As filed with the U.S. Securities and Exchange Commission on October 2, 2018.

Registration No. 333-227333

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 2
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Allogene Therapeutics, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	2836	82-3562771
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

210 East Grand Avenue
South San Francisco, California 94080
(650) 457-2700
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

David Chang, M.D., Ph.D.
President and Chief Executive Officer
Allogene Therapeutics, Inc.
210 East Grand Avenue
South San Francisco, California 94080
(650) 457-2700
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Charles J. Bair, Esq. **Charles S. Kim, Esq.** **Cooley LLP** **4401 Eastgate Mall** **San Diego, California 92121** **(858) 550-6000**	**Brian J. Cuneo, Esq.** **B. Shayne Kennedy, Esq.** **Latham & Watkins LLP** **140 Scott Drive** **Menlo Park, California 94025** **(650) 328-4600**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☒ (Do not check if a smaller reporting company)	Smaller reporting company ☐
	Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has not elected to use the extended transition period for complying with any new or revised financial accounting standards provided in Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price (1)(2)	Amount of registration fee (3)
Common Stock, $0.001 par value per share	18,400,000	$18.00	$331,200,000	$40,141.44

(1) Includes 2,400,000 shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended.
(3) The registrant previously paid a registration fee of $12,450 in connection with the initial filing of this Registration Statement.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED OCTOBER 2, 2018

PRELIMINARY PROSPECTUS

16,000,000 Shares

Common Stock

This is an initial public offering of shares of common stock of Allogene Therapeutics, Inc. We are offering 16,000,000 shares of our common stock. We currently expect the initial public offering price to be between $16.00 and $18.00 per share of common stock.

Prior to this offering, there has been no public market for our common stock. We have applied to list our common stock on the Nasdaq Global Select Market under the symbol "ALLO."

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to Allogene, before expenses	$	$

(1) See the section entitled "Underwriting" for a description of the compensation payable to the underwriters.

Investing in our common stock involves risks. See "Risk Factors" beginning on page 12 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities nor passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

We have granted the underwriters the option for a period of 30 days to purchase up to an additional 2,400,000 shares from us at the initial price to the public less the underwriting discounts and commissions.

The underwriters expect to deliver the shares against payment in New York, New York on , 2018.

Goldman Sachs & Co. LLC **J.P. Morgan** **Cowen** **Jefferies**

Prospectus dated , 2018.

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We have not, and the underwriters have not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

For investors outside the United States: We have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus. Because it is only a summary, it does not contain all of the information that you should consider before investing in shares of our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. You should read the entire prospectus carefully, especially "Risk Factors" and our financial statements and the related notes, before deciding to buy shares of our common stock. The discussion of existing autologous therapies in the summary below and elsewhere in this prospectus, including the section entitled "Business," is not intended to imply that our product candidates are more likely than others to receive regulatory approval from any regulatory authority. Unless the context requires otherwise, references in this prospectus to "Allogene," "we," "us" and "our" refer to Allogene Therapeutics, Inc., and references in this prospectus to "Servier" collectively refer to Les Laboratoires Servier SAS and Institut de Recherches Internationales Servier SAS.

Allogene Therapeutics

Overview

We are a clinical stage immuno-oncology company pioneering the development and commercialization of genetically engineered allogeneic T cell therapies for the treatment of cancer. We are developing a pipeline of off-the-shelf T cell product candidates that are designed to target and kill cancer cells. Our engineered T cells are allogeneic, meaning they are derived from healthy donors for intended use in any patient, rather than from an individual patient for that patient's use, as in the case of autologous T cells. We believe this key difference will enable us to deliver readily available treatments faster, more reliably, at greater scale, and to more patients. In addition, we believe our management team's experience in immuno-oncology and specifically in chimeric antigen receptor (CAR) T cell therapy will help drive the rapid development and, if approved, the commercialization of these potentially curative therapies for patients with aggressive cancer.

In collaboration with Servier, we are developing UCART19, a CAR T cell product candidate targeting CD19. UCART19 is being studied in clinical trials in patients with relapsed or refractory (R/R) B-cell precursor acute lymphoblastic leukemia (ALL), and we expect UCART19 to be advanced to potential registrational trials in the second half of 2019. We also plan to submit an investigational new drug application (IND) in the first half of 2019 for our second allogeneic anti-CD19 CAR T cell product candidate, ALLO-501, for the treatment of R/R non-Hodgkin lymphoma (NHL). In addition, we have a deep pipeline of allogeneic CAR T cell product candidates targeting multiple promising antigens in a host of hematological malignancies and solid tumors.

CAR T cell therapy, a form of cancer immunotherapy, has recently emerged as a revolutionary and potentially curative therapy for patients with hematologic cancers, including refractory cancers. In 2017, two autologous anti-CD19 CAR T cell therapies, Kymriah, developed by Novartis International AG (Novartis), and Yescarta, developed by Kite Pharma, Inc. (Kite), were approved by the FDA for the treatment of R/R B-cell precursor ALL (Kymriah) and R/R large B-cell lymphoma (Yescarta). Autologous CAR T cell therapies are manufactured individually for the patient's use by modifying the patient's own T cells to express CARs. The entire manufacturing process is dependent on the viability of each patient's T cells and takes approximately two to four weeks. As seen in the registrational trials for Kymriah and Yescarta, up to 31% of intended patients ultimately did not receive treatment primarily due to interval complications from the underlying disease during manufacturing or manufacturing failures.

We believe our allogeneic platform has the potential to be the next revolution in cancer treatment. The below chart highlights some of the potential key benefits of allogeneic CAR T cell therapy.

Supply	• Off-the-shelf product enables creation of inventory • Potential to treat more patients than autologous cell therapies • Readily available supply for retreatment
Delivery Time	• On demand product delivery from inventory • Faster time to treatment may improve patient outcomes
Potency	• More uniform starting materials sourced from healthy donors • Potential for more predictable safety and efficacy
Cost	• Potential for ~100 doses from a single manufacturing run • Ability to scale production to further reduce cost

Our Pipeline

We are currently developing a pipeline of multiple allogeneic CAR T cell product candidates utilizing protein engineering, gene editing, gene insertion and advanced proprietary T cell manufacturing technologies. Our most advanced product candidate, UCART19, is an engineered allogeneic CAR T cell therapy that targets CD19, a protein expressed on the cell surface of B cells and a validated target for B cell driven hematological malignancies. We are also developing engineered allogeneic CAR T cell product candidates for multiple myeloma, other blood cancers and solid tumors. Our pipeline is represented in the diagram below.

1 *May not be required if Phase 2 is a registrational clinical trial.*
2 *Servier holds ex-US commercial rights.*
3 *To enable expansion and persistence of allogeneic CAR T product candidates.*

Our lead product candidates include:

- *UCART19.* In 2016, our collaboration partner, Servier, initiated two clinical trials of UCART19: the CALM trial and the PALL trial. The CALM trial is a Phase 1, open-label, dose-escalation clinical trial in adult patients with R/R ALL. The PALL trial is a Phase 1, open-label, clinical trial in pediatric patients with R/R ALL. In June 2018, interim results from 18 patients in the CALM and PALL clinical trials were presented at the 23rd European Hematology Association Annual Congress. As of April 2018, 13 out of 16 evaluable patients, or 81%, achieved a complete response (CR), defined as the absence of any evidence of cancer, and 12 of those patients, or 92%, achieved a minimum residual disease negative CR (MRD- CR), which occurs when a patient achieves a CR and there is no evidence

of ALL cells in the marrow when using sensitive tests such as polymerase chain reaction or flow cytometry. The most common adverse events were related to cytokine release syndrome (CRS) and were generally manageable. Two mild graft-versus-host disease (GvHD) cases in the skin were observed and resolved. See the discussion under the heading "—Business—Product Pipeline and Development Strategy—UCART19—Clinical Data—Interim Safety" on page 98 of this prospectus for more information regarding adverse events. We expect UCART19 to be advanced to potential registrational trials in the second half of 2019.

- *ALLO-501*. We plan to submit an IND in the first half of 2019 for our second allogeneic anti-CD19 CAR T cell product candidate, ALLO-501, for the treatment of patients with R/R NHL. The manufacturing process for ALLO-501 is different than the one employed for UCART19, but the two product candidates are identical in molecular design.
- *ALLO-715*. We plan to submit an IND in 2019 for an allogeneic CAR T cell product candidate, ALLO-715, targeting BCMA for the treatment of patients with R/R multiple myeloma. Several clinical studies of third-party autologous CAR T cell therapies targeting BCMA have produced promising results in this indication.
- *ALLO-647*. We are developing an anti-CD52 monoclonal antibody, ALLO-647, which is designed to be used prior to infusing our other product candidates as part of the lymphodepletion regimen. We believe ALLO-647 can reduce the likelihood of a patient's immune system rejecting the engineered allogeneic T cells, and may create a window of persistence during which the engineered allogeneic T cells can actively target and destroy cancer cells.

Our Approach

Our allogeneic T cell development strategy has four key pillars:

- ***Limit risk of GvHD.*** GvHD is a condition where allogeneic T cells can recognize the patient's normal tissue as foreign and cause damage. We use a gene editing technology, TALEN, which we license from Cellectis, S.A. (Cellectis), to limit the risk of GvHD by engineering T cells to lack functional T cell receptors (TCRs) so the engineered T cells are no longer capable of recognizing a patient's normal tissue as foreign.
- ***Create a window of persistence by allowing allogeneic T cells to expand in patients.*** To enhance the expansion and persistence of our engineered allogeneic T cells, we use TALEN to inactivate the CD52 gene in donor T cells and an anti-CD52 monoclonal antibody to deplete CD52 expressing T cells in patients while sparing the therapeutic allogeneic T cells. We believe this enables a window of persistence for the infused allogeneic T cells to expand and actively target and destroy cancer cells. We are also developing ALLO-647, our own anti-CD52 monoclonal antibody.
- ***Build a leading manufacturing platform.*** Our off-the-shelf approach is dependent on state-of-the-art manufacturing processes, and we are building a technical operations organization with fully integrated in-house expertise in clinical and commercial engineered T cell manufacturing.
- ***Leverage next generation technologies to improve the functionality of allogeneic CAR T cells.*** We plan to leverage next generation technologies to develop more potent allogeneic CAR T cells and to improve the characteristics of our product candidates. We believe next generation technologies will also allow us to develop allogeneic T cell therapies for the treatment of solid tumors, which to date have been difficult to treat in part due to tumor microenvironments that can impair the activity of T cells.

Our History and Team

We believe we have established a leadership position in allogeneic T cell therapy. In April 2018, we acquired certain assets from Pfizer Inc. (Pfizer), including strategic license and collaboration agreements and

other intellectual property related to the development and administration of allogeneic CAR T cells for the treatment of cancer. We have an exclusive collaboration with Servier to develop and commercialize UCART19 and ALLO-501, and we hold the commercial rights to these product candidates in the United States. We also have an exclusive worldwide license from Cellectis to use its TALEN gene-editing technology for the development of allogeneic T cell product candidates directed against 15 different cancer antigens.

Our world-class management team has significant experience in immuno-oncology and in progressing products from early stage research to clinical trials, and ultimately to regulatory approval and commercialization. In particular, our Executive Chairman, Arie Belldegrun, M.D., FACS, has experience in T cell therapy that dates back to his time at the National Cancer Institute as a research fellow in surgical oncology and immunotherapy with Steven Rosenberg, M.D., Ph.D, a recognized pioneer in immuno-oncology. Our President and Chief Executive Officer, David Chang, M.D., Ph.D., served as Executive Vice President of Kite and held senior leadership roles at Amgen, Inc. (Amgen). Moreover, both Dr. Belldegrun and Dr. Chang led the development and approval of Yescarta at Kite. Additionally, our Chief Technical Officer, Alison Moore, Ph.D., was previously Senior Vice President, Process Development at Amgen, where she led the development, deployment and oversight of manufacturing for approximately 80 multi-modality assets.

Our Strategy

Our goal is to maintain and build upon our leadership position in allogeneic T cell therapy. We plan to rapidly develop and, if approved, commercialize allogeneic T cell products for the treatment of cancer that can be delivered faster, more reliably and at greater scale than autologous T cell therapies. We believe achieving this goal could result in allogeneic T cell therapy becoming a standard of care in cancer treatment and enable us to make potentially lifesaving therapies more readily accessible to more patients throughout the world. Key elements of our strategy include:

- ***Capitalize on a validated target and our first mover advantage in engineered allogeneic anti-CD19 CAR T cell product candidates.*** Autologous anti-CD19 CAR T cell therapies, such as Kymriah and Yescarta, have emerged as potentially curative therapies for B-cell lymphomas and leukemias. We believe developing allogeneic CAR T cell product candidates targeting CD19, such as UCART19 and ALLO-501, is the next frontier in delivering potentially curative therapies against B-cell lymphomas and leukemias, including NHL and ALL.
- ***Expand our leadership position within hematologic indications.*** In addition to UCART19, we plan to advance our near-term pipeline against additional hematological targets where there remains a high unmet need, including ALLO-715, an allogeneic CAR T cell product candidate targeting BCMA for the treatment of R/R multiple myeloma.
- ***Build state-of-the-art gene engineering and cell manufacturing capabilities.*** Manufacturing allogeneic T cell product candidates involves a series of complex and precise steps. We believe a critical component to our success will be to leverage and expand our proprietary manufacturing know-how, expertise and capacity. Accordingly, we plan to invest in cutting edge manufacturing systems and facilities.
- ***Leverage next generation technologies to advance our platform and expand into solid tumor indications with high unmet need.*** We have a broad portfolio of solid tumor targets, including CD70 for the treatment of renal cell cancer and DLL3 for the treatment of small cell lung cancer and other aggressive neuroendocrine tumors. We plan to leverage next generation technologies to make more potent allogeneic CAR T cells and improve the characteristics of our product candidates.

Recent Private Financings

In April 2018, we initiated a $300.0 million Series A and A-1 preferred stock financing, with the first $150.0 million received in April and the second $150.0 million received in July and August, with investments from BellCo Capital, Gilead, Pfizer, Regents of the University of California, funds affiliated with TPG Global, LLC, partners of Two River, and Vida Ventures, LLC.

In September 2018, we sold and issued $120.2 million aggregate principal amount of convertible promissory notes (2018 Notes) in a private placement transaction. The 2018 Notes do not accrue interest and will automatically settle into shares of our common stock in connection with the closing of this offering at a settlement price equal to 85% of the initial public offering price per share set forth on the cover page of this prospectus.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled ‘‘Risk Factors,’’ immediately following this prospectus summary. These risks include the following, among others:

- We have a limited operating history and face significant challenges and expense as we build our capabilities.
- We have incurred net losses in every period since our inception and anticipate that we will incur substantial net losses in the future.
- Our engineered allogeneic T cell product candidates represent a novel approach to cancer treatment that creates significant challenges for us.
- We are heavily reliant on our partners for access to key gene-editing technology for manufacturing our product candidates and for the development of UCART19 and ALLO-501.
- Our product candidates are based on novel technologies, which makes it difficult to predict the time and cost of product candidate development and obtaining regulatory approval.
- Our business is highly dependent on the success of UCART19. If we or Servier are unable to obtain approval for UCART19 and effectively commercialize UCART19 for the treatment of patients in its approved indications, our business would be significantly harmed.
- Our product candidates may cause undesirable side effects or have other properties, our clinical trials may fail to demonstrate the safety and efficacy of any of our product candidates, and we may encounter substantial delays in our clinical trials, or may not be able to conduct our trials on the timelines we expect.
- We rely and will continue to rely on third parties, including Servier, to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.
- We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.
- We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.
- We will need substantial additional financing to develop our products and implement our operating plans. If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our product candidates.
- We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.
- If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our market.

- Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.

Certain Preliminary Financial Data

As of September 30, 2018, we had approximately $399.5 million of cash, cash equivalents and marketable securities. This amount is unaudited and preliminary, is subject to completion of financial closing procedures that could result in changes to the amount, and does not present all information necessary for an understanding of our financial condition as of September 30, 2018.

Corporate and Other Information

We were incorporated in Delaware in November 2017. Our principal executive offices are located at 210 East Grand Avenue, South San Francisco, California 94080, and our telephone number is (650) 457-2700. Our corporate website address is www.allogene.com. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Implications of Being an Emerging Growth Company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act (JOBS Act), enacted in April 2012. An "emerging growth company" may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act);
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved.

We may use these provisions until, at latest, the last day of our fiscal year following the fifth anniversary of the completion of this offering. If certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

The Offering

Common stock offered by us	16,000,000 shares
Option to purchase additional shares	The underwriters have a 30-day option to purchase up to a total of 2,400,000 additional shares of common stock.
Common stock to be outstanding immediately after this offering	113,688,982 shares (or 116,088,982 shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We intend to use the net proceeds from this offering to fund research and development of our product candidates and development programs, including our ongoing and planned clinical trials of UCART19, ALLO-501 and ALLO-715, as well as the expansion of our facilities, and for working capital and other general corporate purposes, including costs and expenses associated with being a public company. See "Use of Proceeds."
Risk factors	You should read the section entitled "Risk Factors" for a discussion of certain of the factors to consider carefully before deciding to purchase any shares of our common stock.
Proposed Nasdaq Global Select Market symbol	"ALLO"
Directed share program	At our request, the underwriters have reserved up to 800,000 shares of our common stock offered by this prospectus for sale, at the initial public offering price, to our directors and officers and certain other parties related to us. Shares purchased by our directors and officers will be subject to the 180-day lock-up restriction described in the "Underwriting" section of this prospectus. The number of shares of common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

The number of shares of our common stock to be outstanding after this offering set forth above is based on 97,688,982 shares of common stock outstanding as of June 30, 2018, after giving effect to (i) the conversion of all our outstanding shares of convertible preferred stock as of June 30, 2018 into an aggregate of 61,655,922 shares of common stock in connection with the closing of this offering and (ii) the issuance of 8,318,317 shares of common stock upon the automatic share settlement of the 2018 Notes, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering, and excludes:

- 7,344,225 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2018, at a weighted-average exercise price of $2.27 per share;
- 2,347,275 shares of common stock issuable upon the exercise of outstanding stock options granted after June 30, 2018, at a weighted-average exercise price of $6.87 per share;

- 9,335,850 shares of common stock reserved for future issuance under our amended and restated 2018 equity incentive plan (2018 Plan), as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution and delivery of the underwriting agreement for this offering (including 1,112,753 shares of common stock reserved for issuance under our prior amended and restated 2018 equity incentive plan (Prior Plan), which shares will be added to the 2018 Plan upon its effectiveness); and
- 1,160,000 shares of common stock reserved for future issuance under our 2018 employee stock purchase plan (ESPP), as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution and delivery of the underwriting agreement for this offering.

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the conversion of all our outstanding shares of convertible preferred stock as of June 30, 2018, into an aggregate of 61,655,922 shares of common stock in connection with the closing of this offering;
- the issuance of 8,318,317 shares of common stock upon the automatic share settlement of the 2018 Notes, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering;
- no exercise by the underwriters of their option to purchase up to a total of 2,400,000 additional shares of our common stock;
- no exercise of the outstanding options described above;
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the closing of this offering; and
- a 1-for-5.25 forward stock split of our common effected on October 1, 2018.

Summary Financial Data

The following tables set forth a summary of our financial data as of, and for the periods ended on, the dates indicated. We have derived the summary statement of operations and comprehensive loss data for the period from November 30, 2017 (inception) to December 31, 2017 from our audited financial statements included elsewhere in this prospectus. We have derived the summary statement of operations and comprehensive loss data for the six months ended June 30, 2018 and the summary balance sheet data as of June 30, 2018 from our unaudited interim financial statements included elsewhere in this prospectus. Our unaudited interim financial statements were prepared on the same basis as our audited financial statements and, in our opinion, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of the financial information in those statements. The summary financial data included in this section is not intended to replace the financial statements and related notes included elsewhere in this prospectus. You should read the following summary financial data in conjunction with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected for any other period in the future, and our interim results are not necessarily indicative of the results to be expected for the full year or any other period.

	Period from November 30, 2017 (Inception) to December 31, 2017	Six Months Ended June 30, 2018 (Unaudited)
	(In thousands, except share and per share data)	
Statements of Operations and Comprehensive Loss Data:		
Operating expenses:		
Research and development	$ —	$ 122,486
General and administrative	2	15,123
Total operating expenses	2	137,609
Loss from operations	(2)	(137,609)
Interest and other income, net	—	110
Net and comprehensive loss	$ (2)	$ (137,499)
Net loss per share, basic and diluted(1)	$ 0.00	$ (9.42)
Weighted-average number of shares used in computing net loss per share, basic and diluted(1)	26,249,993	14,600,379
Pro forma net loss per share, basic and diluted (unaudited)(1)		$ (3.12)
Weighted-average number of shares used in computing pro forma net loss per share, basic and diluted (unaudited)(1)		44,011,274

(1) See Notes 2 and 11 to our financial statements included elsewhere in this prospectus for a description of how we compute basic and diluted net loss per share and basic and diluted unaudited pro forma net loss per share, and the weighted-average number of shares used in the computation of these per share amounts.

	As of June 30, 2018		
	Actual	Pro Forma(2)	Pro Forma as Adjusted(3) (4)
		(Unaudited) (In thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 143,927	$ 410,827	$ 660,287
Total assets	148,845	415,745	665,205
Working capital(1)	129,519	396,419	645,879
Total liabilities	17,233	17,233	17,233
Convertible preferred stock	411,052	—	—
Subscriptions receivable from preferred stockholders	(150,000)	—	—
Accumulated deficit	(137,522)	(162,034)	(162,034)
Total stockholders' (deficit) equity	(129,440)	398,512	647,972

(1) We define working capital as current assets less current liabilities. See our financial statements and related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

(2) The pro forma balance sheet data gives effect to (i) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the closing of this offering, (ii) the conversion of all outstanding shares of our convertible preferred stock into 61,655,922 shares of our common stock immediately upon the closing of this offering, (iii) the receipt of $150.0 million in cash proceeds from our convertible preferred stockholders in July and August 2018 related to subscriptions receivable, (iv) the receipt of $116.9 million in net cash proceeds from the sale of the 2018 Notes in September 2018 (which is reflected in cash and cash equivalents, common stock, and additional paid-in capital) and (v) the settlement of the 2018 Notes into 8,318,317 shares of our common stock and an aggregate charge to accumulated deficit of $24.5 million, of which $21.2 million relates to the loss resulting in the change in fair value of the 2018 Notes from the issuance date through their settlement and $3.3 million relates to the recognition of debt issuance costs that will be expensed on the 2018 Notes issuance date. The assumed number of common shares noted above is based upon the midpoint of the price range as set forth on the cover page of this prospectus.

(3) The pro forma as adjusted balance sheet data gives effect to (i) the pro forma adjustments set forth in footnote (2) above and (ii) our receipt of net proceeds from the sale of 16,000,000 shares of our common stock at the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(4) Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), would increase (decrease) each of cash and cash equivalents, total assets, working capital and total stockholders' equity by $14.9 million, assuming the number of shares offered by us as stated on the cover page of this prospectus remain unchanged and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, total assets, and working capital, and total stockholders' equity by $15.8 million, assuming the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Related to Our Business and Industry

We have a limited operating history and face significant challenges and expense as we build our capabilities.

We were incorporated in 2017 and acquired certain rights to UCART19 and other allogeneic CAR T cell therapy assets from Pfizer in April 2018. We have a limited operating history and are subject to the risks inherent in any newly-formed organization, including, among other things, risks that we may not be able to hire sufficient qualified personnel and establish operating controls and procedures. We currently do not have complete in-house resources to enable our allogeneic CAR T platform. We are heavily reliant on several support services from Pfizer through a Transition Services Agreement (TSA), including certain research and development and general and administrative services. As we build our own capabilities, we expect to encounter risks and uncertainties frequently experienced by growing companies in new and rapidly evolving fields, including the risks and uncertainties described herein. Our ability to rely on services from Pfizer is limited for a period of time, and if we are unable to build our own capabilities, our operating and financial results could differ materially from our expectations, and our business could suffer.

As a company, we have not progressed any product candidates through clinical development to commercialization. Our collaboration partner, Servier, conducts the CALM and PALL clinical trials of UCART19, and we cannot be certain that our planned clinical trials of our other product candidates will begin or be completed on time, if at all.

We have incurred net losses in every period since our inception and anticipate that we will incur substantial net losses in the future.

We are a clinical-stage biopharmaceutical company and investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable. We have only recently acquired rights to an allogeneic CAR T platform of primarily early-stage product candidates and have no products approved for commercial sale and have not generated any revenue from product sales to date, and we will continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not profitable and have incurred net losses in each period since our inception. For the six months ended June 30, 2018, we reported a net loss of $137.5 million. As of June 30, 2018, we had an accumulated deficit of $137.5 million.

We expect to incur significant expenditures for the foreseeable future, and we expect these expenditures to increase as we continue our research and development of, and seek regulatory approvals for, product candidates based on our engineered allogeneic T cell platform, including UCART19, ALLO-501 and ALLO-715. Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Our engineered allogeneic T cell product candidates represent a novel approach to cancer treatment that creates significant challenges for us.

We are developing a pipeline of allogeneic T cell product candidates that are engineered from healthy donor T cells to express CARs and are intended for use in any patient with certain cancers. Advancing these novel product candidates creates significant challenges for us, including:

- manufacturing our product candidates to our specifications and in a timely manner to support our clinical trials, and, if approved, commercialization;
- sourcing clinical and, if approved, commercial supplies for the raw materials used to manufacture our product candidates;
- understanding and addressing variability in the quality of a donor's T cells, which could ultimately affect our ability to produce product in a reliable and consistent manner;
- educating medical personnel regarding the potential side effect profile of our product candidates, if approved, such as the potential adverse side effects related to CRS, neurotoxicity, GvHD, prolonged cytopenia and neutropenic sepsis;
- using medicines to manage adverse side effects of our product candidates which may not adequately control the side effects and/or may have a detrimental impact on the efficacy of the treatment;
- conditioning patients with chemotherapy and ALLO-647 or other lymphodepletion agents in advance of administering our product candidates, which may increase the risk of adverse side effects;
- obtaining regulatory approval, as the FDA and other regulatory authorities have limited experience with development of allogeneic T cell therapies for cancer; and
- establishing sales and marketing capabilities upon obtaining any regulatory approval to gain market acceptance of a novel therapy.

We are heavily reliant on our partners for access to key gene editing technology for manufacturing our product candidates and for the development of UCART19 and ALLO-501.

A critical aspect to manufacturing allogeneic T cell product candidates involves gene editing the healthy donor T cells in an effort to avoid GvHD and to limit the patient's immune system from attacking the allogeneic T cells. GvHD results when allogeneic T cells start recognizing the patient's normal tissue as foreign. We use Cellectis's TALEN gene-editing technology to inactivate a gene coding for TCRα, a key component of the natural antigen receptor of T cells, to cause the engineered T cells to be incapable of recognizing foreign antigens. Accordingly, when injected into a patient, the intent is for the engineered T cell not to recognize the tissue of the patient as foreign and thus avoid attacking the patient's tissue. In addition, we use TALEN gene editing to inactivate the CD52 gene in donor T cells, which codes for the target of an anti-CD52 monoclonal antibody. Anti-CD52 monoclonal antibodies deplete CD52 expressing T cells in patients while sparing therapeutic allogeneic T cells lacking CD52. By administering an anti-CD52 antibody prior to infusing our product candidates, we believe we have the potential to reduce a patient's immune system from destroying the engineered allogeneic T cells.

We rely on an agreement with Cellectis for rights to use TALEN and electroporation technology for 15 select targets, including BCMA, Flt3, CD70, DLL3 and other targets included in our pipeline. We also rely on Cellectis, through our agreement with Servier, for rights to UCART19, ALLO-501 and potentially one additional target. We would need an additional license from Cellectis or access to other gene-editing technology to research and develop product candidates directed at targets not covered by our existing agreements with Cellectis and Servier. In addition, the Cellectis gene-editing technology may fail to produce viable product candidates. Moreover, both Servier and Cellectis may terminate our respective agreements in the event of a material breach of the agreements, or upon certain insolvency events. If our agreements were terminated or we required other gene editing technology, such a license or technology may not be available to us on reasonable terms, or at all, particularly given the limited number of alternative gene-editing technologies in the market.

In addition, under the Servier Agreement, Servier is responsible for conducting the two clinical trials of UCART19, CALM and PALL. We plan to support Servier in advancing the CALM and PALL trials, and we expect Servier to support us in submitting an IND in the first half of 2019 for our second anti-CD19 allogeneic T cell product candidate, ALLO-501, for the treatment of patients with NHL. Other than the agreed-upon global research and development plan for UCART19, we have limited control over the nature or timing of Servier's clinical trials and limited visibility into their day-to-day activities. In addition, we rely on Servier for access to data from the UCART19 trials, and as a result at any given time we may not be aware of one or more significant trial developments. If UCART19 encounters safety or efficacy problems, manufacturing problems, developmental delays, regulatory issues or other problems, our development plans and business would be significantly harmed. Additionally, other clinical trials being conducted by Servier may at times receive higher priority than research on our programs. Moreover, if Servier does not provide its share of support for the UCART19 and ALLO-501 clinical trials, or does not agree with our global development plan and budget for ALLO-501, our expenses may be greater than we currently expect and we may have difficulty progressing ALLO-501 in a timely manner.

The gene-editing technology we use is relatively new, and if we are unable to use this technology in our intended product candidates, our revenue opportunities will be materially limited.

Cellectis's TALEN technology involves a relatively new approach to gene editing, using sequence-specific DNA-cutting enzymes, or nucleases, to perform precise and stable modifications in the DNA of living-cells and organisms. Although Cellectis has generated nucleases for many specific gene sequences, it has not created nucleases for all gene sequences that we may seek to target, and we may not be able do so, which could limit the usefulness of this technology. This technology may also not be shown to be effective in clinical studies that Cellectis, we or other licensees of Cellectis technology may conduct, or may be associated with safety issues that may negatively affect our development programs.

In addition, the gene-editing industry is rapidly developing, and our competitors may introduce new technologies that render our technology obsolete or less attractive. New technology could emerge at any point in the development cycle of our product candidates. As competitors use or develop new technologies, any failures of such technology could adversely impact our program. We also may be placed at a competitive disadvantage, and competitive pressures may force us to implement new technologies at a substantial cost. In addition, our competitors may have greater financial, technical and personnel resources that allow them to enjoy technological advantages and may in the future allow them to implement new technologies before we can. We cannot be certain that we will be able to implement technologies on a timely basis or at a cost that is acceptable to us. If we are unable to maintain technological advancements consistent with industry standards, our operations and financial condition may be adversely affected.

Our product candidates are based on novel technologies, which makes it difficult to predict the time and cost of product candidate development and obtaining regulatory approval.

We have concentrated our research and development efforts on our engineered allogeneic T cell therapy and our future success depends on the successful development of this therapeutic approach. We are in the early stages of developing our platform and there can be no assurance that any development problems we experience in the future will not cause significant delays or unanticipated costs, or that such development problems can be overcome. We may also experience delays in developing a sustainable, reproducible and scalable manufacturing process or transferring that process to commercial partners, which may prevent us from completing our clinical studies or commercializing our products on a timely or profitable basis, if at all. In addition, since we are in the early stages of clinical development, we do not know the doses to be evaluated in pivotal trials or, if approved, commercially. Finding a suitable dose may delay our anticipated clinical development timelines. In addition, our expectations with regard to our scalability and costs of manufacturing may vary significantly as we develop our product candidates and understand these critical factors.

In addition, the clinical study requirements of the FDA, EMA and other regulatory agencies and the criteria these regulators use to determine the safety and efficacy of a product candidate are determined according to the type, complexity, novelty and intended use and market of the potential products. The regulatory approval process

for novel product candidates such as ours can be more complex and consequently more expensive and take longer than for other, better known or extensively studied pharmaceutical or other product candidates. Approvals by the EMA and FDA for existing autologous CAR T therapies, such as Kymriah and Yescarta, may not be indicative of what these regulators may require for approval of our therapies. Also, while we expect reduced variability in our products candidates compared to autologous products, we do not have significant clinical data supporting any benefit of lower variability. More generally, approvals by any regulatory agency may not be indicative of what any other regulatory agency may require for approval or what such regulatory agencies may require for approval in connection with new product candidates. Moreover, our product candidates may not perform successfully in clinical trials or may be associated with adverse events that distinguish them from the autologous CAR T therapies that have previously been approved. For instance, allogeneic product candidates may result in GvHD not experienced with autologous products. Unexpected clinical outcomes would significantly impact our business.

Our business is highly dependent on the success of UCART19. If we or Servier are unable to obtain approval for UCART19 and effectively commercialize UCART19 for the treatment of patients in its approved indications, our business would be significantly harmed.

Our business and future success depends on our ability to obtain regulatory approval of, and then successfully commercialize, our most advanced product candidate, UCART19. UCART19 is in the early stages of development and has only been administered in a limited number of patients in Phase 1 clinical trials. The results to date may not predict results for our planned trial or any future studies of UCART19 or any other allogeneic CAR T product candidate. Because UCART19 is the first allogeneic product to be evaluated in the clinic, its failure, or the failure of other allogeneic T cell therapies, may significantly influence physicians' and regulators' opinions in regards to the viability of our entire pipeline of allogeneic T cell therapies, particularly if high or uncontrolled rates of GvHD are observed. If significant GvHD events are observed with the administration of UCART19, or if it is viewed as less safe or effective than autologous therapies, our ability to develop other allogeneic therapies may be significantly harmed. We are also dependent on Servier to conduct the UCART19 trials in a timely and appropriate manner. If Servier does not conduct the trials on the timeline we expect or otherwise fails to support the trials, our leadership position in the allogeneic CAR T industry and ability to progress additional product candidates may be significantly harmed.

All of our product candidates, including UCART19, will require additional clinical and non-clinical development, regulatory review and approval in multiple jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. In addition, because UCART19 is our most advanced product candidate, and because our other product candidates are based on similar technology, if UCART19 encounters safety or efficacy problems, manufacturing problems, developmental delays, regulatory issues or other problems, our development plans and business would be significantly harmed.

Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, limit their commercial potential or result in significant negative consequences.

Undesirable or unacceptable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Approved autologous CAR T therapies and those under development have shown frequent rates of CRS and neurotoxicity, and adverse events have resulted in the death of patients. We expect similar adverse events for allogeneic CAR T product candidates. Our allogeneic CAR T cell product candidates undergo gene engineering by using lentivirus and TALEN nucleases that can cause insertion, deletion, or chromosomal translocation. These changes can cause allogeneic CAR T cells to proliferate uncontrollably and may cause

adverse events. In addition, our allogeneic CAR T cell product candidates may cause unique adverse events related to the differences between the donor and patients, such as GvHD, infusion reaction, or prolong persistence of donor cells in the patients.

In the PALL and CALM clinical trials, the most common severe or life threatening adverse events resulted from CRS, neurotoxicity, skin GvHD, prolonged cytopenia and neutropenic sepsis. Multiple patients have also died in these trials, including two deaths that were attributed to UCART19, as further described under "Business—Product Pipeline and Development Strategy—UCART19—Clinical Data". In the future, patients may experience additional adverse events related to the lymphodepletion regimen as well as UCART19, some of which may result in death. As we treat more patients with UCART19 in our clinical trials, new less common side effects may also emerge.

As an anti-CD19 CAR T cell therapy, we expect ALLO-501 to cause similar toxicities as UCART19. Other of our allogeneic CAR T product candidates may also cause similar or worse toxicities. For instance, because ALLO-715 may require a higher dose than UCART19 and could be used in a more elderly patient population, it is possible that the risk of GvHD or other adverse events for ALLO-715 could be greater than UCART19.

If unacceptable toxicities arise in the development of our product candidates, we or Servier could suspend or terminate our trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. The data safety monitoring board may also suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immunotherapy trials. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from T cell therapy are not normally encountered in the general patient population and by medical personnel. We have trained and expect to have to train medical personnel using CAR T cell product candidates to understand the side effect profile of our product candidates for both our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient deaths. Any of these occurrences may harm our business, financial condition and prospects significantly.

Our clinical trials may fail to demonstrate the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our product candidates, including UCART19, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials, including in any post-approval studies of UCART19.

There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy, insufficient durability of efficacy or unacceptable safety issues, notwithstanding promising results in earlier trials. Most product candidates that commence clinical trials are never approved as products.

In addition, for UCART19 and any future trials that may be completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. To the extent that the results of the trials are not satisfactory to the

FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

Interim "top line" and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim "top line" or preliminary data from our clinical studies. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. For instance, we and Servier have published preliminary data from the CALM and PALL clinical trials, however such results are preliminary in nature, do not bear statistical significance and should not be viewed as predictive of ultimate success. It is possible that such results will not continue or may not be repeated in ongoing or future clinical trials of UCART19 or our other product candidates.

Preliminary or "top line" data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects.

We may not be able to file INDs to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

We plan to submit an IND to the FDA to initiate a clinical trial of ALLO-715 targeting BCMA for the treatment of patients with R/R multiple myeloma in 2019, and an IND in the first half of 2019 for ALLO-501 in the treatment of patients with R/R NHL. However, our timing of filing on these product candidates is dependent on further pre-clinical and manufacturing success. We cannot be sure that submission of an IND or IND amendment will result in the FDA allowing testing and clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such clinical trials. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND or clinical trial application, we cannot guarantee that such regulatory authorities will not change their requirements in the future.

We may encounter substantial delays in our clinical trials, or may not be able to conduct our trials on the timelines we expect.

Clinical testing is expensive, time consuming and subject to uncertainty. We cannot guarantee that any clinical studies will be conducted as planned or completed on schedule, if at all. Even if these trials begin as planned, issues may arise that could suspend or terminate such clinical trials. A failure of one or more clinical studies can occur at any stage of testing, and our future clinical studies may not be successful. Events that may prevent successful or timely completion of clinical development include:

- inability to generate sufficient preclinical, toxicology or other in vivo or in vitro data to support the initiation of clinical studies;
- delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for advanced clinical trials;
- delays in developing suitable assays for screening patients for eligibility for trials with respect to certain product candidates;
- delays in reaching a consensus with regulatory agencies on study design;
- delays in reaching agreement on acceptable terms with prospective CROs and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical study sites;

- delays in obtaining required institutional review board (IRB) approval at each clinical study site;
- imposition of a temporary or permanent clinical hold by regulatory agencies for a number of reasons, including after review of an IND application or amendment, or equivalent application or amendment; as a result of a new safety finding that presents unreasonable risk to clinical trial participants; a negative finding from an inspection of our clinical study operations or study sites; developments on trials conducted by competitors for related technology that raises FDA concerns about risk to patients of the technology broadly; or if FDA finds that the investigational protocol or plan is clearly deficient to meet its stated objectives;
- delays in recruiting suitable patients to participate in our clinical studies;
- difficulty collaborating with patient groups and investigators;
- failure by our CROs, other third parties or us to adhere to clinical study requirements;
- failure to perform in accordance with the FDA's good clinical practice (GCP) requirements or applicable regulatory guidelines in other countries;
- transfer of manufacturing processes to any new CMO or our own manufacturing facilities or any other development or commercialization partner for the manufacture of product candidates;
- delays in having patients complete participation in a study or return for post-treatment follow-up;
- patients dropping out of a study;
- occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;
- changes in the standard of care on which a clinical development plan was based, which may require new or additional trials;
- the cost of clinical studies of our product candidates being greater than we anticipate;
- clinical studies of our product candidates producing negative or inconclusive results, which may result in our deciding, or regulators requiring us, to conduct additional clinical studies or abandon product development programs;
- delays or failure to secure supply agreements with suitable raw material suppliers, or any failures by suppliers to meet our quantity or quality requirements for necessary raw materials; and
- delays in manufacturing, testing, releasing, validating, or importing/exporting sufficient stable quantities of our product candidates for use in clinical studies or the inability to do any of the foregoing.

Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenue. In addition, if we make manufacturing or formulation changes to our product candidates, we may be required to or we may elect to conduct additional studies to bridge our modified product candidates to earlier versions. Clinical study delays could also shorten any periods during which our products have patent protection and may allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business and results of operations.

Monitoring safety of patients receiving our product candidates is challenging, which could adversely affect our ability to obtain regulatory approval and commercialize.

For our ongoing clinical trials of UCART19 and in our planned clinical trials of other product candidates, Servier has contracted with and is expected to continue to contract with academic medical centers and hospitals

experienced in the assessment and management of toxicities arising during clinical trials. Nonetheless, these centers and hospitals may have difficulty observing patients and treating toxicities, which may be more challenging due to personnel changes, inexperience, shift changes, house staff coverage or related issues. This could lead to more severe or prolonged toxicities or even patient deaths, which could result in us or the FDA delaying, suspending or terminating one or more of our clinical trials, and which could jeopardize regulatory approval. We also expect the centers using UCART19, if approved, on a commercial basis could have similar difficulty in managing adverse events. Medicines used at centers to help manage adverse side effects of UCART19 may not adequately control the side effects and/or may have a detrimental impact on the efficacy of the treatment. Use of these medicines may increase with new physicians and centers administering our product candidates.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents; and
- the risk that patients enrolled in clinical trials will drop out of the trials before the infusion of our product candidates or trial completion.

In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, some of our clinical trial sites are also being used by some of our competitors, which may reduce the number of patients who are available for our clinical trials in that clinical trial site.

Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and hematopoietic cell transplantation or autologous CAR T cell therapies, rather than enroll patients in our clinical trial. Patients eligible for allogeneic CAR T cell therapies but ineligible for autologous CAR T cell therapies due to aggressive cancer and inability to wait for autologous CAR T cell therapies may be at greater risk for complications and death from therapy.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of our ongoing clinical trial and planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

Clinical trials are expensive, time-consuming and difficult to design and implement.

Human clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our allogeneic T cell product candidates are based on new

technologies and will require the creation of inventory of mass-produced, off-the-shelf product, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. In addition, costs to treat patients with R/R cancer and to treat potential side effects that may result from our product candidates can be significant. We also have less control of costs incurred by our development partner, Servier, for the clinical trials of UCART19. Accordingly, our clinical trial costs are likely to be significantly higher than for more conventional therapeutic technologies or drug products.

The market opportunities for our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and may be small.

The FDA often approves new therapies initially only for use in patients with R/R metastatic disease. We expect to initially seek approval of UCART19, with Servier, and our other product candidates in this setting. Subsequently, for those products that prove to be sufficiently beneficial, if any, we would expect to seek approval in earlier lines of treatment and potentially as a first line therapy. There is no guarantee that our product candidates, even if approved, would be approved for earlier lines of therapy, and, prior to any such approvals, we will have to conduct additional clinical trials, including potentially comparative trials against approved therapies. We are also targeting a similar patient population as autologous CAR T product candidates, including approved autologous CAR T products. Our therapies may not be as safe and effective as autologous CAR T therapies and may only be approved for patients who are ineligible for autologous CAR T therapy.

Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers in a position to receive second or later lines of therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. For instance, we expect our most advanced product candidate, UCART19, to initially target a small patient population that suffers from R/R ALL. Even if we obtain significant market share for our product candidates, because the potential target populations are small, we may never achieve profitability without obtaining regulatory approval for additional indications.

If we fail to develop additional product candidates, our commercial opportunity will be limited.

One of our core strategies is to pursue clinical development of additional product candidates beyond UCART19, including ALLO-501 and ALLO-715. Developing, obtaining regulatory approval and commercializing additional CAR T cell product candidates will require substantial additional funding beyond the net proceeds of this offering and is prone to the risks of failure inherent in medical product development. We cannot provide you any assurance that we will be able to successfully advance any of these additional product candidates through the development process.

Even if we receive FDA approval to market additional product candidates for the treatment of cancer, we cannot assure you that any such product candidates will be successfully commercialized, widely accepted in the marketplace or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize additional product candidates, our commercial opportunity will be limited. Moreover, a failure in obtaining regulatory approval of additional product candidates may have a negative effect on the approval process of any other, or result in losing approval of any approved, product candidate.

Our development strategy relies on incorporating an anti-CD52 monoclonal antibody as part of the lymphodepletion preconditioning regimen prior to infusing allogeneic CAR T cell product candidates.

We plan to utilize an anti-CD52 monoclonal antibody as part of a preconditioning regimen to be infused prior to infusing our product candidates, such as UCART19, ALLO-501 and ALLO-715. While we believe an

anti-CD52 antibody can reduce the likelihood of a patient's immune system from rejecting engineered allogeneic T cells, and thereby may enable a window of persistence during which such engineered allogeneic T cells can actively target and destroy cancer cells, the antibody may not have the benefits that we anticipate and could have other adverse effects. For instance, our lymphodepletion regimen, including using an anti-CD52 antibody, will cause a transient and sometimes prolonged immune suppression.

In the ongoing CALM and PALL trials, we use a commercially available monoclonal antibody, alemtuzumab, that binds CD52. To secure our own readily available source of anti-CD52 antibody, we are developing our own monoclonal anti-CD52 antibody, ALLO-647. We submitted a drug master file (DMF) to the FDA in August 2018 for ALLO-647. If the FDA activates the DMF, Servier will be authorized to reference the DMF in its IND proposing use of ALLO-647 in combination with UCART19 in clinical trials. There can be no assurance that the FDA will activate our DMF in a timely manner or at all. We initially plan to use ALLO-647 in the safety dose-expansion phase of the ongoing CALM clinical trial to further evaluate and optimize its use as a lymphodepleting agent. We plan to utilize the results from the CALM trial to progress ALLO-647 in our planned clinical trials of ALLO-501 and ALLO-715. However, we may be unable to agree with Servier an appropriate arrangement for the use of ALLO-647 in the CALM trial, and we are dependent on Servier's ability to progress the CALM trial. In addition, we may have to license certain rights relating to ALLO-647 from third parties. If we are unable to secure such rights, we may not be able to progress the commercialization of ALLO-647.

If we are unable to successfully develop ALLO-647 in the timeframe we anticipate, or at all, or if the FDA does not approve the use of ALLO-647 in combination with our allogeneic T cell product candidates, we may be unable to source alemtuzumab and our engineered allogeneic T cell product candidates may be less effective, which could result in delays in our product development efforts and/or the commercial potential of our product candidates.

We intend to operate our own manufacturing facility, which will require significant resources and we may fail to successfully operate our facility, which could adversely affect our clinical trials and the commercial viability of our product candidates.

We may not be able to achieve clinical or commercial manufacturing and cell processing on our own or at our CMO, including mass-producing off-the-shelf product to satisfy demands for any of our product candidates. While we believe the manufacturing and processing approaches are appropriate to support our clinical product development, we have limited experience in managing the allogeneic T cell engineering process, and our allogeneic processes may be more difficult or more expensive than the approaches taken by our competitors. We cannot be sure that the manufacturing processes employed by us will result in T cells that will be safe and effective.

We plan to build a separate manufacturing facility with clinical and commercial supply manufacturing capabilities, but we have not identified a location for these activities or secured any space for these activities.

Our operations remain subject to review and oversight by the FDA and the FDA could object to our use of our manufacturing facility. We must first receive approval from the FDA prior to licensure to manufacture our product candidates, which we may never obtain. Even if approved, we would be subject to ongoing periodic unannounced inspection by the FDA and corresponding state agencies to ensure strict compliance with current good manufacturing practices (cGMPs) and other government regulations. Our license to manufacture product candidates will be subject to continued regulatory review.

Our cost of goods development is at an early stage. The actual cost to manufacture and process our product candidates could be greater than we expect and could materially and adversely affect the commercial viability of our product candidates.

The manufacture of biopharmaceutical products is complex and requires significant expertise, including the development of advanced manufacturing techniques and process controls. Manufacturers of cell therapy products often encounter difficulties in production, particularly in scaling out and validating initial production and ensuring the absence of contamination. These problems include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Furthermore, if contaminants are discovered in our supply of product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any stability or other issues relating to the manufacture of our product candidates will not occur in the future.

We may fail to manage the logistics of storing and shipping our product candidates. Storage failures and shipment delays and problems caused by us, our vendors or other factors not in our control, such as weather, could result in loss of usable product or prevent or delay the delivery of product candidates to patients.

We may also experience manufacturing difficulties due to resource constraints or as a result of labor disputes. If we were to encounter any of these difficulties, our ability to provide our product candidates to patients would be jeopardized.

We currently have no marketing and sales organization and as a company have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and as a company have no experience in marketing products. We intend to develop an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products; however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product that receives regulatory approval in the United States or overseas.

A variety of risks associated with conducting research and clinical trials abroad and marketing our product candidates internationally could materially adversely affect our business.

The CALM trial is currently being conducted in the United States, the United Kingdom and France, while the PALL clinical trial is currently being conducted in the United Kingdom, Belgium and France, and we plan to globally develop our future product candidates. Accordingly, we expect that we will be subject to additional risks related to operating in foreign countries, including:

- differing regulatory requirements in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- increased difficulties in managing the logistics and transportation of storing and shipping product candidates produced in the United States and shipping the product candidate to the patient abroad;

- import and export requirements and restrictions;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- differing payor reimbursement regimes, governmental payors or patient self-pay systems, and price controls;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations and our collaborations with Servier and Cellectis, each based in France, may materially adversely affect our ability to attain or maintain profitable operations.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry, and the immuno-oncology industry specifically, is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products.

Specifically, engineered T cells face significant competition in both the CAR and TCR technology space from multiple companies. Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances.

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel, including our Executive Chairman, our President and Chief Executive Officer, our Chief Technical Officer and our Chief Financial Officer. In addition, we are currently dependent on our TSA with Pfizer for personnel support. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business.

We conduct substantially all of our operations at our facilities in South San Francisco. This region is headquarters to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel in our market is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain “key person” insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel.

We have grown rapidly and will need to continue to grow the size of our organization, and we may experience difficulties in managing this growth.

As our development and commercialization plans and strategies develop, and as we continue to transition into operating as a public company, we have rapidly expanded our employee base and expect to continue to add managerial, operational, sales, research and development, marketing, financial and other personnel. Current and future growth imposes significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage our growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants, including Pfizer through the TSA, which expires after a certain period of time, to provide certain services, including certain research and development as well as general and administrative support. There can be no assurance that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified

replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We may form or seek strategic alliances, create joint ventures or collaborations or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. Any delays in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. For instance, our Exclusive License and Collaboration Agreement with Servier requires significant research and development commitments that may not result in the development and commercialization of product candidates, including UCART19 and ALLO-501. We cannot be certain that, following a strategic transaction or license, we will achieve the results, revenue or specific net income that justifies such transaction.

We may not realize the benefits of acquired assets or other strategic transactions.

In April 2018, we entered into an Asset Contribution Agreement with Pfizer pursuant to which we acquired certain assets and assumed certain liabilities from Pfizer, including the Collaboration and License Agreement with Cellectis and the Exclusive License and Collaboration Agreement with Servier and other intellectual property for the development and administration of CAR T cells for the treatment of cancer. We also agreed to offer employment to certain Pfizer employees on terms no less favorable than the terms such employees enjoyed while being employed by Pfizer. We also entered into a TSA with Pfizer pursuant to which Pfizer provides us with certain services, including the services of their personnel, with respect to the assets that we purchased from Pfizer. Under the TSA, Pfizer also provides us with certain facilities and facility management services.

We actively evaluate various strategic transactions on an ongoing basis. We may acquire other businesses, products or technologies as well as pursue joint ventures or investments in complementary businesses. The success of our strategic transactions, including our acquisition of CAR T cell assets from Pfizer and licenses with Cellectis and Servier, and any future strategic transactions depends on the risks and uncertainties involved including:

- unanticipated liabilities related to acquired companies or joint ventures;

- difficulties integrating acquired personnel, technologies and operations into our existing business;
- retention of key employees;
- diversion of management time and focus from operating our business to management of strategic alliances or joint ventures or acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- disruption in our relationships with collaborators or suppliers as a result of such a transaction; and
- possible write-offs or impairment charges relating to acquired businesses or joint ventures.

If any of these risks or uncertainties occur, we may not realize the anticipated benefit of any acquisition or strategic transaction. Additionally, foreign acquisitions and joint ventures are subject to additional risks, including those related to integration of operations across different cultures and languages, currency risks, potentially adverse tax consequences of overseas operations and the particular economic, political and regulatory risks associated with specific countries.

Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition.

We will need substantial additional financing to develop our products and implement our operating plans. If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our product candidates.

We expect to spend a substantial amount of capital in the clinical development of our product candidates, including the planned clinical trials for UCART19, ALLO-501 and ALLO-715. We will need substantial additional financing to develop our products and implement our operating plans. In particular, we will require substantial additional financing to enable commercial production of our products and initiate and complete registration trials for multiple products. Further, if approved, we will require significant additional amounts in order to launch and commercialize our product candidates.

We estimate that our net proceeds from this offering will be approximately $249.5 million, based on an assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We believe that such proceeds together with our existing cash, cash equivalents and marketable securities will be sufficient to fund our operations for at least the next 36 months. However, changing circumstances may cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more money than currently expected because of circumstances beyond our control. We may require additional capital for the further development and commercialization of our product candidates, including funding our internal manufacturing capabilities and may need to raise additional funds sooner if we choose to expand more rapidly than we presently anticipate.

We cannot be certain that additional funding will be available on acceptable terms, or at all. We have no committed source of additional capital and if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. Our license agreements may also be terminated if we are unable to meet the payment obligations under the agreements. We could be required to seek collaborators for our product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to our product candidates in markets where we otherwise would seek to pursue development or commercialization ourselves.

Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

Our internal computer systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems and the systems of our CROs, contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. While we have not experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our CMO, CROs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Our ability to manufacture our product candidates could be disrupted if our operations or those of our suppliers are affected by a man-made or natural disaster or other business interruption. Our corporate headquarters are located in California near major earthquake faults and fire zones. The ultimate impact on us, our significant suppliers and our general infrastructure of being located near major earthquake faults and fire zones and being consolidated in certain geographical areas is unknown, but our operations and financial condition could suffer in the event of a major earthquake, fire or other natural disaster.

Our relationships with customers, physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, health information privacy and security laws, and other healthcare laws and regulations. If we or our employees, independent contractors, consultants, commercial partners and vendors violate these laws, we could face substantial penalties.

These laws may impact, among other things, our clinical research program, as well as our proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services is subject to extensive laws and regulations designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive and other business arrangements. We may also be subject to federal, state and foreign laws governing the privacy and security of identifiable patient information. The U.S. healthcare laws and regulations that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, any person or entity from knowingly and willfully, offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, the purchasing, leasing, ordering or arranging for the purchase, lease, or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term “remuneration” has been broadly

interpreted to include anything of value. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that may be alleged to be intended to induce prescribing, purchases or recommendations, include any payments of more than fair market value, and may be subject to scrutiny if they do not qualify for an exception or safe harbor. In addition, a person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act and the civil monetary penalties statute;

- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal civil False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other federal government programs that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government, including federal healthcare programs;
- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by any trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statements in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH) and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the United States Department of Health and Human Services' Centers for Medicare & Medicaid Services (CMS) information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we may be subject to state and foreign equivalents of each of the healthcare laws described above, among others, some of which may be broader in scope. For example, we may be subject to the following: state anti-kickback and false claims laws that may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third party payors, including private insurers, or that apply regardless of payor; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; state and

local laws requiring the registration of pharmaceutical sales and medical representatives; and state and foreign laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities, or our arrangements with physicians, some of who receive stock options as compensation, could be subject to challenge under one or more of such laws. If we or our employees, independent contractors, consultants, commercial partners and vendors violate these laws, we may be subject to investigations, enforcement actions and/or significant penalties. We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct or business noncompliance, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

European data collection is governed by restrictive regulations governing the use, processing, and cross-border transfer of personal information.

The collection and use of personal data in the European Union (EU) are governed by the General Data Protection Regulation (GDPR). The GDPR imposes stringent requirements for controllers and processors of personal data, including, for example, more robust disclosures to individuals and a strengthened individual data rights regime, shortened timelines for data breach notifications, limitations on retention of information, increased requirements pertaining to special categories of data, such as health data, and additional obligations when we contract with third-party processors in connection with the processing of the personal data. The GDPR also imposes strict rules on the transfer of personal data out of the European Union to the United States and other third countries. In addition, the GDPR provides that EU member states may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric or health data.

The GDPR applies extraterritorially, and we may be subject to the GDPR because of our data processing activities that involve the personal data of individuals located in the European Union, such as in connection with our EU clinical trials. Failure to comply with the requirements of the GDPR and the applicable national data protection laws of the EU member states may result in fines of up to €20,000,000 or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. GDPR regulations may impose additional responsibility and liability in relation to the personal data that we process and we may be required to put in place additional mechanisms to ensure compliance with the new data protection rules. This may be onerous and may interrupt or delay our development activities, and adversely affect our business, financial condition, results of operations and prospects.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with corporate collaborators. Our insurance policies may also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. Assuming we obtained clinical trial insurance for our clinical trials, we may have to pay amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

The global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and

could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive an economic downturn, which could directly affect our ability to attain our operating goals on schedule and on budget.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in the equity ownership of certain stockholders over a rolling three-year period), the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income and taxes may be limited. As a result of our most recent private placements and other transactions that have occurred in 2018, we may have experienced, and, upon completion of this offering, may experience, an "ownership change." We may also experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As of June 30, 2018, we had U.S. net operating loss carryforwards of approximately $21.4 million and federal and state research and development credits of $0.3 million and $0.3 million, respectively, which could be limited if we experience an "ownership change." We anticipate incurring significant additional net losses for the foreseeable future, and our ability to utilize net operating loss carryforwards associated with any such losses to offset future taxable income may be limited to the extent we incur future ownership changes.

Risks Related to Our Reliance on Third Parties

We rely and will continue to rely on third parties, including Servier, to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, CROs and strategic partners to conduct our preclinical and clinical trials under agreements with us. In addition, we depend on our collaborator, Servier, to sponsor and lead the conduct of the CALM and PALL clinical trials.

We negotiate budgets and contracts with CROs and study sites, which may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with good clinical practices (GCPs), which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP regulations. In addition, our clinical trials must be conducted with biologic product produced under cGMPs and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are and will not be our employees and, except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties

may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

If any of our relationships with trial sites, or any CRO that we may use in the future, terminates, we may not be able to enter into arrangements with alternative trial sites or CROs or do so on commercially reasonable terms. Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines.

We may rely on third parties to manufacture our clinical product supplies, and we may have to rely on third parties to produce and process our product candidates, if approved.

Servier is responsible for UCART19 manufacturing and is working with a CMO in Europe to provide clinical supply for the CALM and PALL clinical trials. ALLO-501 has the same molecular design as UCART19, but is produced by a different CMO using a different manufacturing process. ALLO-501 and ALLO-715 will be manufactured in the United States, at least initially, by a CMO, and we will manage all other aspects of the supply, including planning, CMO oversight, disposition and distribution logistics.

Although we expect to secure our own clinical manufacturing facility, we must currently rely on outside vendors to manufacture supplies and process our product candidates. We have not yet caused our product candidates to be manufactured or processed on a commercial scale and may not be able to achieve manufacturing and processing and may be unable to create an inventory of mass-produced, off-the-shelf product to satisfy demands for any of our product candidates.

We do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing and processing of our product candidates, and the actual cost to manufacture and process our product candidates could materially and adversely affect the commercial viability of our product candidates. As a result, we may never be able to develop a commercially viable product.

In addition, our anticipated reliance on a limited number of third-party manufacturers exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA may have questions regarding any replacement contractor. This may require new testing and regulatory interactions. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of FDA questions, if any.
- Our third-party manufacturers might be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Contract manufacturers may not be able to execute our manufacturing procedures appropriately.
- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.

- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Administration and corresponding state agencies to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our products.
- Our third-party manufacturers could breach or terminate their agreement with us.

Our contract manufacturers would also be subject to the same risks we face in developing our own manufacturing capabilities, as described above. Each of these risks could delay our clinical trials, the approval, if any of our product candidates by the FDA or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenue. In addition, we will rely on third parties to perform release tests on our product candidates prior to delivery to patients. If these tests are not appropriately done and test data are not reliable, patients could be put at risk of serious harm.

Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Our product candidates require many specialty raw materials, including viral vectors that deliver the CAR sequence and electroporation technology that we currently obtain through Cellectis, some of which are manufactured by small companies with limited resources and experience to support a commercial product, and the suppliers may not be able to deliver raw materials to our specifications. In addition, those suppliers normally support blood-based hospital businesses and generally do not have the capacity to support commercial products manufactured under cGMP by biopharmaceutical firms. The suppliers may be ill-equipped to support our needs, especially in non-routine circumstances like an FDA inspection or medical crisis, such as widespread contamination. We also do not have contracts with many of these suppliers, and we may not be able to contract with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key raw materials to support clinical or commercial manufacturing.

In addition, some raw materials are currently available from a single supplier, or a small number of suppliers. We cannot be sure that these suppliers will remain in business or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort to qualify a new supplier could result in additional costs, diversion of resources or reduced manufacturing yields, any of which would negatively impact our operating results. Further, we may be unable to enter into agreements with a new supplier on commercially reasonable terms, which could have a material adverse impact on our business.

If we or our third-party suppliers use hazardous, non-hazardous, biological or other materials in a manner that causes injury or violates applicable law, we may be liable for damages.

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials. We and our suppliers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that we and our suppliers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we and our suppliers cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for

liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Risks Related to Government Regulation

The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing, and distribution of drug products, including biologics, are subject to extensive regulation by the FDA and other regulatory authorities in the United States. We are not permitted to market any biological drug product in the United States until we receive approval of a BLA from the FDA. We have not previously submitted a BLA to the FDA, or similar approval filings to comparable foreign authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety and effectiveness for each desired indication. The BLA must also include significant information regarding the chemistry, manufacturing and controls for the product, including with respect to chain of identity and chain of custody of the product.

We expect the novel nature of our product candidates to create further challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of allogeneic T cell therapies for cancer. We may also request regulatory approval of future CAR-based product candidates by target, regardless of cancer type or origin, which the FDA may have difficulty accepting if our clinical trials only involved cancers of certain origins. The FDA may also require a panel of experts, referred to as an Advisory Committee, to deliberate on the adequacy of the safety and efficacy data to support licensure. The opinion of the Advisory Committee, although not binding, may have a significant impact on our ability to obtain licensure of the product candidates based on the completed clinical trials, as the FDA often adheres to the Advisory Committee's recommendations. Accordingly, the regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

We may also experience delays in completing planned clinical trials for a variety of reasons, including delays related to:

- obtaining regulatory authorization to begin a trial, if applicable;
- the availability of financial resources to commence and complete the planned trials;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining approval at each clinical trial site by an independent IRB;
- recruiting suitable patients to participate in a trial;
- having patients complete a trial, including having patients enrolled in clinical trials dropping out of the trial before the product candidate is manufactured and returned to the site, or return for post-treatment follow-up;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- addressing any patient safety concerns that arise during the course of a trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of qualified materials under cGMPs and applying them on a patient by patient basis for use in clinical trials.

We could also encounter delays if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such trials are being conducted or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions, lack of adequate funding to continue the clinical trial, or based on a recommendation by the Data Safety Monitoring Committee. The FDA's review of our data of our ongoing clinical trials of UCART19 may, depending on the data, also result in the delay, suspension or termination of one or more clinical trials of UCART19, which would also delay or prevent the initiation of our other planned clinical trials. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates.

We expect the product candidates we develop will be regulated as biological products, or biologics, and therefore they may be subject to competition sooner than anticipated.

The Biologics Price Competition and Innovation Act of 2009 (BPCIA) was enacted as part of the Affordable Care Act to establish an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an approved biologic. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the reference product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement the BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of the product candidates we develop that is approved in the United States as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider the subject product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of the reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

The regulatory landscape that will govern our product candidates is uncertain; regulations relating to more established gene therapy and cell therapy products are still developing, and changes in regulatory requirements could result in delays or discontinuation of development of our product candidates or unexpected costs in obtaining regulatory approval.

Because we are developing novel CAR T cell immunotherapy product candidates that are unique biological entities, the regulatory requirements that we will be subject to are not entirely clear. Even with respect to more established products that fit into the categories of gene therapies or cell therapies, the regulatory landscape is still developing. For example, regulatory requirements governing gene therapy products and cell therapy products have changed frequently and may continue to change in the future. Moreover, there is substantial, and sometimes

uncoordinated, overlap in those responsible for regulation of existing gene therapy products and cell therapy products. For example, in the United States, the FDA has established the Office of Tissues and Advanced Therapies (OTAT), formerly known as the Office of Cellular, Tissue and Gene Therapies (OCTGT), within its Center for Biologics Evaluation and Research (CBER) to consolidate the review of gene therapy and related products, and the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER on its review. Gene therapy clinical trials are also subject to review and oversight by an institutional biosafety committee (IBC), a local institutional committee that reviews and oversees basic and clinical research conducted at the institution participating in the clinical trial. Although the FDA decides whether individual gene therapy protocols may proceed, review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical study, even if the FDA has reviewed the study and approved its initiation. Conversely, the FDA can place an IND application on clinical hold even if such other entities have provided a favorable review. Furthermore, each clinical trial must be reviewed and approved by an independent IRB at or servicing each institution at which a clinical trial will be conducted. In addition, adverse developments in clinical trials of gene therapy products conducted by others may cause the FDA or other regulatory bodies to change the requirements for approval of any of our product candidates.

Complex regulatory environments exist in other jurisdictions in which we might consider seeking regulatory approvals for our product candidates, further complicating the regulatory landscape. For example, in the EU a special committee called the Committee for Advanced Therapies (CAT) was established within the EMA in accordance with Regulation (EC) No 1394/2007 on advanced-therapy medicinal products (ATMPs) to assess the quality, safety and efficacy of ATMPs, and to follow scientific developments in the field. ATMPs include gene therapy products as well as somatic cell therapy products and tissue engineered products. In this regard, on May 28, 2014, the EMA issued a recommendation that UCART19 be considered a gene therapy product under Regulation (EC) No 1394/2007 on ATMPs. We believe this recommendation is likely to be applicable to our UCART19 product candidate; however, this recommendation is not definitive until UCART19 obtains regulatory approval for commercialization.

These various regulatory review committees and advisory groups and new or revised guidelines that they promulgate from time to time may lengthen the regulatory review process, require us to perform additional studies, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. Because the regulatory landscape for our CAR T cell immunotherapy product candidates is new, we may face even more cumbersome and complex regulations than those emerging for gene therapy products and cell therapy products. Furthermore, even if our product candidates obtain required regulatory approvals, such approvals may later be withdrawn as a result of changes in regulations or the interpretation of regulations by applicable regulatory agencies.

Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential product to market could decrease our ability to generate sufficient product revenue to maintain our business.

The FDA may disagree with our regulatory plan and we may fail to obtain regulatory approval of our product candidates.

We plan to support the completion of the CALM and PALL clinical trials, which we expect to occur in the second half of 2019, and, assuming positive data, we expect UCART19 to be advanced to potential registrational trials, CALM II and PALL II. The general approach for FDA approval of a new biologic or drug is for the sponsor to provide dispositive data from two well-controlled, Phase 3 clinical studies of the relevant biologic or drug in the relevant patient population. Phase 3 clinical studies typically involve hundreds of patients, have significant costs and take years to complete. We expect CALM II will be designed to evaluate the efficacy of UCART19 in an open-label, international, non-comparative, two-stage, pivotal, multicenter, single-arm clinical trial in adult patients with R/R ALL who have exhausted available treatment options, and PALL II will be designed as an open-label, international, non-comparative, two-stage, pivotal clinical trial of pediatric patients with R/R ALL aged from three

months up to less than 18 years. If the results are sufficiently compelling, we intend to discuss with the FDA submission of a BLA for UCART19. However, we do not have any agreement or guidance from the FDA that our regulatory development plans will be sufficient for submission of a BLA for UCART19. For example, the FDA may require that we conduct a comparative trial against an approved therapy including potentially an approved autologous T cell therapy, which would significantly delay our development timelines and require substantially more resources. In addition, the FDA may only allow us to evaluate patient's that have failed or who are ineligible for autologous therapy, which are extremely difficult patients to treat and patients with advanced and aggressive cancer, and our product candidates may fail to improve outcomes for such patients.

The FDA may grant accelerated approval for our product candidates and, as a condition for accelerated approval, the FDA may require a sponsor of a drug or biologic receiving accelerated approval to perform post-marketing studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical endpoint, and the drug or biologic may be subject to withdrawal procedures by the FDA that are more accelerated than those available for regular approvals. We believe our accelerated approval strategy is warranted given the limited alternatives for patients with R/R ALL, but the FDA may ultimately require a Phase 3 clinical trial prior to approval, particularly since our product candidates represent a novel treatment. In addition, the standard of care may change with the approval of new products in the same indications that we are studying. This may result in the FDA or other regulatory agencies requesting additional studies to show that our product candidate is superior to the new products.

ALLO-647 will also require regulatory review prior to its use in our clinical trials and the FDA may not accept the use of ALLO-647 in our clinical trials in a timely manner or at all. For instance, the FDA may not accept comparability data to alemtuzumab. In addition, we cannot be certain we will be able to successfully obtain regulatory approval of ALLO-647 in a timely manner or at all. Any delays to ALLO-647 approval could delay any approval or commercialization of UCART19 and our other allogeneic T cell product candidates.

Our clinical trial results may also not support approval. In addition, our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our product candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval, including due to the heterogeneity of patient populations;
- we may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a BLA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities will inspect our commercial manufacturing facility and may not approve our facility; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

We may seek orphan drug designation for some or all of our product candidates across various indications, but we may be unable to obtain such designations or to maintain the benefits associated with orphan drug designation, including market exclusivity, which may cause our revenue, if any, to be reduced.

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. In order to obtain orphan drug designation, the request must be made before submitting a BLA. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user-fee waivers. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval of that particular product for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a BLA, to market the same biologic (meaning, a product with the same principal molecular structural features) for the same indication for seven years, except in limited circumstances such as a showing of clinical superiority to the product with orphan drug exclusivity or if FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. As a result, even if one of our product candidates receives orphan exclusivity, the FDA can still approve other biologics that do not have the same principal molecular structural features for use in treating the same indication or disease or the same biologic for a different indication or disease during the exclusivity period. Furthermore, the FDA can waive orphan exclusivity if we are unable to manufacture sufficient supply of our product or if a subsequent applicant demonstrates clinical superiority over our product.

We may seek orphan drug designation for some or all of our product candidates in specific orphan indications in which there is a medically plausible basis for the use of these products. Even if we obtain orphan drug designation, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition, or if a subsequent applicant demonstrates clinical superiority over our products, if approved. In addition, although we may seek orphan drug designation for other product candidates, we may never receive such designations.

A Breakthrough Therapy Designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek a Breakthrough Therapy Designation for our product candidates if the clinical data support such a designation for one or more product candidates. A breakthrough therapy is defined as a drug or biologic that is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug, or biologic in our case, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For product candidates that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Biologics designated as breakthrough therapies by the FDA may also be eligible for priority review.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy Designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under non-expedited the FDA review procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a risk evaluation and mitigation strategy, or REMS, in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and cGCPs for any clinical trials that we conduct post-approval. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any BLA, other marketing application and previous responses to inspectional observations. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control. In addition, the FDA could require us to conduct another study to obtain additional safety or biomarker information. Further, we

will be required to comply with FDA promotion and advertising rules, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved uses (known as "off-label use"), limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet and social media. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party suppliers or manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the current U.S. President's administration may impact our business and industry. Namely, the current U.S. President's administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Negative public opinion and increased regulatory scrutiny of genetic research and therapies involving gene editing may damage public perception of our product candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our product candidates.

The gene-editing technologies that we use are novel. Public perception may be influenced by claims that gene editing is unsafe, and products incorporating gene editing may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in our targeted diseases prescribing our product candidates as treatments in lieu of, or in addition to, existing, more familiar, treatments for which greater clinical data may be available. Any increase in negative perceptions of gene editing may result in fewer physicians prescribing our treatments or may reduce the willingness of patients to utilize our treatments or participate in clinical trials for our product candidates. Increased negative public opinion or more restrictive government regulations in response thereto, would have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for such product candidates.

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

The use of engineered T cells as a potential cancer treatment is a recent development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers and others in the medical community. We expect physicians in the large bone marrow transplant centers to be particularly influential and we may not be able to convince them to use our product candidates for many reasons. For example, certain of the product candidates that we will be developing target a cell surface marker that may be present on cancer cells as well as non-cancerous cells. It is possible that our product candidates may kill these non-cancerous cells, which may result in unacceptable side effects, including death. Additional factors will influence whether our product candidates are accepted in the market, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement and pricing by third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of coverage and adequate reimbursement by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts.

If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue. Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates, if approved, profitably.

Successful sales of our product candidates, if approved, depend on the availability of coverage and adequate reimbursement from third-party payors including governmental healthcare programs, such as Medicare and Medicaid, managed care organizations and commercial payors, among others. Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In addition, because our product candidates represent new approaches to the treatment of cancer, we cannot accurately estimate the potential revenue from our product candidates.

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Obtaining coverage and adequate reimbursement from third-party payors is critical to new product acceptance.

Third-party payors decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. Even if we obtain coverage for a given product, if the resulting reimbursement rates are insufficient, hospitals may not approve our product for use in their facility or third-party payors may require co-payments that patients find unacceptably high. Patients are unlikely to use our product candidates unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our product candidates. Separate reimbursement for the product itself may or may not be available. Instead, the hospital or administering physician may be reimbursed only for providing the treatment or procedure in which our product is used. Further, from time to time, CMS revises the reimbursement systems used to reimburse health care providers, including the Medicare Physician Fee Schedule and Outpatient Prospective Payment System, which may result in reduced Medicare payments. In some cases, private third-party payers rely on all or portions of Medicare payment systems to determine payment rates. Changes to government healthcare programs that reduce payments under these programs may negatively impact payments from private third-party payers, and reduce the willingness of physicians to use our product candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

We intend to seek approval to market our product candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our product candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in Europe, the pricing of biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a product candidate. Some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if government and other third-party payors fail to provide coverage and adequate reimbursement. We expect downward pressure on pharmaceutical pricing to continue. Further, coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

The advancement of healthcare reform may negatively impact our ability to sell our product candidates, if approved, profitably.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our product candidates, if approved, profitably. In particular, in 2010 the Affordable Care Act was enacted. The Affordable Care Act and its implementing regulations, among other things, revised the methodology by which rebates owed by manufacturers to the state and federal government for covered outpatient drugs and certain biologics, including our product candidates, under the Medicaid drug rebate program are calculated, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid drug rebate program, extended the Medicaid drug rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research. Additionally, the Affordable Care Act allowed states to implement expanded eligibility criteria for Medicaid programs, imposed a new Medicare Part D coverage gap discount program, expanded the entities eligible for discounts under the Public Health Service pharmaceutical pricing program and implemented a new Patient-Centered Outcomes Research Institute. We are still unsure of the full impact that the Affordable Care Act will have on our business.

Some of the provisions of the Affordable Care Act have yet to be implemented, and there have been legal and political challenges to certain aspects of the Affordable Care Act. Since January 2017, the U.S. President has signed two Executive Orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the Affordable Care Act. In December 2017, Congress repealed the tax penalty for an individual's failure to maintain Affordable Care Act-mandated health insurance as part of a tax reform bill. Further, on January 22, 2018, the U.S. President signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain Affordable Care Act-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Moreover, the Bipartisan Budget Act of 2018 (BBA), among other things, amends the Affordable Care Act, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". More recently, in July 2018, CMS announced that it is suspending further collections and payments to and from certain Affordable Care Act qualified health plans and health insurance issuers under the Affordable Care Act risk adjustment program pending the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. Congress is continuing to consider legislation that would alter other aspects of the Affordable Care Act. The ultimate content, timing or effect of any healthcare reform legislation on the U.S. healthcare industry is unclear

Further legislation or regulation could be passed that could harm our business, financial condition and results of operations. Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, President Obama signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013 and will stay in effect through 2027, unless additional Congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of

healthcare. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. Such reforms could have an adverse effect on anticipated revenue from product candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop product candidates.

In addition, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient assistance programs, and reform government program reimbursement methodologies for drugs. At the federal level, the U.S. President's administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the current U.S. President's administration released a "Blueprint", or plan, to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services (HHS) has already started the process of soliciting feedback on some of these measures and, at the same, is immediately implementing others under its existing authority. While some proposed measures will require authorization through additional legislation to become effective, Congress and the current U.S. President's administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Risks Related to Our Intellectual Property

We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others.

We depend substantially on our license agreements with Pfizer, Servier and Cellectis. These licenses may be terminated upon certain conditions. Any termination of these licenses could result in the loss of significant rights

and could harm our ability to commercialize our product candidates. For example, we are dependent on our license with Cellectis for gene-editing technology that is necessary to produce our engineered T cells. In addition, Servier in-licenses some of the intellectual property rights they are licensing to us. To the extent these licensors fail to meet their obligations under their license agreements, which we are not in control of, we may lose the benefits of our license agreements with these licensors. In the future, we may also enter into additional license agreements that are material to the development of our product candidates.

Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including those related to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed, or license in the future, prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our market.

We rely upon a combination of patents, trade secret protection and license agreements to protect the intellectual property related to our technologies. Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market.

We have an exclusive collaboration with Servier to develop and commercialize UCART19 and ALLO-501, and we hold the commercial rights to these product candidates in the United States. Under the Servier Agreement, we also have an exclusive option to obtain the same rights to additional product candidates targeting one additional cancer antigen. We also have an exclusive worldwide license from Cellectis to its TALEN gene-editing technology for the development of allogeneic T cell product candidates directed against 15 different cancer antigens. Our collaboration with Servier gives us access to TALEN gene-editing technology for all product candidates under the Servier Agreement. Certain intellectual property which is covered by these agreements may have been developed with funding from the U.S. government. If so, our rights in this intellectual property may be subject to certain research and other rights of the government.

Additional patent applications have been filed, and we anticipate additional patent applications will be filed, both in the United States and in other countries, as appropriate. However, we cannot predict:

- if and when patents will issue;

- the degree and range of protection any issued patents will afford us against competitors including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose.

Composition of matter patents for biological and pharmaceutical products such as CAR-based product candidates often provide a strong form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain that the claims in our pending patent applications covering composition of matter of our product candidates will be considered patentable by the United States Patent and Trademark Office (USPTO) or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products “off-label.” Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the patentability, validity, enforceability or scope thereof, for example through inter partes review (IPR) post-grant review or ex parte reexamination before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions, which may result in such patents being cancelled, narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patents and patent applications we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced. United States patent applications containing or that at any time contained a claim not entitled to a priority date before March 16, 2013 are subject to the “first to file” system implemented by the America Invents Act (2011).

This first to file system will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Furthermore, for United States applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. For United States applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law in view of the passage of the America Invents Act, which brought into effect significant changes to the United States patent laws, including new procedures for challenging patent applications and issued patents.

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we seek to rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are

difficult to enforce and any other elements of our product discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Trade secrets, however, may be difficult to protect. Although we require all of our employees to assign their inventions to us, and require all of our employees and key consultants who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others.

Third parties may assert that we infringe their patents or are otherwise employing their proprietary technology without authorization and may sue us. We are aware of several U.S. patents held by third parties relating to certain CAR compositions of matter and their methods of use. Generally, conducting clinical trials and other development activities in the United States is not considered an act of infringement. If and when UCART19 or another CAR-based product candidate is approved by the FDA, third parties may then seek to enforce their patents by filing a patent infringement lawsuit against us. Patents issued in the United States by law enjoy a presumption of validity that can be rebutted only with evidence that is “clear and convincing,” a heightened standard of proof. We may not be able to prove in litigation that any patent enforced against us is invalid.

Additionally, there may be third-party patents of which we are currently unaware with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of our product candidates, constructs or molecules used in or formed during the manufacturing process, or any final product itself, the holders of any such patents may be able to block our ability to commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held not infringed, unpatentable, invalid or unenforceable. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, including combination therapy or patient selection methods, the holders of any such patent may be able to block our ability to develop and commercialize the product candidate unless we obtained a license or until such patent expires or is finally determined to be held not infringed, unpatentable, invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Defense of these

claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business and may impact our reputation. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Presently we have rights to the intellectual property, through licenses from third parties and under patent applications that we own or will own, to develop UCART19 and our other product candidates. Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license or use these proprietary rights.

Our product candidates may also require specific formulations to work effectively and efficiently and these rights may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, which would harm our business. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Interference proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or interference proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its first effective filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from biosimilar or generic medications. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. If we do not have sufficient patent life to protect our products, our business and results of operations will be adversely affected.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

We may in the future be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Issued patents covering our product candidates could be found unpatentable, invalid or unenforceable if challenged in court or the USPTO.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include IPR, ex parte re-examination and post grant review in the United States, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover and protect our product candidates. The outcome following legal assertions of unpatentability, invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of unpatentability, invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the 2013 case, *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. While we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents.

We may not be able to protect our intellectual property rights throughout the world.

We may not be able to protect our intellectual property rights outside the United States. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do

not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biopharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to This Offering and Ownership of Our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering there has been no public market for shares of our common stock. An active trading market for our shares may never develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The initial public offering price for our common stock was determined through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of the common stock after the offering. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of our ongoing and planned clinical trials of our product candidates or any future clinical trials we or Servier may conduct, or changes in the development status of our product candidates;
- our or Servier's decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse results or delays in clinical trials;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such

filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;

- our failure to commercialize our product candidates;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our manufacturers or suppliers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to immuno-oncology or related to the use of our product candidates;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- the size and growth of our initial cancer target markets;
- our ability to successfully treat additional types of cancers or at different stages;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immunotherapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and the Nasdaq Global Select Market and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, our executive officers, directors, and 5% stockholders beneficially owned approximately 47.7% of our voting stock as of June 30, 2018, and, upon the closing of this offering, that same group will continue to beneficially own a significant percentage of our outstanding voting stock. Accordingly, even after this offering, these stockholders will have the ability to influence us through this ownership position and significantly affect the outcome of all matters requiring stockholder approval. For example, these stockholders may be able to significantly affect the outcome of elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The initial public offering price is substantially higher than the net tangible book value per share of our common stock. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the book value of our tangible assets after subtracting our liabilities. As a result, investors purchasing

common stock in this offering will incur immediate dilution of $11.31 per share, based on the initial public offering price of $17.00 per share. Further, investors purchasing common stock in this offering will contribute approximately 39.1% of the total amount invested by stockholders since our inception, but will own only approximately 14.1% of the shares of common stock outstanding after giving effect to this offering.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering and the exercise of stock options granted to our employees. To the extent outstanding options are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act enacted in April 2012. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a “smaller reporting company” which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (Exchange Act), which will require, among other things, that we file with the Securities and Exchange

Commission (SEC) annual, quarterly and current reports with respect to our business and financial condition**.** In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and the Nasdaq Global Select Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as "say on pay" and proxy access. Emerging growth companies are permitted to implement many of these requirements over a longer period and up to five years from the pricing of this offering. We intend to take advantage of this legislation for as long as we are permitted to do so. Once we become required to implement these requirements, we will incur additional compliance-related expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to continue to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on shares of common stock outstanding as of June 30, 2018 and assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) for purposes of determining the number of shares that will be issued upon automatic share settlement of the 2018 Notes in connection with the closing of this offering, upon the closing of this offering we will have outstanding a total of 113,688,982 shares of common stock. Of these shares, only the shares of common stock sold in this offering by us (excluding any shares sold to our directors and officers in the directed share program), plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction in the public market immediately following this offering. The underwriters, however, may, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

We expect that the lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under the 2018 Plan will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act of 1933, as amended (Securities Act). If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering and assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), the holders of 69,974,239 shares of our common stock

will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the 180-day lock-up agreements described above. See "Description of Capital Stock—Registration Rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to the 2018 Plan, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

Pursuant to the 2018 Plan, certain amendments of which became effective on the business day prior to the public trading date of our common stock, our management is authorized to grant stock options to our employees, directors and consultants.

Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under the 2018 Plan is 9,335,850 shares. Additionally, the number of shares of our common stock reserved for issuance under the 2018 Plan will automatically increase on January 1 of each year, beginning on January 1, 2019 and continuing through and including January 1, 2028, by 5% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and amended and restated bylaws, which are to become effective at or prior to the closing of this offering, contain provisions that could delay or prevent a

change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer, or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and
- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no securities or industry analysts commence coverage of our company, the trading price for our stock would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements about:

- the success, cost, timing and potential indications of our product development activities and clinical trials, including the ongoing clinical trials of UCART19;
- the timing of our planned IND submissions to the FDA for our product candidates, including ALLO-501 and ALLO-715;
- the timing of the initiation, enrollment and completion of planned clinical trials;
- our ability to obtain and maintain regulatory approval of our product candidates, including UCART19, ALLO-501 and ALLO-715 in any of the indications for which we plan to develop them, and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to complete the clinical trials of any of our product candidates, including UCART19, ALLO-501 and ALLO-715;
- our plans to research, develop and commercialize our product candidates, including UCART19, ALLO-501 and ALLO-715;
- our ability to attract and retain collaborators with development, regulatory and commercialization expertise;
- the size of the markets for our product candidates, and our ability to serve those markets;
- our ability to successfully commercialize our product candidates, including UCART19, ALLO-501 and ALLO-715;
- the rate and degree of market acceptance of our product candidates, including UCART19, ALLO-501 and ALLO-715;
- our ability to develop and maintain sales and marketing capabilities, whether alone or with potential future collaborators;
- regulatory developments in the United States and foreign countries;
- the performance of our third-party suppliers and manufacturers;
- the success of competing therapies that are or become available;
- our ability to attract and retain key scientific or management personnel;
- our use of the proceeds from this offering;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates and our ability to operate our business without infringing on the intellectual property rights of others.

In some cases, you can identify these statements by terms such as "anticipate," "believe," "could," "estimate," "expects," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" or the

negative of those terms, and similar expressions that convey uncertainty of future events or outcomes. These forward-looking statements reflect our management's beliefs and views with respect to future events and are based on estimates and assumptions as of the date of this prospectus and are subject to risks and uncertainties. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements. We discuss many of the risks associated with the forward-looking statements in this prospectus in greater detail under the heading "Risk Factors." Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

You should carefully read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $249.5 million (or approximately $287.4 million if the underwriters' option to purchase additional shares is exercised in full) from the sale of the shares of common stock offered by us in this offering, based on an assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the net proceeds to us from this offering by approximately $14.9 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a 1.0 million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us by $15.8 million, assuming the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, to create a public market for our common stock and to facilitate our future access to the public equity markets. We anticipate that we will use the net proceeds of this offering as follows:

- approximately $25 million to fund our portion of the costs for the ongoing UCART19 CALM and PALL clinical trials;
- approximately $40 million to fund our portion of the costs for the planned UCART19 CALM II and PALL II clinical trials;
- approximately $40 million to fund our portion of the costs for the planned clinical trial of ALLO-501;
- approximately $60 million to fund the planned clinical trial of ALLO-715;
- approximately $45 million to fund the transition services from Pfizer and the expansion of our facilities, including the build-out of our headquarters in South San Francisco, California;
- approximately $35 million to fund our internal research and development capabilities to advance new product candidates; and
- the remainder for working capital and other general corporate purposes, including the additional costs associated with being a public company.

We may also use a portion of the net proceeds from this offering to in-license, acquire, or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

We believe that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will enable us to fund our operating expenses and capital expenditure requirements through at least the next 36 months from the date of this offering and through the completion of the CALM and PALL clinical trials, the Phase 1 clinical trial of ALLO-501 and the Phase 1 clinical trial of ALLO-715. We may require additional funding to be able to complete the CALM II and PALL II clinical trials, and any Phase 2 portion of the ALLO-501 and ALLO-715 clinical trials. It is difficult to predict the cost and timing required to complete our clinical trials due to, among other factors, our lack of experience with initiating and conducting clinical trials, the rate of subject enrollment in our clinical trials, filing requirements with various regulatory agencies, clinical trial results, and the actual costs of manufacturing and supplying our product candidates.

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to obtain additional financing, the progress, cost and

results of our preclinical and clinical development programs, and whether we are able to enter into future licensing or collaboration arrangements. We may find it necessary or advisable to use the net proceeds for other purposes, and our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds from this offering.

Pending their use, we plan to invest the net proceeds from this offering in short- and medium-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of June 30, 2018 as follows:

- on an actual basis;
- on a pro forma basis to reflect (i) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering, (ii) the conversion of all outstanding shares of our convertible preferred stock as of June 30, 2018 into 61,655,922 shares of our common stock immediately upon the closing of this offering, (iii) the receipt of $150.0 million in cash proceeds from our convertible preferred stockholders in July and August 2018 related to subscriptions receivable, (iv) the receipt of $116.9 million in net cash proceeds from the sale of the 2018 Notes in September 2018 (which is reflected in cash and cash equivalents, common stock, and additional paid-in capital) and (v) the settlement of the 2018 Notes into 8,318,317 shares of our common stock and an aggregate charge to accumulated deficit of $24.5 million, of which $21.2 million relates to the loss resulting in the change in fair value of the 2018 Notes from the issuance date through their settlement and $3.3 million relates to the recognition of debt issuance costs that will be expensed on the 2018 Notes issuance date, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering; and
- on a pro forma as adjusted basis to give effect to (i) the pro forma adjustments set forth above and (ii) our issuance and sale of 16,000,000 shares of our common stock in this offering at the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this information together with the sections entitled “Selected Financial Data,” “Description of Capital Stock” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes included elsewhere in this prospectus.

	As of June 30, 2018		
	Actual	Pro Forma	Pro Forma as Adjusted(1)
	(Unaudited) (In thousands, except share and per share data)		
Cash and cash equivalents	$ 143,927	$ 410,827	$ 660,287
Convertible preferred stock, $0.001 par value; 11,743,987 shares authorized, issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	$ 411,052	$ —	$ —
Subscriptions receivable from preferred stockholders	(150,000)	—	—
Stockholders’ (deficit) equity:			
Preferred stock, $0.001 par value; no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.001 par value; 101,000,000 shares authorized, 27,714,743 shares issued and outstanding, actual; 200,000,000 shares authorized, 97,688,982 shares issued and outstanding, pro forma; 200,000,000 shares authorized, 113,688,982 shares issued and outstanding, pro forma as adjusted	28	98	114
Additional paid-in capital	8,054	560,448	809,892
Accumulated deficit	(137,522)	(162,034)	(162,034)
Total stockholders’ (deficit) equity	(129,440)	398,512	647,972
Total capitalization	$ 131,612	$ 398,512	$ 647,972

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total capitalization and total stockholders’ equity by approximately $14.9 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, at the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total capitalization and total stockholders’ equity by approximately $15.8 million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The outstanding share information in the table above excludes, as of June 30, 2018, the following:

- 7,344,225 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2018, with a weighted-average exercise price of $2.27 per share;
- 2,347,275 shares of common stock issuable upon the exercise of outstanding stock options granted after June 30, 2018, at a weighted-average exercise price of $6.87 per share;
- 9,335,850 shares of common stock reserved for future issuance under the 2018 Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering (including 1,112,753 shares of common stock reserved for issuance under our Prior Plan, which shares will be added to the 2018 Plan upon its effectiveness); and

- 1,160,000 shares of common stock reserved for issuance under the ESPP, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of June 30, 2018, we had a historical net tangible book deficit of $(130.5) million, or $(4.71) per share of common stock. Our historical net tangible book deficit per share represents the amount of our total tangible assets less total liabilities and convertible preferred stock net of subscriptions receivable, divided by the total number of shares of common stock outstanding at June 30, 2018.

After giving effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock into 61,655,922 shares of our common stock in connection with the closing of this offering, (ii) the receipt of $150.0 million in cash proceeds from our convertible preferred stockholders in July and August 2018 related to subscriptions receivable and (iii) the receipt of $116.9 million in net cash proceeds from the sale of the 2018 Notes in September 2018 and the settlement of the 2018 Notes into 8,318,317 shares of our common stock and an aggregate charge to accumulated deficit of $24.5 million, of which $21.2 million relates to the loss resulting in the change in fair value of the 2018 Notes from the issuance date through their settlement and $3.3 million relates to the recognition of debt issuance costs that will be expensed on the 2018 Notes issuance date. The assumed number of shares of common stock noted above is based on the midpoint of the price range set forth on the cover page of this prospectus.

Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering. After giving further effect to the sale of shares of our common stock that we are offering at the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2018 was $646.9 million, or approximately $5.69 per share. This amount represents an immediate increase in pro forma net tangible book value of $1.62 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $11.31 per share to new investors participating in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution:

Assumed initial public offering price per share		$17.00
Historical net tangible book deficit per share at June 30, 2018, before giving effect to this offering	$(4.71)	
Pro forma increase in historical net tangible book value per share attributable to conversion of all outstanding shares of convertible preferred stock and of all 2018 Notes	8.78	
Pro forma net tangible book value per share at June 30, 2018, before giving effect to this offering.	4.07	
Increase in pro forma net tangible book value per share attributable to investors participating in this offering	1.62	
Pro forma as adjusted net tangible book value per share after this offering		5.69
Dilution per share to new investors participating in this offering		$11.31

Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as

adjusted net tangible book value per share after this offering by approximately $14.9 million, and dilution in pro forma net tangible book value per share to new investors by approximately $0.87, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Similarly, each increase of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase our pro forma as adjusted net tangible book value per share after this offering by approximately $15.8 million and decrease the dilution to investors participating in this offering by approximately $(0.09) per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Each decrease of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the pro forma as adjusted net tangible book value per share after this offering by approximately $(15.8) million and increase the dilution to investors participating in this offering by approximately $0.09 per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of our common stock in full in this offering, the pro forma as adjusted net tangible book value after the offering would be $5.90 per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $0.21 per share and the dilution per share to new investors would be $11.10 per share, in each case assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus).

To the extent that outstanding options with an exercise price per share that is less than the pro forma as adjusted net tangible book value per share are exercised, new investors will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

The following table summarizes on a pro forma as adjusted basis as of June 30, 2018, the number of shares of common stock purchased or to be purchased from us, the total consideration paid or to be paid to us in cash and the average price per share paid by existing securityholders for shares issued prior to or in connection with the closing of this offering and the price to be paid by new investors in this offering. The calculation below is based on the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. As the table below shows, investors participating in this offering will pay an average price per share substantially higher than our existing securityholders paid.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing securityholders	97,688,982	85.9%	$423,522,314	60.9%	$ 4.34
Investors participating in this offering	16,000,000	14.1	272,000,000	39.1	$ 17.00
Total	113,688,982	100.0%	$695,522,314	100.0%	

Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) each of the total consideration paid by new investors and the total consideration paid by all stockholders by $16.0 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us, as

set forth on the cover page of this prospectus, would increase (decrease) each of the total consideration paid by investors participating in this offering and the total consideration paid by all stockholders by $17.0 million, assuming the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The foregoing tables and calculations exclude:

- 7,344,225 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2018, with a weighted-average exercise price of $2.27 per share;
- 2,347,275 shares of common stock issuable upon the exercise of outstanding stock options granted after June 30, 2018, at a weighted-average exercise price of $6.87 per share;
- 9,335,850 shares of common stock reserved for future issuance under the 2018 Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering (including 1,112,753 shares of common stock reserved for issuance under our Prior Plan which shares will be added to the 2018 Plan upon its effectiveness); and
- 1,160,000 shares of common stock reserved for issuance under the ESPP, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering.

We may choose to raise additional capital through the sale of equity or debt due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent we issue additional shares of common stock or other equity or convertible debt securities in the future, there will be further dilution to investors participating in this offering.

SELECTED FINANCIAL DATA

The following tables set forth our selected financial data as of, and for the periods ended on, the dates indicated. We have derived the selected statement of operations and comprehensive loss data for the period from November 30, 2017 (inception) to December 31, 2017 and balance sheet data as of December 31, 2017 from our audited financial statements included elsewhere in this prospectus. We have derived the selected statement of operations and comprehensive loss data for the six months ended June 30, 2018 and the balance sheet data as of June 30, 2018 from our unaudited interim financial statements included elsewhere in this prospectus. Our unaudited interim financial statements have been prepared on the same basis as our audited financial statements and, in our opinion, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of our unaudited interim financial statements. The selected financial data included in this section are not intended to replace the financial statements and related notes included elsewhere in this prospectus. You should read the selected financial data together with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected for any other period in the future, and our interim results are not necessarily indicative of the results to be expected for the full year or any other period.

	Period from November 30, 2017 (Inception) to December 31, 2017	Six Months Ended June 30, 2018 (Unaudited)
	(In thousands, except share and per share data)	
Statements of Operations and Comprehensive Loss Data:		
Operating expenses:		
Research and development	$ —	$ 122,486
General and administrative	2	15,123
Total operating expenses	2	137,609
Loss from operations	(2)	(137,609)
Interest and other income, net	—	110
Net and comprehensive loss	$ (2)	$ (137,499)
Net loss per share, basic and diluted[1]	$ 0.00	$ (9.42)
Weighted-average shares used in computing net loss per share, basic and diluted[1]	26,249,993	14,600,379
Pro forma net loss per share, basic and diluted (unaudited)[1]		$ (3.12)
Weighted-average shares used in computing pro forma net loss per share, basic and diluted (unaudited)[1]		44,011,274

(1) See Notes 2 and 11 to our financial statements included elsewhere in this prospectus for a description of how we compute basic and diluted net loss per share and basic and diluted unaudited pro forma net loss per share, and the weighted-average number of shares used in the computation of these per share amounts.

	As of December 31, 2017	As of June 30, 2018 (Unaudited)
	(In thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ —	$ 143,927
Total assets	—	148,845
Working capital(1)	—	129,519
Total liabilities	2	17,233
Convertible preferred stock	—	411,052
Subscriptions receivable from preferred stockholders	—	(150,000)
Accumulated deficit	(23)	(137,522)
Total stockholders' (deficit) equity	(2)	(129,440)

(1) We define working capital as current assets less current liabilities. See our financial statements and related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section entitled "Selected Financial Data" and our financial statements and related notes appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the section entitled "Risk Factors," our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. You should carefully read the section entitled "Risk Factors" to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see the section entitled "Special Note Regarding Forward-Looking Statements."

Overview

We are a clinical stage immuno-oncology company pioneering the development and commercialization of genetically engineered allogeneic T cell therapies for the treatment of cancer. We are developing a pipeline of off-the-shelf T cell product candidates that are designed to target and kill cancer cells. Our engineered T cells are allogeneic, meaning they are derived from healthy donors for intended use in any patient, rather than from an individual patient for that patient's use, as in the case of autologous T cells. We believe this key difference will enable us to deliver readily available treatments faster, more reliably, at greater scale, and to more patients.

In collaboration with Servier, we are developing UCART19, a CAR T cell product candidate targeting CD19. UCART19 is being studied in clinical trials in patients with R/R B-cell precursor ALL, and we expect UCART19 to be advanced to potential registrational trials in the second half of 2019. We also plan to submit an IND in the first half of 2019 for our second allogeneic anti-CD19 CAR T cell product candidate, ALLO-501, for the treatment of NHL. In addition, we have a deep pipeline of allogeneic CAR T cell product candidates targeting multiple promising antigens in a host of hematological malignancies and solid tumors. For example, we plan to submit an IND in 2019 for an allogeneic CAR T cell product candidate targeting BCMA for the treatment of multiple myeloma. We believe our management team's experience in immuno-oncology and specifically in CAR T cell therapy will help drive the rapid development and, if approved, the commercialization of these potentially curative therapies for patients with aggressive cancer.

We believe our allogeneic platform has the potential to be the next revolution in cancer treatment. Our allogeneic approach involves engineering healthy donor T cells, which we believe will allow for the creation of an inventory of off-the-shelf products that can be delivered to a larger portion of eligible patients throughout the world.

We were incorporated in November 2017. In April 2018, we acquired certain assets from Pfizer, including strategic license and collaboration agreement and other intellectual property related to the development and administration of allogeneic CAR T cells for the treatment of cancer. We have an exclusive collaboration with Servier to develop and commercialize UCART19 and ALLO-501, and we hold the commercial rights to these product candidates in the United States. Under the Servier Agreement, we also have an exclusive option to obtain the same rights to additional product candidates targeting one additional cancer antigen. We also have an exclusive worldwide license from Cellectis to its TALEN gene-editing technology for the development of allogeneic T cell product candidates directed against 15 different cancer antigens. Our collaboration with Servier gives us access to TALEN gene-editing technology for all product candidates under the Servier Agreement. In connection with the Pfizer asset acquisition, we hired 39 employees from Pfizer, who are primarily research and technical operation employees and were leading the research and development of our product candidates and next generation gene engineering and cell engineering technologies at Pfizer.

Since our inception through June 30, 2018, our operations have been financed primarily by net proceeds of $149.3 million from the sale of our convertible preferred stock. As of June 30, 2018, we had $143.9 million in cash and cash equivalents. In July and August 2018, we received $150.0 million in cash proceeds from our convertible preferred stockholders related to subscriptions receivable. In September 2018, we sold and issued $120.2 million aggregate principal amount of 2018 Notes and received net cash proceeds of $116.9 million. The 2018 Notes do not accrue interest and will automatically settle into shares of our common stock in connection with the closing of this offering at a settlement price equal to 85% of the initial public offering price per share. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

Since inception, we have had significant operating losses, the vast majority of which are attributable to acquired intangible in-process research and development costs pursuant to the Asset Contribution Agreement with Pfizer. Our net loss and comprehensive loss was $137.5 million for the six months ended June 30, 2018 and as of June 30, 2018, we had an accumulated deficit of $137.5 million. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures, and to a lesser extent, general and administrative expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable and accrued expenses. We expect to continue to incur net losses for the foreseeable future, and we expect our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. In particular, we expect our expenses and losses to increase as we continue our development of, and seek regulatory approvals for, our product candidates, and begin to commercialize any approved products, as well as hire additional personnel, develop commercial infrastructure, pay fees to outside consultants, lawyers and accountants, and incur increased costs associated with being a public company such as expenses related to services associated with maintaining compliance with Nasdaq listing rules and SEC requirements, insurance and investor relations costs. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials and our expenditures on other research and development activities.

Based upon our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents as of June 30, 2018 and the receipt of $150.0 million in cash proceeds from our convertible preferred stockholders in July and August 2018 related to subscriptions receivable and $116.9 million in net cash proceeds from the sale of the 2018 Notes in September 2018, will enable us to fund our operating expenses and capital expenditure requirements through at least the next 36 months from the date of this offering. To date, we have not had any products approved for sale and have not generated any product sales. We do not expect to generate any revenues from product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. As a result, until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through equity offerings, debt financings or other capital sources, including potentially collaborations, licenses and other similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies. If we are unable to raise capital, we will need to delay, reduce or terminate planned activities to reduce costs.

We have invested resources to optimize our manufacturing process, including the development of improved analytical methods. We plan to continue to invest in process science, product characterization and manufacturing to continuously improve our production and supply chain capabilities over time. Our product candidates are designed and manufactured via a platform comprised of defined unit operations and technologies. The process is gradually developed from small to larger scales, incorporating compliant procedures to create cGMP conditions. Notwithstanding this platform based model, each product is unique and for each new product candidate, a developmental phase is necessary to individually customize each engineering step and to create a robust

procedure that can later be implemented in a cGMP environment to ensure the production of clinical batches. This work is performed in our research and development environment to evaluate and assess variability in each step of the process in order to define the most reliable production conditions.

We expect to continue to rely on a third-party CMO and may rely on CMOs and other third parties for the manufacturing and processing of our product candidates in the future. We believe the use of contract manufacturing and testing for the first clinical product candidates is cost-effective and has allowed us to rapidly prepare for clinical trials in accordance with our development plans. We expect third-party manufacturers will be capable of providing and processing sufficient quantities of our product candidates to meet anticipated clinical trial demands. In addition, we plan to secure and build our own manufacturing facility for clinical and commercial supply and are currently searching for a suitable location for such facility. We plan to create a robust supply chain with redundant sources of supply comprised of both internal and external infrastructure.

Our Research Development and License Agreements

Asset Contribution Agreement with Pfizer

In April 2018, we entered into an Asset Contribution Agreement (Pfizer Agreement) with Pfizer pursuant to which we acquired certain assets and assumed certain liabilities from Pfizer, including the Cellectis Agreement and the Servier Agreement described below and other intellectual property for the development and administration of CAR T cells for the treatment of cancer. See Notes 5 and 6 to our financial statements included elsewhere in this prospectus for further description of the Pfizer Agreement.

Research Collaboration and License Agreement with Cellectis

In June 2014, Pfizer entered into a Research Collaboration and License Agreement (Cellectis Agreement) with Cellectis. In April 2018, Pfizer assigned the agreement to us pursuant to the Pfizer Agreement. See Note 6 to our financial statements included elsewhere in this prospectus for further description of the Cellectis Agreement.

Exclusive License and Collaboration Agreement With Servier

In October 2015, Pfizer entered into an Exclusive License and Collaboration Agreement (Servier Agreement) with Servier to develop, manufacture and commercialize certain allogeneic CD19 CAR products, including UCART19, in the United States with the option to obtain the rights over additional products, including other allogenic anti-CD19 CAR product candidates. In April 2018, Pfizer assigned the agreement to us pursuant to the Pfizer Agreement. See Note 6 to our financial statements included elsewhere in this prospectus for further description of the Servier Agreement.

Transition Services Agreement

In connection with the closing of the Pfizer asset purchase transaction, we entered into the TSA with Pfizer in April 2018, pursuant to which Pfizer provides us with certain (i) research and development services, including services relating to testing, studies, and clinical trials, project management services, laboratory equipment and operations services, animal care services, data storage services and regulatory strategy services, and (ii) general and administrative services, including business technology services, compliance services, finance/accounting services, and procurement, manufacturing and supply chain services, with respect to the assets that we purchased from Pfizer. Under the TSA, Pfizer also provides us with certain facilities and facility management services. The services are provided by certain employees of Pfizer as independent contractors of Allogene. We believe that it is helpful for Pfizer to provide such services to us under the TSA to help facilitate the efficient operation of our business after the asset purchase and as we transition to becoming a stand-alone public company.

Pfizer began providing the services in May 2018 and will continue providing the services for a period of time ranging from one to 12 months, depending on the service, which we refer to as the Service Period, with the exception of the services relating to the facilities, which Pfizer shall provide for 18 months. The services and employees for each service may be amended from time to time by the parties. Under the TSA, we estimate we will pay Pfizer an aggregate of $11.2 million in 2018 and $2.6 million in 2019.

The TSA provides that Pfizer will indemnify us for damages that result from Pfizer's gross negligence, willful misconduct or material breach of the TSA and that we will indemnify Pfizer for damages that arise from the provision of the services, unless such damages result from Pfizer's gross negligence, willful misconduct or material breach. We are also required to indemnify Pfizer for damages that arise from our material breach of the TSA.

The term of the agreement began in April 2018 and ends on the earlier to occur of the last date that Pfizer is required to provide the services or the termination of the TSA in accordance with the agreement. Either party may terminate the agreement upon 60 days' prior written notice in the event of the other party's uncured material breach. Pfizer may terminate the TSA upon 10 days' prior written notice in the event of for our non-payment, if left uncured. We may terminate our use of the facilities with 60 days' written notice.

Components of Operating Results

Operating Expenses

Research and Development

To date, our research and development expenses have related primarily to discovery efforts and preclinical and clinical development of our product candidates. Research and development expenses for the six months ended June 30, 2018 primarily consist of acquired in-process research and development recognized as a non-cash expense related to the Asset Contribution Agreement with Pfizer. Research and development expenses consist primarily of costs incurred for the development of our most advanced product candidate, UCART19, which include:

- expenses incurred under agreements with our collaboration partners and third-party contract organizations, investigative clinical trial sites that conduct research and development activities on our behalf, and consultants;
- costs related to production of clinical materials, including fees paid to contract manufacturers;
- laboratory and vendor expenses related to the execution of preclinical and clinical trials;
- employee-related expenses, which include salaries, benefits and stock-based compensation; and
- facilities and other expenses, which include expenses for rent and maintenance of facilities, depreciation and amortization expense and other supplies.

Other significant research and development costs include costs relating to facilities and overhead costs, including payments to Pfizer under the TSA for use of their facilities. We expense all research and development costs in the periods in which they are incurred. We accrue for costs incurred as the services are being provided by monitoring the status of the project and the invoices received from our external service providers. We adjust our accrual as actual costs become known. Where contingent milestone payments are due to third parties under research and development arrangements or license agreements, the milestone payment obligations are expensed when the milestone results are achieved.

We are required to reimburse Servier for 60% of the costs associated with the development of UCART19, including for the CALM and PALL clinical trials. We accrue for costs incurred by monitoring the status of the CALM and PALL clinical trials and the invoices received from Servier. We adjust our accrual as actual costs become known.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase over the next several years as our UCART19, ALLO-501 and ALLO-715 clinical programs progress and as we seek to initiate clinical trials of additional product candidates. We also expect to incur increased research and development expenses as we selectively identify and develop additional product candidates. However, it is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates.

The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors that include, but are not limited to, the following:

- per patient trial costs;
- the number of patients that participate in the trials;
- the number of sites included in the trials;
- the countries in which the trials are conducted;
- the length of time required to enroll eligible patients;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up; and
- the efficacy and safety profile of the product candidates.

In the case of UCART19, we are also dependent on Servier's ability to manage the CALM and PALL clinical trials. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential.

Because our product candidates are still in clinical and preclinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of product candidates or whether, or when, we may achieve profitability. Due to the early stage nature of our programs, we do not track costs on a project by project basis. As our programs become more advanced, we intend to we intend to track the external and internal cost of each program.

General and Administrative

General and administrative expenses consist primarily of salaries and other staff-related costs, including stock-based compensation for options granted and modification of shares of common stock issued to our founders to include vesting conditions, for personnel in executive, commercial, finance, accounting, legal, investor relations, facilities, business development and human resources functions. Other significant costs include costs relating to facilities and overhead costs, including payments to Pfizer under the TSA for use of their facilities, legal fees relating to corporate and patent matters, insurance, investor relations costs, fees for accounting and consulting services, and other general and administrative costs. General and administrative costs are expensed as incurred, and we accrue for services provided by third parties related to the above expenses by monitoring the status of services provided and receiving estimates from our service providers, and adjusting our accruals as actual costs become known.

We expect our general and administrative expenses to increase over the next several years to support our continued research and development activities, manufacturing activities, potential commercialization of our product candidates and the increased costs of operating as a public company. These increases are anticipated to include increased costs related to the hiring of additional personnel, developing commercial infrastructure, fees to outside consultants, lawyers and accountants, and increased costs associated with being a public company such as expenses related to services associated with maintaining compliance with Nasdaq listing rules and SEC requirements, insurance and investor relations costs.

Interest and Other Income, Net

Interest and other income, net consists of interest earned on our cash equivalents during the period.

Results of Operations

Period from November 30, 2017 (Inception) to December 31, 2017

The following sets forth our results of operations for the period from November 30, 2017 (inception) to December 31, 2017 (in thousands):

	Period From November 30, 2017 (Inception) to December 31, 2017
Operating expenses:	
Research and development	$ —
General and administrative	2
Total operating expenses	2
Loss from operations	(2)
Interest and other income, net	—
Net and comprehensive loss	$ (2)

From the period from November 30, 2017 (inception) to December 31, 2017, we incurred $2,000 in start-up costs to establish our company. Principal operations commenced in April 2018 when we acquired certain assets from Pfizer and completed a Series A and A-1 preferred stock financing.

Six Months Ended June 30, 2018

The following sets forth our results of operations for the six months ended June 30, 2018 (in thousands):

	Six Months Ended June 30, 2018 (Unaudited)
Operating expenses:	
Research and development	$ 122,486
General and administrative	15,123
Total operating expenses	137,609
Loss from operations	(137,609)
Interest and other income, net	110
Net and comprehensive loss	$ (137,499)

Research and Development Expenses

Research and development expenses were $122.5 million for the six months ended June 30, 2018. Research and development consisted primarily of a non-cash charge of $109.4 million associated with acquired in-process research and development assets with no alternative future use purchased from Pfizer, $4.7 million in external costs for payments to our research and development partners related to product candidate development activities and manufacturing support for UCART19 clinical trials, $2.3 million for personnel-related costs, and $1.9 million for expenses incurred under the TSA with Pfizer.

General and Administrative Expenses

General and administrative expenses were $15.1 million for the six months ended June 30, 2018. General and administrative expenses consisted primarily of $8.0 million in stock-based compensation expense resulting from the modification of our founders' shares of common stock to include vesting conditions, $3.6 million in start-up costs, including legal fees and professional consulting service fees, related to the establishment of our company, $1.3 million for personnel-related costs and $1.3 million for expenses incurred under the TSA with Pfizer.

Interest and Other Income, Net

Interest and other income, net was $0.1 million for the six months ended June 30, 2018 and consisted of interest earned on our cash equivalents during the period.

Liquidity and Capital Resources

Since our inception through June 30, 2018, our operations have been financed primarily by net proceeds of $149.3 million from the sale of our convertible preferred stock. As of June 30, 2018, we had $143.9 million in cash and cash equivalents. In July and August 2018, we received $150.0 million in cash proceeds from our convertible preferred stockholders related to subscriptions receivable. In September 2018, we received $116.9 million in net cash proceeds from the sale of the 2018 Notes. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

We have incurred losses since our inception in November 2017 and, as of June 30, 2018, we had an accumulated deficit of $137.5 million. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures related to UCART19, ALLO-501 and ALLO-715, and other research efforts, and to a lesser extent, general and administrative expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable and accrued expenses.

Our product candidates may never achieve commercialization and we anticipate that we will continue to incur losses for the foreseeable future. We expect that our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. As a result, until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings or other capital sources, including potentially collaborations, licenses and other similar arrangements. Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, costs relating to the build-out of our headquarters and manufacturing facility, license payments or milestone obligations that may arise, laboratory and related supplies, clinical costs, manufacturing costs, legal and other regulatory expenses and general overhead costs.

Based upon our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents as of June 30, 2018 and the receipt of $150.0 million in cash proceeds from

our convertible preferred stockholders related to subscription receivables in July and August 2018 and $116.9 million in net cash proceeds from the sale of the 2018 Notes in September 2018, will enable us to fund our operating expenses and capital expenditure requirements through at least the next 36 months from the date of this offering. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. We will continue to require additional financing to advance our current product candidates through clinical development, to develop, acquire or in-license other potential product candidates and to fund operations for the foreseeable future. We will continue to seek funds through equity offerings, debt financings or other capital sources, including potentially collaborations, licenses and other similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. If we do raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders, including investors in this offering, will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies. If we are unable to raise capital, we will need to delay, reduce or terminate planned activities to reduce costs.

Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. Our future funding requirements will depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing our lead product candidates or any future product candidates, and conducting nonclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining regulatory approvals or clearances for our lead product candidates or any future product candidates;
- the number and characteristics of any additional product candidates we develop or acquire;
- the timing of any cash milestone payments if we successfully achieve certain predetermined milestones;
- the cost of manufacturing our lead product candidates or any future product candidates and any products we successfully commercialize, including costs associated with building-out our manufacturing capabilities;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of any such agreements that we may enter into;
- the expenses needed to attract and retain skilled personnel;
- the costs associated with being a public company; and
- the timing, receipt and amount of sales of any future approved or cleared products, if any.

Further, our operating plans may change, and we may need additional funds to meet operational needs and capital requirements for clinical trials and other research and development activities. We currently have no credit facility or committed sources of capital. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated product development programs.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Period from November 30, 2017 (Inception) to December 31, 2017	Six Months Ended June 30, 2018 (Unaudited)
Net cash provided by (used in):		
Operating activities	$ —	$ (6,042)
Investing activities	—	(2,634)
Financing activities	—	152,603
Net increase in cash and cash equivalents	$ —	$ 143,927

Operating Activities

During the six months ended June 30, 2018, cash used in operating activities of $6.0 million was attributable to a net loss of $137.5 million, partially offset by non-cash charges of $117.9 million and a net change of $13.5 million in our net operating assets and liabilities. The non-cash charge consisted primarily of acquired in-process research and development expense resulting from the asset acquisition from Pfizer of $109.4 million and $8.1 million of stock-based compensation. The change in operating assets and liabilities was primarily due to a $12.6 million increase in accrued and other liabilities resulting from the timing of payments made to our collaboration partners and Pfizer and accrued professional and consulting services, a $1.3 million increase in accounts payable driven by increased professional fees and a $0.3 million increase in prepaid expenses and other current liabilities.

Investing Activities

During the six months ended June 30, 2018, cash used by investing activities of $2.6 million was related to cash transaction costs incurred in the asset acquisition from Pfizer of $2.1 million and the purchase of property and equipment of $0.5 million.

Financing Activities

During the six months ended June 30, 2018, cash provided by financing activities of $152.6 million was related to net proceeds of $149.3 million from the issuance of our Series A and A-1 convertible preferred stock and $3.3 million from the issuance of common stock in connection with stock option exercises.

Contractual Obligations and Commitments

We did not have any contractual obligations, including debt obligations, capital lease obligations, operating lease obligations, purchase obligations or other long-term liabilities, as of December 31, 2017 or June 30, 2018.

In August 2018, we entered into an operating lease agreement for our new headquarters in South San Francisco. The operating lease term is expected to commence on March 1, 2019 and expires ten years from the commencement date. The initial annual base rent is approximately $4.1 million, and such amount will increase by 3.5% annually on each anniversary of the commencement date. Payments associated with this operating lease agreement will result in operating lease obligations of $3.4 million in 2019, $4.2 million in 2020, $4.4 million in 2021, $4.5 million in 2022, and $33.6 million through 2029.

Commitments

Our commitments primarily consist of obligations under our agreements with Pfizer, Cellectis and Servier. Under these agreements we are required to make milestone payments upon successful completion of certain regulatory and sales milestones on a target-by-target and country-by-country basis. The payment obligations under the license agreements are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and we will be required to make development milestone payments and royalty payments in connection with the sale of products developed under these agreements. As of June 30, 2018, we were unable to estimate the timing or likelihood of achieving the milestones or making future product sales. For additional information regarding our agreements, see "—Our Research Development and License Agreements" above.

Additionally, we have entered into an agreement with third-party contract manufacturers for the manufacture and processing of certain of our product candidates for clinical testing purposes, and we have entered and will enter into other contracts in the normal course of business with contract research organizations for clinical trials and other vendors for other services and products for operating purposes. These agreements generally provide for termination or cancellation, and, other than for costs already incurred.

We also have a Change in Control and Severance Plan that require the funding of specific payments, if certain events occur, such as a change of control and the termination of employment without cause.

Off-Balance Sheet Arrangements

During the periods presented, we did not have, nor do we currently have, any off-balance sheet arrangements as defined under SEC rules.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. We held cash and cash equivalents of $143.9 million as of June 30, 2018. We generally hold our cash in interest-bearing money market accounts. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term maturities of our cash equivalents and the low risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles (U.S. GAAP). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Accrued Research and Development Costs

We accrue liabilities for estimated costs of research and development activities conducted by our collaboration partners and third-party service providers, which include the conduct of preclinical and clinical

studies, and contract manufacturing activities. We recorded the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced, and includes these costs in the accrued and other current liabilities on the balance sheets and within research and development expense on the statements of operations.

We accrue for these costs based on factors such as estimates of the work completed and budget provided and in accordance with agreements established with our collaboration partners and third-party service providers. We make significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, we adjust its accrued liabilities. We have not experienced any material differences between accrued costs and actual costs incurred since our inception.

Research and Development Expenses

We expense research and development costs as incurred. Acquired intangible assets are expensed as research and development costs if, at the time of payment, the technology is under development; is not approved by the FDA or other regulatory agencies for marketing; has not reached technical feasibility; or otherwise has no foreseeable alternative future use.

Research and development expenses also include costs incurred for internal and sponsored and collaborative research and development activities. Research and development costs consist of salaries and benefits, including associated stock-based compensation, and laboratory supplies and facility costs, as well as fees paid to other entities that conduct certain research and development activities on our behalf. Costs associated with co-development activities performed under the various license and collaboration agreements are included in research and development expenses.

Stock-Based Compensation

We recognize compensation costs related to stock-based awards granted to employees and directors, including stock options, based on the estimated fair value of the awards on the date of grant. We estimate the grant date fair value, and the resulting stock-based compensation, using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is generally recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards.

The Black-Scholes option-pricing model requires the use of subjective assumptions to determine the fair value of stock-based awards. These assumptions include:

- *Fair Value of Common Stock*—Historically, for all periods prior to this initial public offering, the fair value of the shares of common stock underlying our share-based awards was estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, valuations of our common stock prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*.
- *Expected Term*—The expected term represents the period that stock-based awards are expected to be outstanding. The expected term for option grants is determined using the simplified method. The simplified method deems the expected term to be the midpoint between the vesting date and the contractual life of the stock-based awards.
- *Expected Volatility*—Since we have been a privately held company and do not have any trading history for our common stock, the expected volatility is estimated based on the average volatility for comparable publicly traded biotechnology companies over a period equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, stage in the life cycle or area of specialty. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of option.
- *Expected Dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

For the six months ended June 30, 2018, stock-based compensation related to stock options was $53,000. As of June 30, 2018, we had $13.8 million of total unrecognized stock-based compensation which we expect to recognize over a weighted-average period of 3.7 years. In addition, we recorded $8.0 million in stock-based compensation as a result of the modification of our founders' shares of common stock to include vesting conditions.

Subsequent to June 30, 2018, we granted stock options to purchase up to an aggregate of 2,347,275 shares of our common stock to our employees and consultants, at a weighted-average exercise price of $6.87 per share.

For our valuations performed prior to June 30, 2018, we used the OPM Backsolve method. In an option pricing method (OPM) framework, the backsolve method for inferring the equity value implied by a recent financing transaction involves making assumptions for the expected time to liquidity, volatility and risk-free rate and then solving for the value of equity such that value for the most recent financing equals the amount paid. This method was selected as management concluded that the contemporaneous financing transaction was an arm's-length transaction. Furthermore, as of the valuation date prior to June 30, 2018, we were at an early stage of development and future liquidity events were difficult to forecast.

For our valuation performed subsequent to June 30, 2018, we used a hybrid method of the OPM and the Probability-Weighted Expected Return Method (PWERM). PWERM considers various potential liquidity outcomes. Our approach included the use of different timing of initial public offering scenarios and a scenario assuming continued operation as a private entity. Under the hybrid OPM and PWERM method, the per share value calculated under the OPM and PWERM are weighted based on expected exit outcomes and the quality of the information specific to each allocation methodology to arrive at a final estimated fair value per share value of the common stock before a discount for lack of marketability is applied.

Given the absence of a public trading market for our common stock, our board of directors exercised their judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including contemporaneous valuations performed by an independent third party, our stage of development, important developments in our operations, the prices at which we sold shares of our preferred stock, the rights, preferences and privileges of our preferred stock relative to those of our common stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies, and the lack of liquidity of our common stock, among other factors. After the closing of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of the grant. Our board of directors intended all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the grant date.

Based upon the assumed initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover of this prospectus), the aggregate intrinsic value of options outstanding as of June 30, 2018 was $108.2 million, all of which related to unvested options.

Emerging Growth Company Status

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or

(ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2016-09, *Stock Compensation—Improvements to Employee Share-Based Payment Accounting* (ASU 2016-09). ASU 2016-09 was issued to simplify accounting guidance by identifying, evaluating, and improving areas for which cost and complexity can be reduced while maintaining or improving the usefulness of the information provided to users of financial statements. The areas affected by ASU 2016-09 include accounting for income taxes, classification of excess tax benefits on the statement of cash flows, minimum statutory tax withholding requirements, and classification of employee taxes paid on the statement of cash flows when an employer withholds shares for tax-withholding purposes. In addition, under this guidance, an entity can make an accounting policy election to either estimate the number of awards that are expected to vest or account for forfeitures when they occur. We adopted this guidance beginning with the period from November 30, 2017 (inception) to December 31, 2017, and elected to account for forfeitures as they occur.

In January 2017, the FASB issued Accounting Standards Update No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* (ASU 2017-01). ASU 2017-01 clarifies the framework for determining whether an integrated set of assets and activities meets the definition of a business. The revised framework establishes a screen for determining whether an integrated set of assets and activities is a business and narrows the definition of a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated. This new accounting guidance is effective for public or private companies for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The new accounting guidance should be applied prospectively on or after the effective date. We adopted this guidance on January 1, 2018.

In June 2018, the FASB issued Accounting Standards Update No. 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting* (ASU 2018-07). ASU 2018-07 simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. Some of the areas of simplification apply only to nonpublic entities. For all entities, the amendments are effective for annual periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted for any entity in any interim or annual period for which financial statements haven’t been issued or made available for issuance, but not before an entity adopts ASC 606. We early adopted this guidance on January 1, 2018.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases* (ASU 2016-02) provides accounting guidance for both lessee and lessor accounting models. The principle of ASU 2016-02 is that a lessee should recognize the assets and liabilities that arise from leases. Lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based on the liability. For income statement purposes, ASU 2016-02 requires leases to be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. ASU 2016-02 is effective for public companies for fiscal years beginning after December 15, 2018. For all other entities, this standard is effective for annual reporting periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted. The new standard must be adopted using a modified-retrospective transition and provides for certain practical expedients. We are currently evaluating the effects of the adoption of this ASU on our financial statements.

BUSINESS

Overview

We are a clinical stage immuno-oncology company pioneering the development and commercialization of genetically engineered allogeneic T cell therapies for the treatment of cancer. We are developing a pipeline of off-the-shelf T cell product candidates that are designed to target and kill cancer cells. Our engineered T cells are allogeneic, meaning they are derived from healthy donors for intended use in any patient, rather than from an individual patient for that patient's use, as in the case of autologous T cells. We believe this key difference will enable us to deliver readily available treatments faster, more reliably, at greater scale, and to more patients.

In collaboration with Servier, we are developing UCART19, a chimeric antigen receptor (CAR) T cell product candidate targeting CD19. UCART19 is being studied in clinical trials in patients with relapsed or refractory (R/R) B-cell precursor acute lymphoblastic leukemia (ALL), and we expect UCART19 to be advanced to potential registrational trials in the second half of 2019. We also plan to submit an investigational new drug application (IND) in the first half of 2019 for our second allogeneic anti-CD19 CAR T cell product candidate, ALLO-501, for the treatment of R/R non-Hodgkin lymphoma (NHL). In addition, we have a deep pipeline of allogeneic CAR T cell product candidates targeting multiple promising antigens in a host of hematological malignancies and solid tumors. For example, we plan to submit an IND in 2019 for an allogeneic CAR T cell product candidate targeting B-cell maturation antigen (BCMA) for the treatment of multiple myeloma. We believe our management team's experience in immuno-oncology and specifically in CAR T cell therapy will help drive the rapid development and, if approved, the commercialization of these potentially curative therapies for patients with aggressive cancer.

CAR T cell therapy, a form of cancer immunotherapy, has recently emerged as a revolutionary and potentially curative therapy for patients with hematologic cancers, including refractory cancers. In 2017, two autologous anti-CD19 CAR T cell therapies, Kymriah, developed by Novartis International AG (Novartis), and Yescarta, developed by Kite Pharma, Inc. (Kite), were approved by the U.S. Food and Drug Administration (FDA) for the treatment of R/R B-cell precursor ALL (Kymriah) and R/R large B-cell lymphoma (Yescarta). Autologous CAR T cell therapies are manufactured individually for the patient's use by modifying the patient's own T cells outside the body, causing the T cells to express CARs. The entire manufacturing process is dependent on the viability of each patient's T cells and takes approximately two to four weeks. As seen in the registrational trials for Kymriah and Yescarta, up to 31% of intended patients ultimately did not receive treatment primarily due to interval complications from the underlying disease during manufacturing or manufacturing failures.

We believe our allogeneic platform has the potential to be the next revolution in cancer treatment. Our allogeneic approach involves engineering healthy donor T cells, which we believe will allow for the creation of an inventory of off-the-shelf products that can be delivered to a larger portion of eligible patients throughout the world. These potential benefits led our Executive Chairman, Arie Belldegrun, M.D., FACS, who was previously the Chairman and Chief Executive Officer at Kite, and our President and Chief Executive Officer, David Chang, M.D., Ph.D., previously Chief Medical Officer and Executive Vice President of Research and Development at Kite, to found our company with the driving purpose of accelerating the development of allogeneic CAR T cell therapies. Dr. Belldegrun and Dr. Chang led the development of Yescarta at Kite, achieving FDA approval in just 34 months after the submission of an IND. Shortly before Yescarta approval, in October 2017, Gilead Sciences, Inc. (Gilead) acquired Kite for $11.9 billion.

Our Pipeline

We are currently developing a pipeline of multiple allogeneic CAR T cell product candidates utilizing protein engineering, gene editing, gene insertion and advanced proprietary T cell manufacturing technologies. Our most advanced product candidate, UCART19, is an engineered allogeneic CAR T cell therapy that targets

CD19, a protein expressed on the cell surface of B cells and a validated target for B cell driven hematological malignancies. We are also developing engineered allogeneic CAR T cell product candidates for multiple myeloma, other blood cancers and solid tumors. Our pipeline is represented in the diagram below.

1 *May not be required if Phase 2 is a registrational clinical trial.*
2 *Servier holds ex-US commercial rights.*
3 *To enable expansion and persistence of allogeneic CAR T product candidates.*

Our lead product candidates include:

- *UCART19.* In 2016, our collaboration partner, Servier, initiated two clinical trials of UCART19: the CALM trial and the PALL trial. The CALM trial is a Phase 1, open-label, dose-escalation clinical trial in adult patients with R/R ALL. The PALL trial is a Phase 1, open-label, clinical trial in pediatric patients with R/R ALL. In June 2018, interim results from 18 patients in the CALM and PALL clinical trials were presented at the 23rd European Hematology Association Annual Congress. As of April 2018, 13 out of 16 evaluable patients, or 81%, achieved a complete response (CR) and 12 of those patients, or 92%, achieved a minimum residual disease negative CR (MRD- CR). The most common adverse events were related to cytokine release syndrome (CRS) and were generally manageable. Two mild graft-versus-host disease (GvHD) cases in the skin were observed and resolved. We expect UCART19 to be advanced to potential registrational trials in the second half of 2019.
- *ALLO-501.* We plan to submit an IND in the first half of 2019 for our second allogeneic anti-CD19 CAR T cell product candidate, ALLO-501, for the treatment of patients with R/R NHL. The manufacturing process for ALLO-501 is different than the one employed for UCART19, but the two product candidates are identical in molecular design.
- *ALLO-715.* We plan to submit an IND in 2019 for an allogeneic CAR T cell product candidate, ALLO-715, targeting BCMA for the treatment of patients with R/R multiple myeloma. Several clinical studies of third-party autologous CAR T cell therapies targeting BCMA have produced promising results in this indication.
- *ALLO-647.* We are developing an anti-CD52 monoclonal antibody, ALLO-647, which is designed to be used prior to infusing our other product candidates as part of the lymphodepletion regimen. We believe ALLO-647 can reduce the likelihood of a patient's immune system rejecting the engineered allogeneic T cells, and may create a window of persistence during which our engineered allogeneic T cells can actively target and destroy cancer cells.

Our Approach

Our allogeneic T cell development strategy has four key pillars: (1) developing product candidates to minimize the risk of GvHD, a condition where allogeneic T cells can recognize the patient's normal tissue as foreign and cause damage, (2) creating a window of persistence that may enable allogeneic T cells to expand in patients, (3) building a leading manufacturing platform and (4) leveraging next generation technologies to improve the functionality of allogeneic CAR T cells. We use Cellectis's TALEN gene-editing technology with the goal of limiting the risk of GvHD by engineering T cells to lack functional T cell receptors (TCRs) that are no longer capable of recognizing a patient's normal tissue as foreign. With the goal of enhancing the expansion and persistence of our engineered allogeneic T cells, we use TALEN to inactivate the CD52 gene in donor T cells and an anti-CD52 monoclonal antibody to deplete CD52 expressing T cells in patients while sparing the therapeutic allogeneic T cells. We believe this enables a window of persistence for the infused allogeneic T cells to actively target and destroy cancer cells. We are also developing ALLO-647, our own anti-CD52 monoclonal antibody. Our off-the-shelf approach is dependent on state-of-the-art manufacturing processes, and we are building a technical operations organization with fully integrated in-house expertise in clinical and commercial engineered T cell manufacturing. Finally, we plan to leverage next generation technologies to develop more potent allogeneic T cell products candidates that can potentially be used at a lower cell dose, thereby allowing more efficient manufacturing of the allogeneic T cells. We believe next generation technologies will also allow us to develop allogeneic T cell therapies for the treatment of solid tumors, which to date have been difficult to treat because of the lack of validated targets and tumor microenvironments that can impair the activity of T cells.

Our History and Team

We believe we have established a leadership position in allogeneic T cell therapy. In April 2018, we acquired certain assets from Pfizer Inc. (Pfizer), including strategic license and collaboration agreements and other intellectual property related to the development and administration of allogeneic CAR T cells for the treatment of cancer. We have an exclusive collaboration with Servier to develop and commercialize UCART19 and ALLO-501, and we hold the commercial rights to these product candidates in the United States. Under the Servier Agreement, we also have an exclusive option to obtain the same rights to additional product candidates targeting one additional cancer antigen. We also have an exclusive worldwide license from Cellectis to its TALEN gene-editing technology for the development of allogeneic T cell product candidates directed against 15 different cancer antigens. Our collaboration with Servier gives us access to TALEN gene-editing technology for all product candidates under the Servier Agreement. In connection with the Pfizer asset acquisition, we hired 39 employees from Pfizer, who are primarily research and technical operation employees and were leading the research and development of our product candidates and next generation gene engineering and cell engineering technologies at Pfizer.

In April 2018, we initiated a $300.0 million Series A and A-1 preferred stock financing, with the first $150.0 million received in April and the second $150.0 million received in July and August, with investments from BellCo Capital, Gilead, Pfizer, Regents of the University of California, funds affiliated with TPG Global, LLC, partners of Two River, and Vida Ventures, LLC. In September 2018, we sold and issued $120.2 million aggregate principal amount of convertible promissory notes (2018 Notes). The 2018 Notes do not accrue interest and will automatically settle into shares of our common stock in connection with the closing of this offering at a settlement price equal to 85% of the initial public offering price per share.

Our world-class management team has significant experience in immuno-oncology and in progressing products from early stage research to clinical trials, and ultimately to regulatory approval and commercialization. In particular, Dr. Belldegrun's experience in T cell therapy dates back to his time at the National Cancer Institute as a research fellow in surgical oncology and immunotherapy with Steven Rosenberg, M.D., Ph.D, a recognized pioneer in immuno-oncology. Our President and Chief Executive Officer, Dr. Chang, served as Executive Vice President of Kite and held senior leadership roles at Amgen, Inc. (Amgen). Moreover, both Dr. Belldegrun and Dr. Chang led the development and approval of Yescarta at Kite. Additionally, our Chief Technical Officer,

Alison Moore, Ph.D., was previously Senior Vice President, Process Development at Amgen, where she led the development, deployment and oversight of manufacturing for approximately 80 multi-modality assets. Dr. Moore has over 25 years of experience in biotechnology, including in the immuno-oncology space leading process development of Amgen's comprehensive bi-specific T cell engager production platform.

Our Strategy

Our goal is to maintain and build upon our leadership position in allogeneic T cell therapy. We plan to rapidly develop and, if approved, commercialize allogeneic T cell products for the treatment of cancer that can be delivered faster, more reliably and at greater scale than autologous T cell therapies. We believe achieving this goal could result in allogeneic T cell therapy becoming a standard of care in cancer treatment and enable us to make potentially curative therapies more readily accessible to more patients throughout the world. Key elements of our strategy include:

- ***Capitalize on a validated target and our first mover advantage in engineered allogeneic anti-CD19 CAR T cell product candidates.*** Autologous anti-CD19 CAR T cell therapies, such as Kymriah and Yescarta, have emerged as potentially curative therapies for B-cell lymphomas and leukemias. We believe developing allogeneic CAR T cell product candidates targeting CD19, such as UCART19 and ALLO-501, is the next frontier in delivering potentially curative therapies against B-cell lymphomas and leukemias, including ALL and NHL. We plan to support Servier in advancing the CALM and PALL trials in ALL and initiating potential registrational trials for UCART19 after completion of the CALM and PALL trials in the second half of 2019. We also plan to submit an IND in the first half of 2019 for ALLO-501 in NHL. We believe having the first anti-CD19 allogeneic CAR T cell product candidate in the clinic gives us a first mover advantage in efforts to obtain approval of and commercialize anti-CD19 allogeneic CAR T cell product candidates in B-cell lymphoma and leukemia indications.
- ***Expand our leadership position within hematologic indications.*** In addition to UCART19, we plan to advance our near-term pipeline against additional hematological targets where there remains a high unmet need. For example, we are developing ALLO-715, an allogeneic CAR T cell product candidate targeting BCMA. We believe BCMA is a promising target, as early results from clinical trials of third-party autologous CAR T cell therapeutic candidates targeting BCMA have been compelling. We plan to submit an IND for a clinical trial of ALLO-715 for the treatment of patients with R/R multiple myeloma in 2019. In addition to advancing UCART19, ALLO-501 and ALLO-715, we plan to develop additional allogeneic T cell product candidates targeting other antigens found on hematologic malignancies, including ALLO-819 targeting Flt3 for the treatment of acute myeloid leukemia (AML).
- ***Build state-of-the-art gene engineering and cell manufacturing capabilities.*** Manufacturing allogeneic T cell product candidates involves a series of complex and precise steps. We believe a critical component to our success will be to leverage and expand our proprietary manufacturing know-how, expertise and capacity. Accordingly, we plan to build our own manufacturing facility. We believe establishing our own fully integrated manufacturing operations and infrastructure will allow us to improve the manufacturing process, limit our reliance on contract manufacturing organizations (CMOs) and more rapidly advance product candidates.
- ***Leverage next generation technologies to advance our platform and expand into solid tumor indications with high unmet need.*** We have a broad portfolio of solid tumor targets, including CD70 for the treatment of renal cell cancer and DLL3 for the treatment of small cell lung cancer and other aggressive neuroendocrine tumors. We plan to leverage next generation technologies to make more potent allogeneic CAR T cells and improve the characteristics of our product candidates. For example, we are exploring ways to improve the functionality of our product candidates, such as modulating cytokines or chemokines to augment expansion, persistence and trafficking of allogeneic T cells. We are also exploring gene-editing technologies to allow site-specific integration of CARs, which could potentially provide more consistent product characteristics and enhanced T cell functions. In addition,

we continually survey the scientific and industry landscape for opportunities to license, partner or acquire technologies that may help us advance current or new T cell therapies for the benefit of patients.

Allogeneic T Cell Therapy

The Immune System and Cancer

White blood cells are a component of the immune system and are responsible for defending the body against infectious pathogens and other foreign material. T cells are a type of white blood cell and are involved in both sensing and killing infected or abnormal cells, including cancer cells, as well as coordinating the activation of other cells in an immune response.

T cells can be distinguished from other white blood cells by T cell receptors present on their cell surface. These receptors contribute to tumor surveillance by helping T cells recognize and destroy cancerous cells once identified. When T cells with cancer-specific receptors are absent, present in low numbers, of poor quality or rendered inactive by suppressive mechanisms employed by tumor tissue, cancer may grow and spread to various organs. In addition, standard of care treatments, such as chemotherapy regimens, can damage the patient's immune system, thereby inhibiting the ability of T cells to kill cancer.

Engineered T Cell Therapies

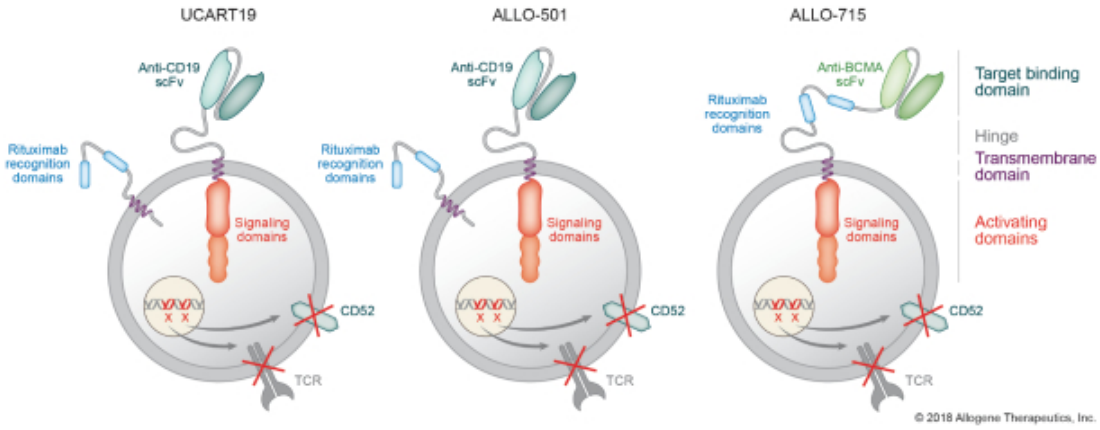
Engineered T cell therapy is a type of immunotherapy treatment whereby human T cells are removed from the body and engineered to express CARs which, when infused into a patient, recognize and destroy cancer cells in a more targeted manner.

Chimeric Antigen Receptors (CARs)

CARs are engineered molecules that, when present on the surface of a T cell, enable the T cell to recognize specific proteins or antigens that are present on the surface of other cells. The CAR in UCART19, ALLO-501 and ALLO-715 is comprised of a single chain protein that contains the following elements:

- *Target Binding Domain:* At one end of the CAR is a target binding domain that is specific to a target antigen. This domain extends out onto the surface of the engineered T cell, where it can recognize the target antigens. The target binding domain consists of a single-chain variable fragment (scFv) of an antibody comprising variable domains of heavy and light chains joined by a short linker.
- *Transmembrane Domain and Hinge:* This middle portion of the CAR links the scFv target binding domain to the activating elements inside the cell. This transmembrane domain "anchors" the CAR in the cell's membrane. In addition, the transmembrane domain may also interact with other transmembrane proteins that enhance CAR function. The hinge domain, which extends to the exterior of the cell, connects the transmembrane domain to scFv and provides structural flexibility to facilitate optimal binding of scFv to the target antigen on the cancer cell's surface.
- *Activating Domains:* The other end of transmembrane domain, inside the T cell, is connected to two contiguous domains responsible for activating the T cell when the CAR binds to the target cell. The CD3z domain delivers an essential primary signal within the T cell, and the 41BB domain delivers an additional, co-stimulatory signal. Together, these signals trigger T cell activation, resulting in proliferation of the CAR T cells and killing of the cancer cell. In addition, activated CAR T cells stimulate the local secretion of cytokines and other molecules that can recruit and activate additional immune cells to potentiate killing of the cancer cells.

The figure below shows the constructs that support our three lead programs: UCART19, ALLO-501 and ALLO-715.



Allogeneic T Cell Therapies: The Next Revolution

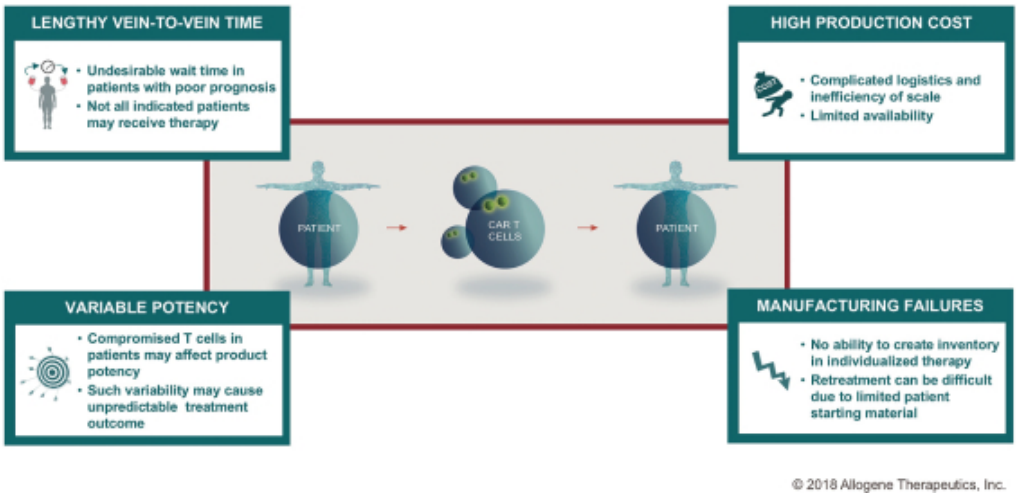
There are two primary approaches to engineered T cell therapy: autologous and allogeneic. Autologous therapies use engineered T cells derived from the individual patient, while allogeneic therapies use engineered T cells derived from healthy donor T cells.

The autologous approach, pioneered by Novartis and Kite, has been highly successful in engineering patients' immune systems to fight cancer, in particular CD19 positive cancers, resulting in significant remission rates. Autologous products are manufactured by first collecting a patient's white blood cells, through a process known as leukapheresis, separating the T cells from the patient's blood sample and proliferating the isolated T cells. After the cells have multiplied, the CAR construct is virally transduced into the T cells and the engineered T cells are then propagated until a sufficient number of cells are available for infusion into the patient. Finally, the engineered T cells are frozen, and then shipped back to the clinical center for administration to the patient. The process from leukapheresis to delivery to the clinical center takes approximately two to four weeks.

While the autologous approach has been revolutionary, demonstrating compelling efficacy in many patients, it is burdened by the following key limitations:

- ***Lengthy Vein-to-Vein Time***. Due to the individualized manufacturing process, patients must wait approximately two to four weeks to be treated with their engineered cells. As a result, in the registrational trials for Yescarta and Kymriah, up to 31% of intended patients ultimately did not receive treatment primarily due to interval complications from the underlying disease during manufacturing or manufacturing failures.
- ***Variable Potency***. In many cases, patients have T cells that have been damaged or weakened due to prior chemotherapy or hematopoietic stem-cell transplant. Compromised T cells may not proliferate well during manufacturing or may produce cells with insufficient potency that cannot be used for patient treatment, resulting in manufacturing failures, or that can show poor expansion and activity in patients. In addition, the individualized nature of autologous manufacturing, together with the variability in patients' T cells, may lead to variable potency of manufactured T cells, and this variability may cause unpredictable treatment outcomes.
- ***Manufacturing Failures***. Autologous cell manufacturing sometimes encounters production failures. This can mean that a patient never receives treatment, as additional patient starting material may not be available or the patient may no longer be eligible due to advanced disease. Furthermore, retreatment can be difficult due to a limited supply of usable patient starting material.

- ***High Production Cost***. The delivery of autologous T cell therapy is complicated due to the individualized nature of manufacturing, which allows only one patient to be treated from each manufacturing run and requires dedicated infrastructure to maintain a strict chain of custody and chain of identity of patient-by-patient material collection, manufacturing and delivery. The complex logistics add significant cost to the process and limit the ability to scale. Additionally, the collection of T cells through leukapheresis from each individual patient results in a time consuming and costly step in the autologous process. In part due to these logistics, autologous treatment is currently only available at select centers.



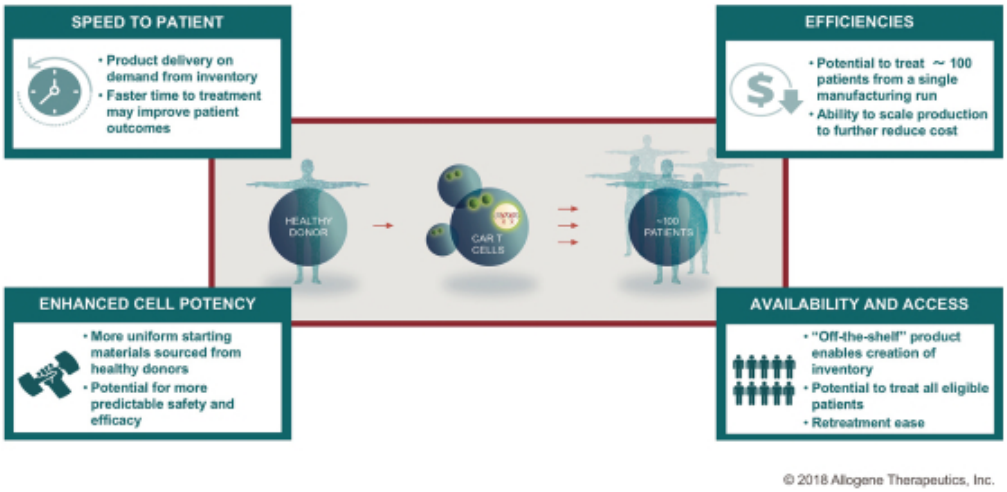
We believe our allogeneic platform has the potential to be the next revolution in cancer treatment. Allogeneic engineered T cells are manufactured in a similar manner as autologous, but with two key differences: (1) allogeneic T cells are derived from T cells from healthy donors and (2) allogeneic T cells must be genetically engineered to minimize the risk of GvHD and avoid being destroyed by the patient's immune system.

Our approach is designed to provide the same intended curative outcome as autologous therapy, while offering the following potential key advantages:

- ***Availability and Access***. We believe that we can scale to approximately 100 doses of an allogeneic product from T cells from one healthy donor that can be used in any eligible patients. Because our allogeneic product candidates are designed to be frozen and available off-the-shelf, they could potentially be readily shipped and administered to patients around the world. We believe having an inventory of off-the-shelf allogeneic T cell products can also facilitate delivering multiple product doses to a patient over time as well as enable treatment with multiple different engineered allogeneic T cell products directed to different cancer targets in a patient.
- ***Speed to Patient***. Many patients with aggressive cancer or rapidly progressing cancer that is refractory to existing therapies may not have multiple weeks to wait for autologous T cell treatment. Our allogeneic approach has the potential to create off-the-shelf product inventory, which could enable dosing of patients within days of prescription. This would represent a significant reduction in patient wait time, potentially allowing the treatment of patients who are too sick to wait for the autologous therapy, and could improve patient outcomes.
- ***Enhanced Cell Consistency and Potency***. Our manufacturing process produces therapies from selected, screened and tested T cells from healthy donors. These donor cells are potentially superior for engineered cellular therapy as compared to T cells from patient donors who have undergone prior

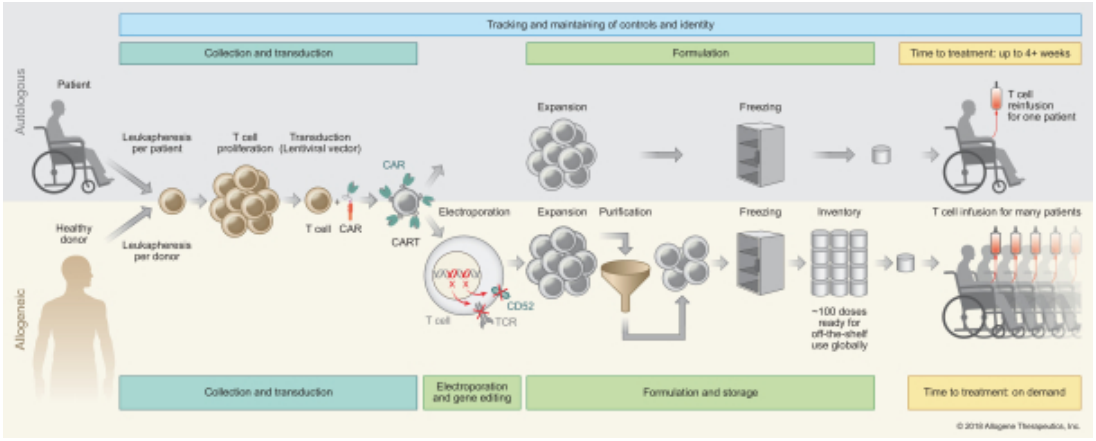
chemotherapy or hematopoietic stem-cell transplant, which can damage or weaken T cells. In addition, greater consistency of the product may yield more predictable treatment outcomes.

- ***Streamlined Manufacturing and Cost Efficiencies***. We are building an efficient and scalable manufacturing process and organization. The allogeneic approach utilizes healthy donor T cells which we believe provides enhanced scalability, reduces costs of engineered T cell therapy and reduces costs to the healthcare system as our allogeneic approach does not require us to collect and track T cells from each individual patient.



Manufacturing Allogeneic T Cells

There are similarities as well as key differences between the processes for allogeneic and autologous T cell manufacturing, as illustrated in the figure below.



The three primary steps to creating our engineered allogeneic CAR T cells are: (1) collection and transduction, (2) gene editing, and (3) purification, formulation, and storage.

Step 1. Collection and Transduction

The starting material for our allogeneic T cell products is white blood cells from a healthy donor, which are collected using a standard blood bank procedure known as leukapheresis. The collected cells are then screened, tested, and shipped to a central processing facility, where the T cells are isolated and stored frozen, creating an inventory of starting healthy donor cells for manufacturing.

The manufacturing process starts by thawing frozen healthy donor T cells, which are then stimulated to proliferate and transduced with a viral vector to integrate the CAR sequence into the T cell genome. The CAR sequence directs the expression of CAR proteins on the cell surface that allows the transduced T cells to recognize and bind to a target molecule that is present on cancer cells.

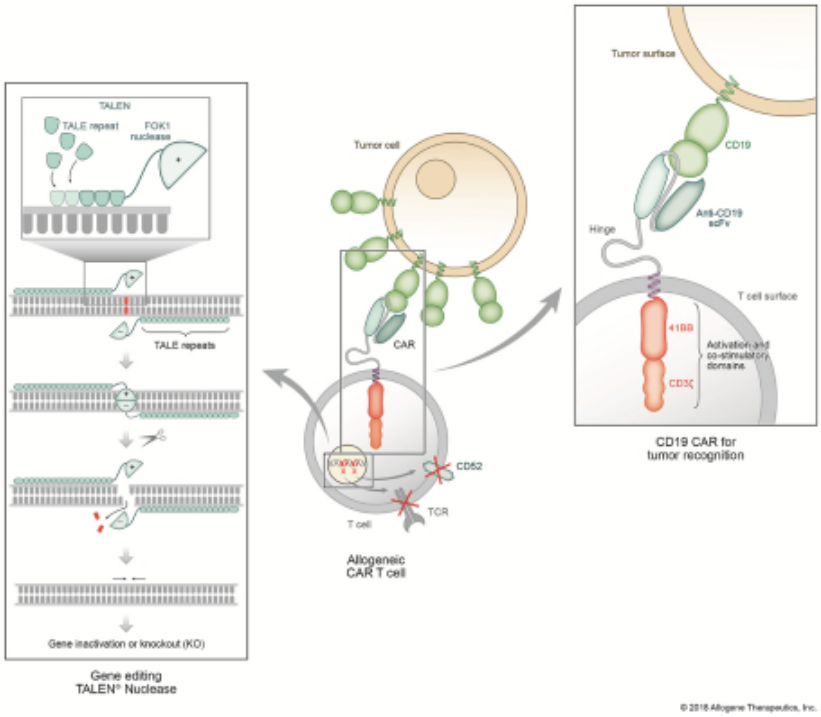
We can also concurrently add additional genes to these cells that confer specific properties. For example, we can add an off-switch by expressing proteins that can make T cells susceptible to certain drugs, such as anti-CD20 monoclonal antibodies, and enable us to deplete our engineered T cells if needed by administering such drugs to the patient.

Step 2. Gene Editing

Next, we use Cellectis's electroporation and TALEN technologies for gene editing of T cells. TALEN is a class of DNA cutting enzymes derived by fusing the DNA-cutting domain of a nuclease to the DNA-binding domains from transcription activator-like effectors (TALE). The TALE DNA-binding domain can be tailored to specifically recognize a unique DNA sequence. These fusion proteins serve as readily targetable "DNA scissors" for genome engineering applications that enable us to perform targeted genome modifications such as sequence insertion, deletion, repair and replacement in living cells.

Electroporation allows TALEN mRNA to enter into the cell, where it is translated into a nuclease that can cut DNA and inactivate specific target genes. Inactivation of genes, such as TCRα and CD52, which is performed for UCART19, ALLO-501, and ALLO-715, is intended to reduce the risk of GvHD and allow the allogeneic T cells to expand and persist in patients. We believe the inactivation of other target genes using the TALEN technology can be incorporated into future product candidates, with the goal of enhancing functions of T cells, including making them more potent at targeting solid tumors. The mRNA molecules are subsequently degraded by the cell, which means that gene editing by TALEN nuclease can only occur for a short space of time.

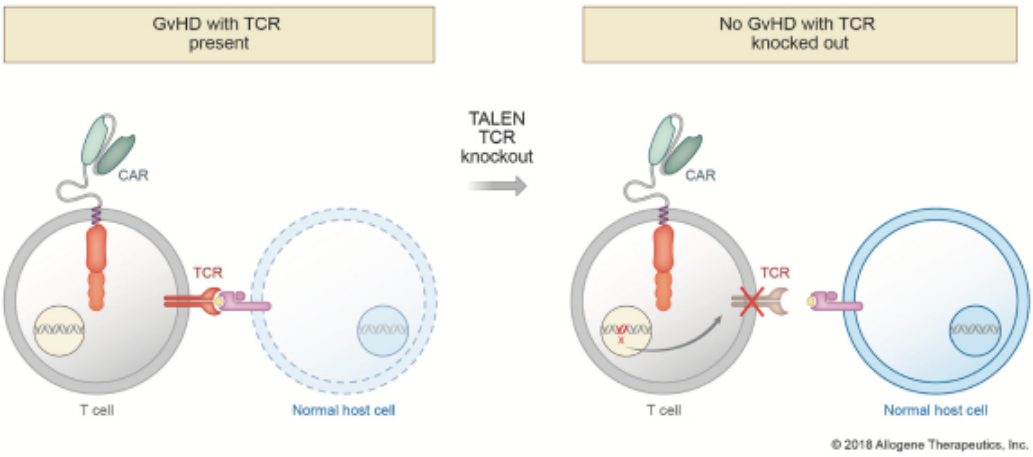
The figure below illustrates how we utilize Cellectis's TALEN and electroporation technology to inactivate the genes coding for TCRα and CD52 in our allogeneic T cells for UCART19.



We believe the key benefits of TALEN technology are:

- *Precision*. It is possible to design a TALEN that will cleave at any selected region in any gene, giving us the ability to achieve the desired genetic outcome with any gene.
- *Specificity and Selectivity*. TALEN may be designed to limit its DNA cleavage to the desired sequence and to reduce the risk of cutting elsewhere in the genome. This parameter is essential, especially for therapeutic applications, because unwanted genomic modifications potentially could lead to harmful effects for the patient. In addition, gene editing requires only a transient presence of TALEN, thus preserving the integrity and functionality of the T cell's genome.
- *Efficiency*. A large percentage of cells treated by the nuclease bear the desired genomic modification after treatment is completed. We believe TALEN's efficiency will contribute to the cost-effectiveness of a manufacturing process involving the generation of gene-edited T cells.

TCRα knockout: Non-modified allogeneic T cells bear functional TCRs and, if injected into a patient, can potentially recognize the patient's tissue as foreign and damage them. This reaction, known as GvHD, is mediated by intact TCRs on allogeneic T cells. To reduce the risk of GvHD, all of our product candidates undergo the inactivation of a gene coding for TCRα, a key component of TCRs. The engineered T cells lacking functional TCRs are no longer capable of recognizing peptide antigens presented on major histocompatibility complex proteins and thus incapable of attacking the patient's normal tissue. This could mitigate the risk of GvHD that can occur when allogeneic TCR-positive T cells are infused into patients who are unrelated to the healthy donor, as shown in the figure below.



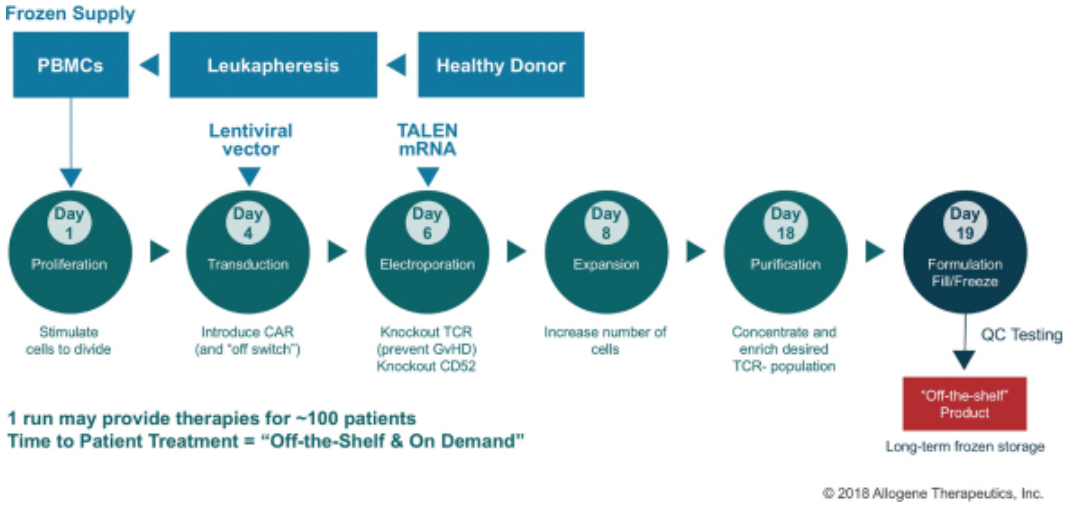
CD52 knockout: The patient's immune system is expected to recognize allogeneic T cells as foreign and destroy or reject them. To prevent this rejection, we use anti-CD52 antibody to deplete lymphocytes, including T cells, in patients. Anti-CD52 antibody recognizes CD52 protein expressed on many immune cells, including T cells. CD52 protein is expressed in both donor and patient immune cells. To selectively deplete a patient's immune cells while sparing the therapeutic allogeneic T cells, we use TALEN gene editing to inactivate the CD52 gene in allogeneic T cells, thus protecting allogeneic T cells from the anti-CD52 antibody mediated depletion.

By administering anti-CD52 antibody prior to infusing our product candidates, we believe we can reduce the likelihood of a patient's immune system rejecting the engineered allogeneic T cells. We believe this approach may create a window of persistence during which our engineered allogeneic T cells can expand and actively target and destroy cancer cells in the body. We also believe our approach is unique and differentiated. To capitalize on this differentiation and to secure our own source of anti-CD52 monoclonal antibody, we are developing ALLO-647. We submitted a DMF to the FDA in August 2018. If the FDA activates the DMF, Servier will be authorized to reference the DMF in its IND proposing use of ALLO-647 in combination with UCART19 in clinical trials.

Step 3. Purification, Formulation, and Storage

Once the allogeneic T cells have been engineered with CARs and gene edited to remove the genes encoding TCRα and CD52, they are cultured for 10 days to increase the cell number and then harvested. The allogeneic cells then undergo a purification step to remove residual TCR positive cells that have not undergone TCRα gene editing. We believe this purification step is essential as none of the currently available gene-editing nucleases can completely inactivate the target genes. After overnight recovery, the cells are formulated in a cryopreservation media and filled into closed, stoppered vials prior to controlled-rate freezing and long term storage in the vapor phase of liquid nitrogen. This inventory will be securely stored and then shipped to patients or oncology centers as needed.

The figure below illustrates the steps in a manufacturing run for our engineered allogeneic CAR T product candidates.



Product Pipeline and Development Strategy

Using our proprietary allogeneic T cell platform, we are researching and developing multiple product candidates for the treatment of blood cancers and solid tumors.

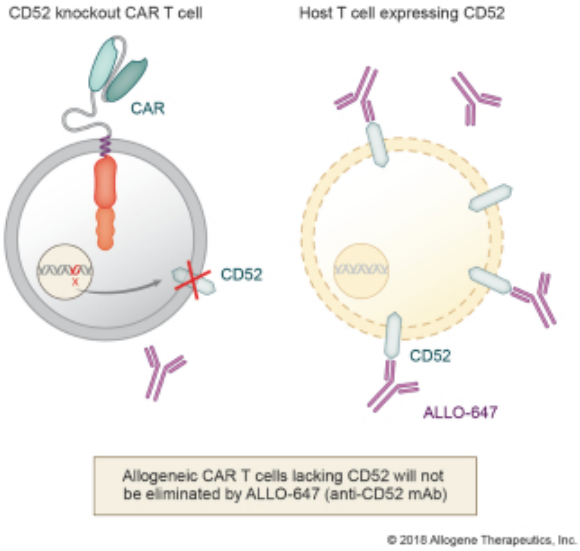
Our product candidates are allogeneic T cells engineered to be used as off-the-shelf treatments for any patient with a particular cancer type. Each product candidate targets a selected antigen expressed on tumor cells and bears specific engineered attributes.

In the near term, we are progressing multiple product candidates directed at promising targets for blood cancers, including ALL, NHL, multiple myeloma and AML. We are also conducting earlier-stage research programs focused on targets associated with solid tumors, such as renal cell carcinoma, small cell lung cancer and other common epithelial cancers.

Our product pipeline is represented in the diagram below:

1 *May not be required if Phase 2 is a registrational clinical trial.*
2 *Servier holds ex-US commercial rights.*
3 *To enable expansion and persistence of allogeneic CAR T product candidates.*

In addition to the allogeneic CAR T cell product candidates we are developing for the treatment of blood cancers and solid tumors, we are developing an anti-CD52 monoclonal antibody, ALLO-647, which is designed to be used prior to infusing our other product candidates as part of the lymphodepletion regimen. As illustrated below, we believe ALLO-647 can reduce the likelihood of a patient's immune system from rejecting the engineered allogeneic T cells, and may create a window of persistence during which our engineered allogeneic T cells can actively target and destroy cancer cells in the body.

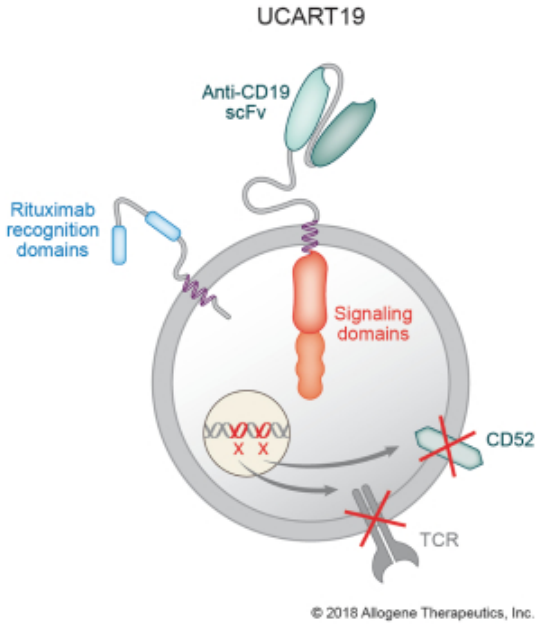


UCART19

We, in partnership with Servier, are developing UCART19 to be a potential first-in-class allogeneic CAR T cell product candidate for the treatment of pediatric and adult patients with R/R CD19 positive B-cell ALL. There are currently two ongoing Phase 1 clinical trials in adult and pediatric R/R ALL. We expect UCART19 to be advanced to potential registrational trials in the second half of 2019.

UCART19 targets CD19, an antigen expressed on the surface of B cells, including malignant B cells. In addition to these indications, CD19 targeting CAR T therapies have shown preliminary efficacy in chronic lymphocytic leukemia, mantle cell lymphoma and low-grade NHLs, such as follicular lymphoma (FL) or marginal zone lymphoma.

UCART19 is manufactured to express a CAR that is designed to target CD19 and gene edited to lack TCRα and CD52 to minimize the risk of GvHD and avoid being destroyed by the patient's immune system. In addition, UCART19 cells are engineered to express a small protein on the cell surface called RQR8, which consists of two rituximab recognition domains separated by a recognition domain for an anti-CD34 antibody. This allows for recognition and elimination of cells in the event that silencing of CAR activity is desired. The figure bellow depicts the construct of UCART19.



Target Indication: Acute Lymphoblastic Leukemia (ALL)

ALL is characterized by the proliferation of immature lymphocytes in the bone marrow. Approximately 5,960 new cases and 1,470 deaths in the United States are anticipated in 2018, according to the U.S. SEER database. Approximately 80% of cases of ALL are B-cell ALL, which we plan to address with UCART19.

The risk for developing ALL is highest in children younger than five years of age. From age five until the mid-20s, the risk declines slowly and begins to steadily rise again after age 50. Overall, about 40% of all cases of ALL are in adults. Though most cases occur in children, approximately 80% of deaths from ALL occur in adults.

Over the past four decades pediatric cure rates have reached greater than 80% in developed countries. This progress can be attributed, in part, to a deeper understanding of the molecular genetics and pathogenesis of the disease, advances in combination chemotherapy, monitoring of minimal residual disease, and use of tyrosine kinase inhibitors for Philadelphia chromosome–positive ALL. Allogeneic stem-cell transplant (allo-SCT) offers the potential for cure in some individuals, however, the option is available only to approximately a third of patients due to the lack of compatible stem cell source, general health, or the high risk of complications. Furthermore, allo-SCT carries a high rate of treatment-related mortality which can occur in approximately 20-30% of patients undergoing allo-SCT. In patients with R/R ALL after two or more lines of therapy, the median disease-free survival is less than six months. The five-year overall survival in adults over the age of 60 is approximately 20%, highlighting the high unmet need despite the recent advances in the treatment of ALL.

Clinical Data

UCART19 is being studied in two ongoing Phase 1 clinical trials, CALM and PALL, sponsored and conducted by Servier, our collaboration partner. In addition, UCART19 has been used in three patients under a compassionate use license.

Initiated in 2016, CALM is an ongoing Phase 1, open-label, dose-escalation clinical trial in adult patients with R/R ALL to evaluate safety, anti-leukemic activity, and determine the maximum tolerated dose (MTD). Post-therapy allo-SCT was allowed at the discretion of the investigator. The CALM trial commenced in the United Kingdom at King's College Hospital NHS Foundation Trust, in the United States at the Hospital of the University of Pennsylvania, Massachusetts General Hospital and University of Texas MD Anderson Cancer Center, and in France at Hôpital Saint-Antoine and Hôpital Saint-Louis. Of the 12 patients enrolled at the time of the April 2018 data cutoff, 10 were enrolled in Europe.

Initiated in 2016, PALL is an ongoing Phase 1, open-label, clinical trial in pediatric R/R ALL patients to evaluate safety and anti-leukemic activity. The PALL clinical trial commenced in the United Kingdom at University College London Great Ormond Hospital, in Belgium at Het Kinderziekenhuis Prinses Elisabeth, and in France at Hôpital Robert-Debré. All six patients enrolled at the time of the April 2018 data cutoff were enrolled in the United Kingdom.

Prior to the initiation of CALM and PALL, UCART19 was administered to three patients with CD19 positive B-cell ALL (two children and one adult) under a compassionate use license granted by the Medicines and Healthcare Products Regulatory Agency in the United Kingdom. The patients had previously failed multiple lines of prior treatment. UCART19 for these patients was manufactured at an academic site, the University College London. The two children are alive (37 and 31 months after UCART19 infusion) and the one adult died within the first month following UCART19 infusion due to disease progression.

CALM Interim Clinical Findings

As of April 2018, all 12 of the patients enrolled had been treated, with six patients at the first dose level of 6×10^6 total cells (approximately 10^5 cells per kilogram) and six patients at the second dose level with 6 to 8×10^7 total cells (approximately 10^6 cells per kilogram). As of the April 2018 data cutoff, no patients were treated at the third and final dose level of 1.8 to 2.4×10^8 total cells. The majority of the patients received three or greater lines of prior treatment, with three having received a prior treatment of blinatumomab, and seven having received a prior treatment of allo-SCT, reflecting clinical practice in Europe where 10 of the 12 patients were enrolled. Patient characteristics are presented below.

	All (N=12)
Median age in yrs (range)	29.50 (18-62)
Nb of prior treatment lines	
1 or 2	4
³3	8
Incl. prior inotuzumab ozogamicin	6
Incl. prior blinatumomab	3
Previous allo-SCT	7
Time of relapse following previous allo-SCT	
< 6 months	4
³ 6 months	3
Median (range)	5.9 months (4.1-11)
Bone marrow blasts prior to lymphodepletion	
<5%	3
5-25%	3
>25%	6
Median (range)	34% (0-98)

Interim Safety

All 12 enrolled patients received UCART19 at the target cell dose following lymphodepleting chemotherapy consisting of cyclophosphamide and fludarabine, with 10 patients receiving alemtuzumab, which we refer to as the FCA regimen, and two patients not receiving alemtuzumab, which we refer to as the FC regimen. The table below summarizes the adverse events by grade related to UCART19 infusion as well as those related to the lymphodepletion regimen. Grade 1 represents mild toxicity, Grade 2 represents moderate toxicity, Grade 3 represents severe toxicity and Grade 4 represents life threatening toxicity. Grade 5 toxicity represents toxicity resulting in death.

	Worst Grade					
N=12	G1 n(%)	G2 n(%)	G3 n(%)	G4 n(%)	G5 n(%)	All Grades n(%)
AEs related to UCART19						
Cytokine release syndrome	1 (8.3)	8 (66.7)	1 (8.3)	1 (8.3)	—	11 (91.7)
Neurotoxicity events	3 (25.0)	—	—	—	—	3 (25.0)
Graft-versus-host disease in skin	1 (8.3)	—	—	—	—	1 (8.3)
AEs related to lymphodepletion and/or UCART19						
Prolonged cytopenia(1)	—	—	—	3 (25.0)	—	3 (25.0)
Neutropenic sepsis	—	—	—	1 (8.3)	1 (8.3)	2 (16.7)
CMV infection	—	3 (25.0)	—	—	—	3 (25.0)
Adenovirus infection	1 (8.3)	—	1 (8.3)	—	—	2 (16.7)

(1) Persistent Grade 4 neutropenia and/or thrombocytopenia beyond day 42 post UCART19 infusion.

The most common UCART19 related adverse event was CRS, reported in 11 patients (two patients experiencing severe cases of CRS, one Grade 3 and one Grade 4). Three patients developed prolonged cytopenia, defined as persistent cytopenia beyond day 42 after UCART19 infusion. Three patients experienced mild, or Grade 1, neurotoxicity events. One patient experienced Grade 1 GvHD adverse event of the skin, which resolved with topical steroids.

Two dose limiting toxicities have been reported. The first case occurred at the first dose level and was a Grade 4 CRS related to UCART19, and associated with Grade 5 neutropenic sepsis related to lymphodepletion and UCART19. Death occurred on day 15 after UCART19 infusion. The second case, a Grade 4 prolonged cytopenia, occurred at the second dose level and was reported as related to both lymphodepletion and UCART19. This patient underwent allo-SCT and had an unrelated Grade 5 pulmonary hemorrhage in the setting of infection on day 19 following allo-SCT or day 82 after UCART19 infusion. Grade 5 adverse events have been reported in other autologous anti-CD19 CAR T cell therapy trials in part due to advanced stage of disease and accompanying confounding conditions.

Two additional deaths have also been reported that were not attributed to UCART19. One patient died from progressive disease, and one patient from allo-SCT related complications. Transplant related mortality occurs in approximately 20-30% of patients following allo-SCT.

Interim Efficacy

Of the 12 patients dosed with UCART19, two were not evaluable (one died at day 15, as noted above, and one had not reached the day 28 evaluation as of the April 2018 data cutoff). Eight out of the 10 evaluable patients achieved a CR, defined as the absence of any evidence of cancer, or CR with incomplete blood count recovery (CRi). Seven patients achieved MRD- CR. Two patients received a second dose of UCART19 under compassionate use (as a deviation from the clinical trial protocol) and both achieved MRD- CR. MRD- CR occurs when a patient achieves a CR and there is no evidence of ALL cells in the marrow when using sensitive

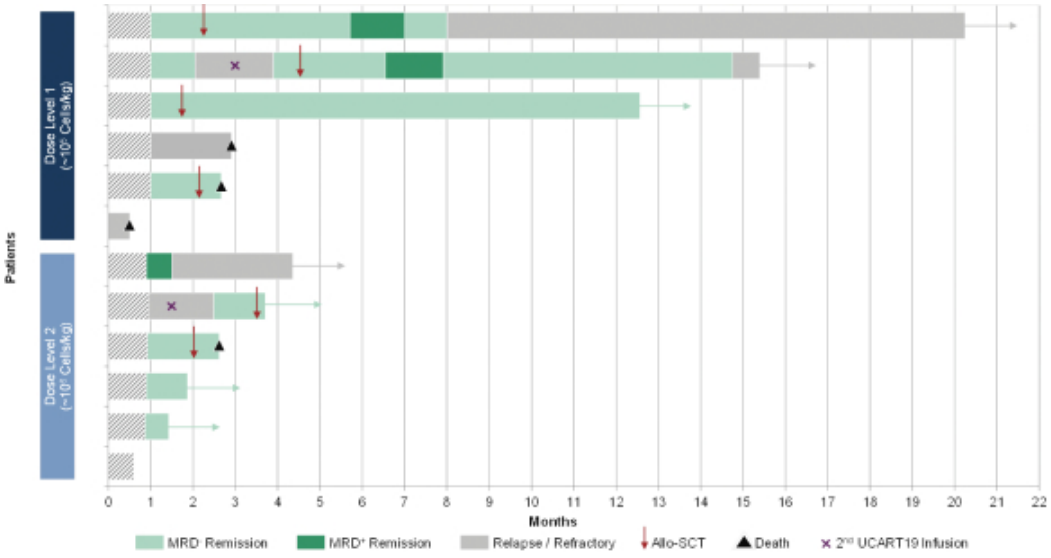
tests such as polymerase chain reaction or flow cytometry. CR or CRi rates are the typical regulatory standard, but studies in both children and adults with ALL have demonstrated a strong correlation between minimal residual disease (MRD+) and risks for relapse.

Six patients proceeded to an allo-SCT, including four patients after the first dose of UCART19, and two patients after the second dose. As of the April 2018 data cutoff, four patients remained in MRD- CR at 12.4, 3.6, 1.8 and 1.3 months after UCART19 infusion. Subsequent to the April 2018 cutoff date, one of the four patients subsequently progressed.

CAR T cell expansion was detected in blood from day 7 after UCART19 infusion, reaching the peak expansion between day 10 and day 17. One patient at the second dose level showed the highest peak linked to a long persistence up to day 42 still ongoing at the data cutoff. At dose level two, the longest persistence observed as of the data cutoff occurred on day 56.

The two patients on the FC regimen showed no evidence of CAR T cell expansion. A similar lack of CAR T cell expansion was seen in two out of 10 patients on the FCA regimen.

The following table illustrates response, duration of remission and re-dosing of UCART19 in the CALM trial as of the April 2018 data cutoff.



Since the April 2018 data cutoff, based on preliminary discussions with the study investigators, two additional patients have been treated at the third dose level of 1.8 to 2.4 × 10^8 total cells and we believe these patients have not responded.

PALL Interim Clinical Findings

As of April 2018, all six of the patients enrolled had been treated at a weight-banded cell dose equivalent to 1.1 to 2.3 × 10^6 cells/kg. Five patients had three or greater lines of prior treatment, with three having received four or greater lines of prior treatment. Two patients had received a prior treatment of allo-SCT. Patient characteristics are presented below.

	All (N=6)
Median age in yrs (range)	3.75 (0.8-16.4)
Disease at screening	
B-All relapsed	6
Disease at diagnosis	
NOS	4
with t(12;21)(p13;q22) TEL-AML1 (ETV6-RUNX1)	1
with t(v;11q23);MLL rearranged	1
Nb of prior treatment lines	
2 prior treatment lines	1
3 prior treatment lines	2
³4 prior treatment lines	3
Previous inotuzumab ozogamicin	2
Previous allogeneic stem cell transplantation (SCT)	2
Time of relapse following previous SCT	
>6 months	2
Bone marrow blasts at inclusion	
<10%	5
>50%	1
Median (range)	4.5% (0-80)

Interim Safety

All six enrolled patients received UCART19 at the target cell dose following lymphodepleting chemotherapy consisting of cyclophosphamide and fludarabine. Five patients also received alemtuzumab. The table below summarizes the adverse events by grade related to UCART19 cell infusion as well as those related to the lymphodepletion regimen and/or UCART19.

	Worst Grade					
N=6	G1 n(%)	G2 n(%)	G3 n(%)	G4 n(%)	G5 n(%)	All Grades n(%)
AEs related to UCART19						
Cytokine release syndrome	1 (16.7)	4 (66.7)	1 (16.7)	—	—	6 (100.0)
Neurotoxic events	2 (33.3)	1 (16.7)	—	—	—	3 (50.0)
Graft-versus-host disease in skin	1 (16.7)	—	—	—	—	1 (16.7)
AEs related to lymphodepletion and/or UCART19						
Prolonged cytopenia(1)	—	—	—	3 (50.0)	—	3 (50.0)
BK virus hemorrhagic cystitis	—	—	2 (33.3)	—	—	2 (33.3)
Metapneumovirus infection	—	—	—	1 (16.7)	—	1 (16.7)
CMV infection	—	—	1 (16.7)	—	—	1 (16.7)
Febrile neutropenia	—	—	1 (16.7)	—	—	1 (16.7)
Adenovirus infection	1 (16.7)	—	—	—	—	1 (16.7)

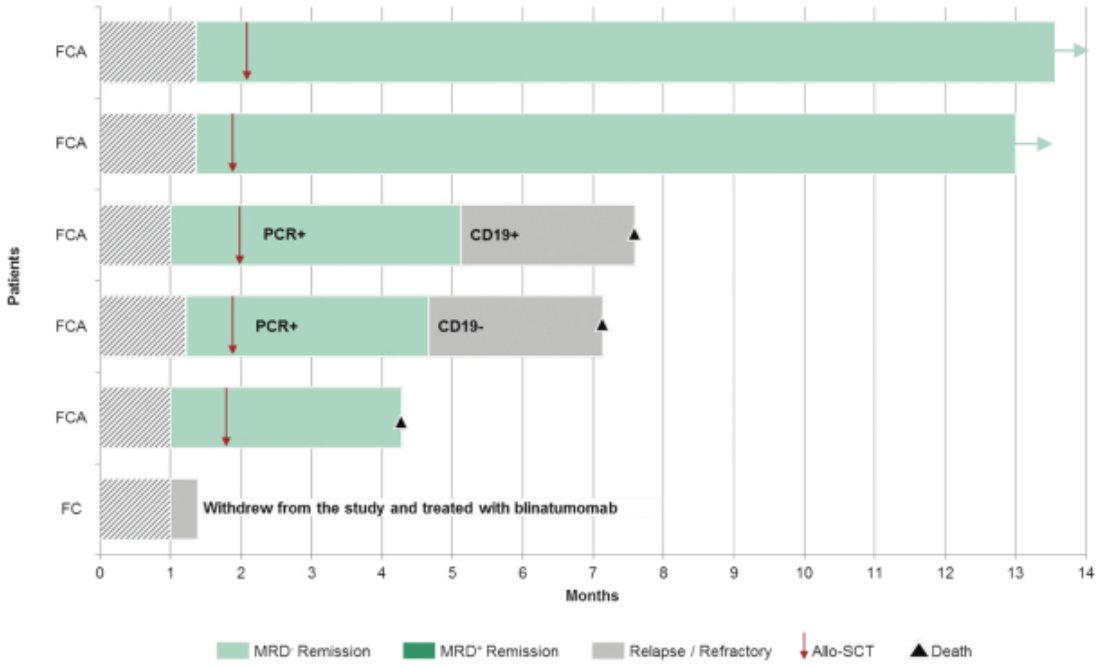
(1) Persistent Grade 4 neutropenia and/or thrombocytopenia beyond day 42 post UCART19 infusion.

As of April 2018, the most frequent adverse events related to UCART19 were CRS in all treated patients, with one patient experiencing Grade 3 CRS. Mild-to-moderate neurotoxic events occurred in three of the six treated patients. Three patients experienced prolonged cytopenia, reported as related to lymphodepletion and in some cases possibly related to UCART19. Viral reactivation with cytomegalovirus (CMV), adenovirus, BK virus and metapneumovirus was attributed to lymphodepletion. One patient experienced transient Grade 1 skin GvHD. Two patients died from disease recurrence following allo-SCT and one patient died from complications of allo-SCT. There were no treatment-related deaths.

Interim Efficacy

All patients completed the 28-day evaluation period and were evaluable for anti-leukemic activity. Five of the six patients achieved MRD- CRs and all five underwent allo-SCT. Two patients were in remission greater than 13 months after UCART19 infusion, as of the April 2018 data cutoff, and three patients died following allo-SCT, two due to disease recurrence, and one due to transplant-related complications. One patient withdrew from the study due to lack of response and received subsequent treatment with blinatumomab off-study. This is the only patient that received the FC regimen.

The following table illustrates response and duration of remission as of the April 2018 data cutoff.



Since the April 2018 data cutoff, based on preliminary discussions with the study investigators, one additional patient has been treated and we believe this patient has not responded.

Development Plan

We, in partnership with Servier, plan to complete the third dose level of UCART19 to determine recommended Phase 2 dose level in CALM and then expand the enrollment to gain additional patient experience on the optimal lymphodepletion regimen, specifically testing the benefits of anti-CD52 monoclonal antibody, alemtuzumab or ALLO-647. Upon completion of these study objectives, which we expect to occur in the second half of 2019, we expect UCART19 to be advanced to potential registrational trials, CALM II and PALL II.

CALM II will be designed to evaluate the efficacy of UCART19 in an open-label, Phase 2, international, non-comparative, two-stage, pivotal, multicenter, single-arm clinical trial in adult patients with R/R ALL who have exhausted available treatment options. The dose will be a flat dose based on the recommended Phase 2 dose identified in Phase 1. The primary efficacy end-point will be overall complete remission rate within three months of UCART19 infusion. Up to 63 patients are expected to be enrolled. Redosing will be allowed in case of relapse within a three month period after the first infusion.

PALL II will be designed as an open-label, Phase 2, international, non-comparative, two-stage, pivotal clinical trial of pediatric patients with R/R ALL aged from three months up to less than 18 years. The dose of UCART19 will depend on the actual weight at the time of infusion. The primary efficacy end-point will be overall complete remission rate within two months of UCART19 infusion. Up to 63 patients are expected to be enrolled. Patients will be monitored for 12 months after infusion whether or not they have received an allo-SCT. Re-dosing will be allowed in CALM II in case of relapse within the three-month period after the first infusion. A pediatric investigation plan was submitted to the European Medicines Agency in March 2018.

In the ongoing CALM and PALL trials, we use alemtuzumab, a commercially available monoclonal antibody that binds CD52, for the purpose of lymphodepletion. To secure our own readily available source of anti-CD52 antibody, we are developing our own monoclonal anti-CD52 antibody, ALLO-647. We submitted a DMF to the FDA in August 2018 for ALLO-647. If the FDA activates the DMF, Servier will be authorized to reference the DMF in its IND proposing use of ALLO-647 in combination with UCART19 in clinical trials. We plan to use ALLO-647 in the safety dose-expansion phase of the ongoing CALM clinical trial to further evaluate and optimize its use as a lymphodepleting agent. If anti-CD52 monoclonal antibody is deemed necessary for lymphodepletion, ALLO-647, if approved for clinical use, will be used in the CALM II and PALL II clinical trials. We expect to make the determination based on the expanded enrollment in the first CALM trial as noted above.

ALLO-501

ALLO-501 is our second allogeneic CAR T cell product candidate targeting CD19. We plan to submit an IND in the first half of 2019 for a Phase 1 clinical trial of ALLO-501 for the treatment of NHL. ALLO-501 is jointly developed by us and Servier. We will be the sponsor of the ALLO-501 program and lead the clinical development program.

ALLO-501 is identical to UCART19 in molecular design, however several modifications have been introduced by us to the manufacturing process for ALLO-501, which distinguishes ALLO-501 from UCART19. These modifications are designed to facilitate more efficient manufacturing scale-up for the larger patient population targeted by ALLO-501. Clinical supply for ALLO-501 trials will be manufactured in the United States using a CMO. Transfer of manufacturing technology to the CMO has been completed.

Target Indication: Non-Hodgkin Lymphoma (NHL)

NHL is a hematologic cancer originating from malignant lymphocytes. It is the most common hematological malignancy in the United States, with 74,680 new cases and 19,910 deaths estimated to be diagnosed in 2018, according to the U.S. SEER database. Over 60 NHL subtypes have been identified, and each subtype represents different neoplastic lymphoid cells (T, B or NK cells) that have arrested at different stages of differentiation. The most common subtype is B-cell, which represents over 90% of all new NHL cases in 2016.

B-cell NHL itself represents a group of different neoplasms that not only differ in pathology, but also response to therapy and prognosis. NHL can be rapidly growing (aggressive) with short survival, such as large B-cell lymphomas, which include DLBCL, or it can be slow growing, or indolent, such as FL. Despite recent therapeutic advances, more than 50% of patients with aggressive B-cell NHL are incurable using existing approved therapies.

The R-CHOP chemotherapy combination (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone) introduced in the early 2000s remains the standard of care for newly diagnosed DLBCL, and five-year survival can be achieved for 55-60% of patients. Unfortunately, approximately 30% of DLBCL second line and subsequent therapy is dependent on whether the patients are candidates for high-dose therapy followed by autologous stem-cell therapy. A retrospective analysis of patients with R/R DLBCL found that outcomes in this population are poor, with an objective response rate of 26% (CR: 7%, partial response: 18%) and median overall survival of 6.3 months.

Despite availability of multiple active agents, high response rates, and long progression-free survival with first-line therapy, follicular lymphoma remains an incurable disease. Most patients treated today eventually relapse, and subsequent responses and durations of responses become increasingly shorter. Ultimately, patients become resistant to chemo-immunotherapy, clinically defined as relapsed within 12 months. In these patients, the toxicity commonly outweighs the benefit of treatment with chemotherapy. Therefore, there remains a high unmet medical need for newer treatment options, especially for those patients with cancer that is resistant to chemo-immunotherapy.

Clinical Development Plan

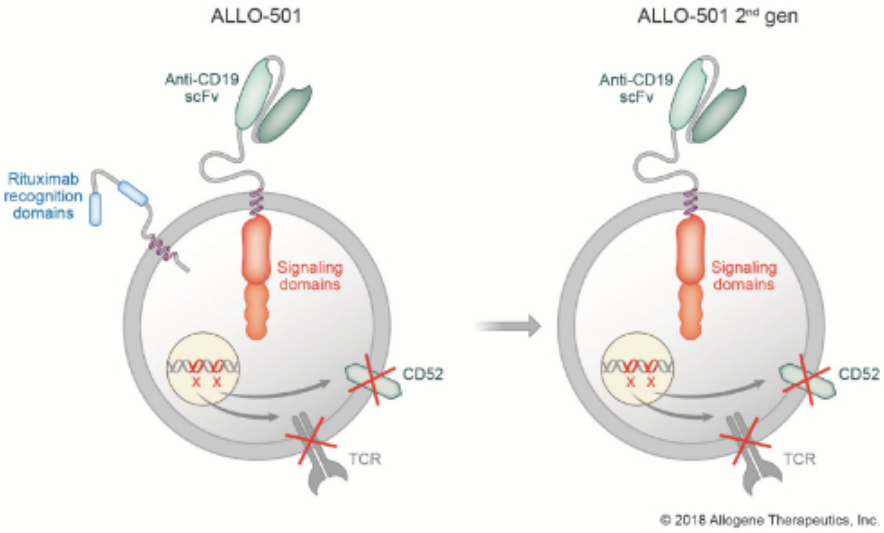
We plan to submit an IND for ALLO-501 in the first half of 2019. The initial clinical trial is expected to be an open-label, Phase 1/2, single arm, multicenter clinical trial evaluating the safety and efficacy of ALLO-501 in patients with R/R large B-cell lymphoma. Cell kinetics and pharmacodynamics of ALLO-501 will be evaluated as secondary and exploratory objectives, respectively. The Phase 1 portion of the trial will be a dose-escalation study for ALLO-501. Based on the MTD established during dose escalation, a single dose of ALLO-501 will be selected as the recommended Phase 2 dose. Prior to ALLO-501 treatment, all patients will undergo lymphodepletion with an FC regimen and potentially ALLO-647 following the same design as in the CALM clinical trial.

Assuming positive Phase 1 data in the large B-cell lymphoma trial, we plan to introduce our second-generation of ALLO-501, as discussed below, in the Phase 2 portion of the trial. We believe the second-generation ALLO-501 will have the potential to facilitate treatment of patients who were previously treated with rituximab.

Up to 18 patients are expected to be evaluated in Phase 1 and approximately 70 patients are expected to be evaluated in Phase 2. The Phase 2 portion of the study is anticipated to commence in 2020. All patients treated with ALLO-501 will be followed in a long term follow up study for at least 15 years.

Next Generation

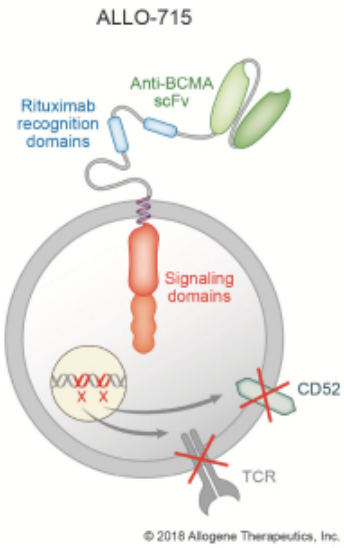
We have created a second version of ALLO-501. The first and current version of ALLO-501 co-expresses a small protein on the cell surface called RQR8, which consists of two rituximab recognition domains separated by a recognition domain for an anti-CD34 antibody. This allows for removal of the CAR T by rituximab. Since prior treatment with rituximab, depending on the lag time between the rituximab administration and planned ALLO-501 infusion, may reduce the persistence of ALLO-501, we have removed RQR8 in this second version of ALLO-501, as illustrated in the figure below. The second version of ALLO-501 manufactured from several donors under non-cGMP conditions has been compared to the current version of ALLO-501 *in vitro*. In this study, we found that both first and second versions of ALLO-501 exhibited similar characteristics and killing activity.



ALLO-715

ALLO-715 is an allogeneic CAR T cell product candidate targeting BCMA. BCMA is a member of the tumor necrosis factor receptor family and is selectively expressed on immunoglobulin-producing plasma cells, including malignant plasma cells (myeloma cells). ALLO-715 will initially be evaluated for the treatment of adult patients with R/R multiple myeloma. We plan to submit an IND for ALLO-715 in 2019.

ALLO-715 is manufactured to express a CAR that is designed to target BCMA and gene edited to lack TCRα and CD52 to minimize the risk of GvHD and avoid being destroyed by the patient's immune system. In addition, rituximab recognition domains, as an off-switch, has been incorporated in between the scFv and the linker domain. We have completed the lead candidate selection and manufacturing under cGMP conditions is in process to enable IND submission. The figure bellow depicts the construct of ALLO-715.



Target Indication: Multiple Myeloma

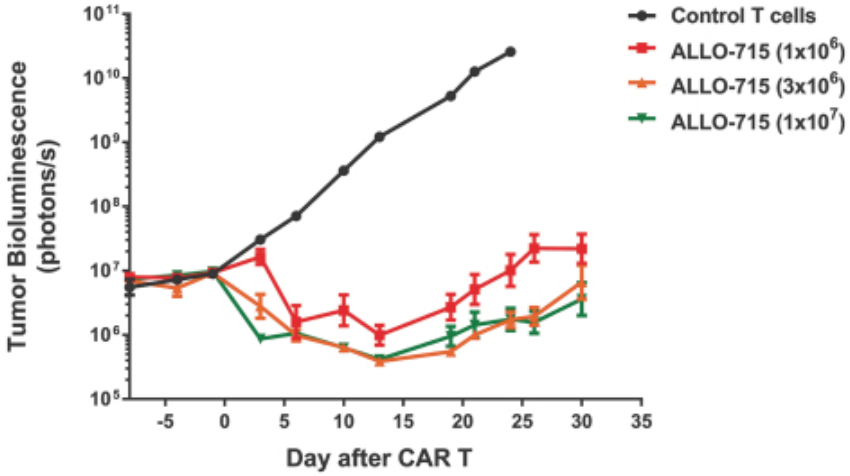
Multiple myeloma is a hematological malignancy that is characterized by uncontrolled expansion of bone marrow plasma cells. There will be an estimated 30,770 new cases of multiple myeloma and 12,770 deaths from multiple myeloma in 2018 in the United States according to the U.S. SEER database. Multiple myeloma predominantly affects the elderly, with 14 times more patients diagnosed at age 65 and over than those diagnosed under the age of 65.

For patients under the age of 70 with no comorbidities, autologous stem cell therapy represents a potentially curative treatment option. For transplant ineligible patients, immunomodulatory drugs (Revlimid, Pomalyst, Thalomid) and proteasome inhibitors (Velcade, Kyrprolis, Ninlaro), often used in combination with one another, have displaced older cytotoxic agents as the mainstay of treatment. In the past five years, several new drugs with novel mechanisms (Darzalex, Empliciti, Farydak) have been approved for multiple myeloma, however none of these novel treatments, other than autologous stem cell therapy, is considered as curative.

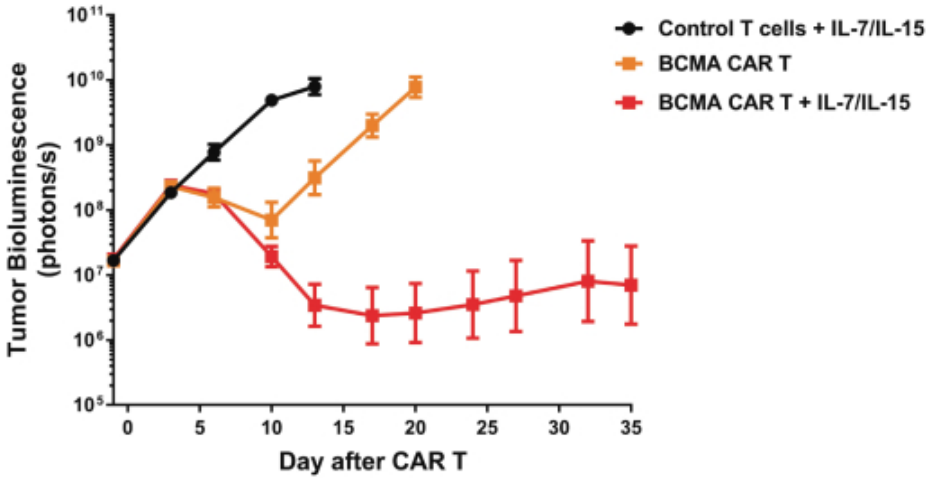
Despite the introduction of newer therapies, a majority of patients are expected to relapse and the unmet need in patients with R/R myeloma remains high. In clinical trials, only 3% of patients who were previously treated with at least three lines of therapy (including proteasome inhibitors and immunomodulatory drugs), or who were refractory to both proteasome inhibitors and immunomodulatory drugs, achieved a complete response to Darzalex. Median survival in such patients was just 17.5 months. Trials of autologous CAR T cell therapies such as bb2121, currently being developed by bluebird bio, Inc. (bluebird) in partnership with Celgene Corporation, have shown early promise in multiple myeloma with complete response rates of 50% at doses greater than 150×10^6 CAR T cells.

Pre-clinical Findings

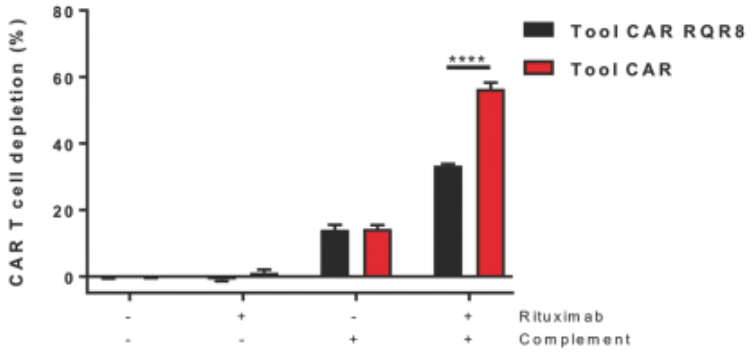
ALLO-715 showed activity *in vitro* against myeloma cell lines and *in vivo* anti-tumor activity, as illustrated below. ALLO-715 allogeneic T cells were injected seven days after intravenous injection of luciferase-expressing a human myeloma cell line into immuno-deficient mice. As expected, tumors in mice injected with control T cells continued to grow as evidenced by increased bioluminescence from these mice. Tumor reduction was observed in ALLO-715 treated mice in a dose-dependent manner.



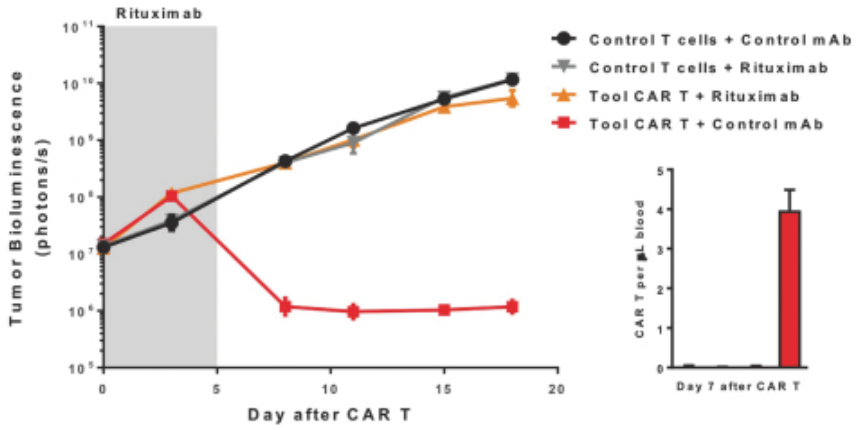
Limited duration of activity of human CAR T cells in mice can be caused by the lack of T cell homeostatic cytokines that normally supports growth and expansion of T cells. To test whether cytokine expression can increase the anti-tumor efficacy of BCMA CAR T cells, mice were treated with a virus to induce expression of human IL-7 and IL-15/IL-15Ra fusion proteins prior to implantation of a myeloma cell line. Animals were then treated with a suboptimal dose of BCMA CAR T cells and tumor growth was monitored by luminescence. Without prior treatment of cytokine encoding virus, continued growth of myeloma cell line was evident in mice treated with BCMA CAR T cells. However, in mice that were previously treated with the cytokine encoding viruses, the same dose of BCMA CAR T cells produced significant and prolonged tumor regression, as illustrated below.



Complement mediated cytotoxicity (CDC) is one of the mechanisms by which rituximab mediates CD20-dependent cell killing. Cells expressing a BCMA CAR with a separate off-switch (RQR8) or an intra-CAR off-switch (R2) were cultured for three hours in the presence of rituximab and complement and residual CAR T cells were measured by flow cytometry. Intra-CAR off-switch (R2) showed superior clearance of BCMA CAR T cells relative to first generation off-switch (RQR8), as illustrated below.



The R2 off-switch has also been observed to function *in vivo*, as illustrated below with BCMA CAR T cells showing efficient anti-tumor activity in the absence of rituximab but losing anti-tumor activity in the presence of rituximab. Mice previously injected with a luciferase-expressing human myeloma cell line received BCMA CAR T cells followed by five consecutive daily injections of rituximab or control immunoglobulin G (IgG). Rituximab treatment abrogated the anti-tumor activity of BCMA CAR T cells in this experiment.



Clinical Development Plan

We plan to submit an IND to initiate a Phase 1/2 clinical trial of ALLO-715 in 2019. The Phase 1 portion of the trial is expected to be an open label, multi-dose, multi center, dose escalation, safety, pharmacokinetic and pharmacodynamic clinical trial of ALLO-715 in adult patients with R/R multiple myeloma, who have progressed on at least two lines of prior therapy, including protease inhibitor therapies, immunomodulatory drugs and anti-CD38 monoclonal antibodies. The primary goal will be to assess safety and tolerability at increasing dose levels of ALLO-715 in successive cohorts of patients with multiple myeloma in order to estimate the MTD and the recommended Phase 2 dose of ALLO-715.

The Phase 2 dose expansion portion of the trial is expected to evaluate safety and efficacy of ALLO-715 at the recommended dose and potentially support the registration of ALLO-715 in patients with R/R multiple

myeloma who have progressed on at least two lines of prior therapy. We expect a maximum of up to 110 patients to be enrolled in this Phase 1/2 study.

Future Opportunities

Moving forward, we plan to utilize our allogeneic platform to pursue additional targets of interest. These include the additional targets currently in our pipeline as well as other targets that might be validated in the future. For example, we are developing allogeneic CAR T cell product candidates targeting Flt3 for the treatment of AML (ALLO-819), CD70 for the treatment of renal cell carcinoma, and DLL3 for the treatment of small cell lung cancer (SCLC).

- ***Acute Myeloid Leukemia and ALLO-819***. Flt3 is a receptor tyrosine kinase that is overactive in AML blasts. AML is a tumor type of high unmet medical need with few treatment options. It is a cancer of bone marrow stem cells and is the most common type of leukemia in adults. SEER estimates 19,520 new diagnoses and 10,670 deaths in the United States in 2018. Patients have a poor prognosis despite improvements in chemotherapy regimens and supportive care. We have conducted *in vitro* and *in vivo* studies of our anti-Flt3 product candidate, ALLO-819 that showed anti-tumor activity against blasts present in bone marrow from AML patients and in mice. We are currently advancing an IND-enabling data set for ALLO-819.
- ***Renal Cell Carcinoma and CD70***. Analysis using proteomic and immunohistochemistry techniques have demonstrated a high level of CD70 expression in clear cell renal cell carcinoma (ccRCC) cell lines and in more than 80% of human ccRCC tumor samples. ccRCC is the most common subtype of renal cancer. Approximately 65,000 new cases of renal cell carcinoma are diagnosed per year in the United States and 15,000 deaths are anticipated in 2018, according to SEER. Average duration of disease control is eight to nine months in first-line and five to six months in second-line, with the five year survival rate for metastatic disease of only 11.6%, and median survival of high risk group at 5.9 months. We are in the final stages of testing and refining constructs and selecting an anti-CD70 CAR T cell product candidate to progress to IND-enabling studies.
- ***Small Cell Lung Cancer and DLL3***. DLL3 is a target which is being pursued for SCLC using ADCs, bi-specifics and autologous CAR T therapies. According to SEER, there will be approximately 234,000 new cases of lung cancer in the United States in 2018, and according to the American Cancer Society, SCLC comprises approximately 10-15% of all lung cancers. SCLC is responsive to chemotherapy, but recurrence arises rapidly, with less than 7% of patients surviving over five years. Recently, SCLC has shown to be responsive to immunotherapy with approximately one-third of patients responding to PD-1/PD-L1 therapy and achieving a median overall survival of approximately eight months. We believe an allogeneic anti-DLL3 CAR T cell product candidate could be used alone or in combination with PD-1/PD-L1 therapy. We are currently testing and refining constructs for an anti-DLL3 CAR T cell product candidate, and following completion we plan to progress to IND-enabling studies.

We also plan to enhance our platform using next-generation technologies such as cytokine signal modulation, switch technologies, including small-molecule induced off-switch, and site-specific integration.

- ***Cytokine Signal Modulation***. Expressing cytokines from the CAR T cells or producing intracellular signals which mimic the action of a cell receiving a cytokine signal could enhance the proliferative potential, migratory behavior, and killing activity of engineered CAR T cells. Such modulation may allow engineered CAR T cells to more effectively elicit endogenous immune response thereby enhancing anti-tumor activity of CAR T cells. We are currently investigating controlled or regulated expression of select cytokines and testing hybrid cytokine receptors to modulate cytokine signaling in CAR T cells in a desired manner.
- ***Switch Technology***. In addition to the CD20 epitope engineered off-switch, such as RQR8 and R2 off-switches that responds to rituximab, we are investigating the use of small molecule dimerization of

death-inducing proteins to eliminate CAR T cells in the event that CAR T cell activity is no longer needed or needs to be shut off for safety reasons.

- ***Site-Specific Integration***. Using a combination of gene-editing technology and homologous recombination technology we can potentially integrate the CAR into specific target genes within the T cell DNA. Such site-specific integration allows the CAR or other target genes to be introduced into the T cells in a more homogeneous manner, allowing a more uniform and controlled expression of the CAR, with the goal of generating CAR T cell products that behave in a more consistent and predictable manner.

In addition, we continually survey the scientific and industry landscape for opportunities to license, partner or acquire technologies that may help us advance current or new T cell therapies for the benefit of patients.

Our Manufacturing Strategy

We have invested resources to optimize our manufacturing process, including the development of improved analytical methods. We plan to continue to invest in process science, product characterization and manufacturing to continuously improve our production and supply chain capabilities over time.

Our product candidates are designed and manufactured via a platform comprised of defined unit operations and technologies. The process is gradually developed from small to larger scales, incorporating compliant procedures to create current good manufacturing practices (cGMP) conditions. Although we have a platform-based manufacturing model, each product is unique and for each new product candidate, a developmental phase is necessary to individually customize each engineering step and to create a robust procedure that can later be implemented in a cGMP environment to ensure the production of clinical batches. This work is performed in our research and development environment to evaluate and assess variability in each step of the process in order to define the most reliable production conditions.

In October 2015, Cellectis announced that it completed a series of three production runs of UCART19, confirming the transfer of Cellectis's manufacturing process into clinical grade, cGMP conditions. This important milestone established that allogeneic T cell product candidates can be manufactured under cGMP conditions and demonstrated the industrial production potential of UCART19. Servier is responsible for UCART19 manufacturing and is working with a CMO in Europe to provide clinical supply for the CALM and PALL clinical trials. ALLO-501 is identical in molecular design to UCART19, but is produced using a modified manufacturing process, optimized by us. ALLO-501 and ALLO-715 will be manufactured in the United States by a CMO, and we will manage all other aspects of the supply, including planning, CMO oversight, disposition and distribution logistics. We will similarly develop, and manufacture all of our other product candidates.

The CMO that is manufacturing the clinical supply of ALLO-501 and ALLO-715 in the United States is subject to cGMP requirements, using qualified equipment and materials. We also utilize a separate third party contractor to manufacture cGMP viral vector used to deliver the applicable CAR gene into the T cells. We believe all materials and components utilized in the production of the cell line, viral vector and final T cell product are available from qualified suppliers and suitable for pivotal process development in readiness for registration and commercialization.

We expect to continue to rely on our CMO and may rely on CMOs and other third parties for the manufacturing and processing of our product candidates in the future. We believe the use of contract manufacturing and testing for our first clinical product candidates is cost-effective and has allowed us to rapidly prepare for clinical trials in accordance with our development plans. We expect third-party manufacturers will be capable of providing and processing sufficient quantities of our product candidates to meet anticipated clinical trial demands.

In addition, we plan to build our own manufacturing facility and we are currently searching for a suitable location for such facility. We plan to create a robust supply chain with redundant sources of supply comprised of both internal and external infrastructure.

Strategic Agreements

Asset Contribution Agreement with Pfizer

In April 2018, we entered into an Asset Contribution Agreement (Pfizer Agreement) with Pfizer pursuant to which we acquired certain assets and assumed certain liabilities from Pfizer, including the Cellectis Agreement and the Servier Agreement described below, and other intellectual property for the development and administration of CAR T cells for the treatment of cancer.

As consideration for the purchased assets, we issued Pfizer 3,187,772 shares of our Series A-1 Preferred Stock. In addition, we are required to make milestone payments upon successful completion of regulatory and sales milestones on a target-by-target basis for certain targets, including CD19 and BCMA, covered by the Pfizer Agreement. The aggregate potential milestone payments upon successful completion of various regulatory milestones in the United States and the European Union are $30 million or $60 million per target (depending on the target, and $840.0 million for all targets), provided that we are not obligated to pay a milestone for regulatory approval in the European Union for an anti-CD19 allogeneic CAR T cell product, to the extent Servier has commercial rights to such territory. The aggregate potential milestone payments upon reaching certain annual net sales thresholds in North America, Europe, Asia, Australia and Oceania, which we refer to as the Territory, for a certain number of targets covered by the Pfizer Agreement are $325.0 million per target. Concurrently with our entry into the Pfizer Agreement, we and Pfizer entered into a letter agreement pursuant to which Pfizer granted us, in partial consideration for our milestone and royalty payment obligations under the Pfizer Agreement, an option to expand the Territory to include some or all of the rest of the world at our election. We may exercise the option at any time during the 12 year period following closing of the asset acquisition under the Pfizer Agreement.

Pfizer is also eligible to receive, on a product-by-product and country-by-country basis, (i) royalties in the low single-digit percentage on annual net sales in the United States for products commercialized by us targeting certain targets, including CD19, covered by the Pfizer Agreement, (ii) tiered marginal royalties ranging from the low to mid-single-digit percentages on annual net sales in any country in the world for products commercialized by us targeting certain other targets covered by the Pfizer Agreement and (iii) royalties in the low single-digit percentage on annual net sales in any country in the Territory for products commercialized by us targeting targets not covered by the Pfizer Agreement that use certain Pfizer intellectual property and for which an IND is first filed on or before April 6, 2023. The royalties in the foregoing clauses (i) and (ii) are subject to reduction for products not covered by certain patent claims or for future required licenses of third party intellectual property. Our royalty obligation with respect to a given product in a given country, which we refer to as the Pfizer Royalty Term, begins upon the first sale of such product in such country and ends on the later of (i) expiration of the last claim of a defined set of patent rights, in each case covering such product in such country or (ii) 12 years from the first sale of such product in such country.

Under the Pfizer Agreement, we are required to use commercially reasonable efforts to develop and seek regulatory approval in and for the United States and the European Union for certain products covered by the Pfizer Agreement and to commercialize each product covered by the Pfizer Agreement in the applicable royalty territory in which regulatory approval for such product has been obtained. We also agreed to offer employment to certain Pfizer employees on terms no less favorable than the terms such employees enjoyed while being employed by Pfizer. We hired 39 employees from Pfizer pursuant to the terms of the Pfizer Agreement.

Pfizer is required, subject to certain limitations, to indemnify us against damages arising out of any breach or inaccuracy in the representations or warranties made by Pfizer, any breach of a covenant by Pfizer or any

liability not acquired by us. Likewise, we are required, subject to certain limitations, to indemnify Pfizer against damages arising out of any breach or inaccuracy of our representations and warranties, any breach of a covenant made in the agreement or the related patent and know-how license agreement by us, including any practice of intellectual property outside of the scope of the license granted to us, or any assumed liability.

Research Collaboration and License Agreement with Cellectis

In June 2014, Pfizer entered into a Research Collaboration and License Agreement (Cellectis Agreement) with Cellectis. In April 2018, Pfizer assigned the agreement to us pursuant to the Pfizer Agreement.

Pursuant to the Cellectis Agreement, we have an exclusive, worldwide, royalty-bearing, sublicensable license, on a target-by-target basis, under certain of Cellectis's intellectual property to make, use, sell, import, and otherwise commercialize CAR T products directed at certain targets, including BCMA, Flt3, DLL3 and CD70, for the treatment of cancer.

The Cellectis Agreement included a research collaboration to conduct discovery and pre-clinical development activities to generate CAR T cells directed at targets selected by each party. Pursuant to the terms of the Cellectis Agreement, the research collaboration ended in June 2018.

Cellectis has a non-exclusive, worldwide, royalty-free, perpetual and irrevocable license, with sublicensing rights under certain conditions, under certain of our intellectual property to make, use, sell, import and otherwise commercialize CAR T products directed at Cellectis-selected targets.

The Cellectis Agreement provides for payments of up to $185.0 million per product that is directed against an Allogene-selected target, with aggregate potential pre-clinical, clinical and commercial milestone payments totaling up to $2.8 billion. We expect to pay Cellectis $5.0 million upon the dosing of the first patient in our Phase 1 clinical trial of ALLO-715 in 2019. Cellectis is also eligible to receive tiered royalties on annual worldwide net sales of any products that are commercialized by us that contain or incorporate, or are covered by, certain of Cellectis's intellectual property at rates in the high single-digit percentages. Such royalties may be reduced, on a licensed product-by-licensed product and country-by-country basis, for generic entry and for payments due under licenses of third party patents. Pursuant to the Cellectis Agreement, and subject to certain exceptions, we are required to indemnify Cellectis against all third party claims related to the development, manufacturing, commercialization or use of any product licensed by us to Cellectis targeting a Cellectis-selected target, and Cellectis is required, subject to certain exceptions, to indemnify us against all third party claims related to the development, manufacturing, commercialization or use of any product licensed by Cellectis to us targeting an Allogene-selected target.

The royalties are payable, on a licensed product-by-licensed product and country-by-country basis, until the later of (i) the expiration of the last to expire of the licensed patents covering such product; (ii) the loss of regulatory exclusivity afforded such product in such country, and (iii) the tenth anniversary of the date of the first commercial sale of such product in such country; however, in no event shall such royalties be payable, with respect to a particular licensed product, past the twentieth anniversary of the first commercial sale for such product.

Depending on the Cellectis-selected target, we have a right of first refusal or right of first negotiation to purchase or license from Cellectis rights to develop and commercialize products against such Cellectis-selected targets. Under the Cellectis Agreement, we have certain diligence obligations to progress the development of CAR T product candidates and to commercialize one CAR T product per Allogene-selected target in one major market country where we have received regulatory approval. If we materially breach any of our diligence obligations and fail to cure within 90 days, then with respect to certain targets, such target will cease to be an Allogene-selected target and instead will become a Cellectis-selected target.

Unless earlier terminated in accordance with the agreement, the Cellectis Agreement will expire on a product-by-product and country-by-country basis, upon expiration of all royalty payment obligations with respect to such licensed product in such country. Beginning at the first anniversary of the effective date of the Cellectis Agreement, we have had the right to terminate the agreement at will upon 60 days' prior written notice, either in its entirety or on a target-by-target basis. Either party may terminate the agreement, in its entirety or on a target-by-target basis, upon 90 days' prior written notice in the event of the other party's uncured material breach. The agreement may also be terminated by us upon written notice at any time in the event that Cellectis becomes bankrupt or insolvent.

Exclusive License and Collaboration Agreement With Servier

In October 2015, Pfizer entered into an Exclusive License and Collaboration Agreement (Servier Agreement) with Servier to develop, manufacture and commercialize certain allogeneic anti-CD19 CAR products, including UCART19, in the United States with the option to obtain the rights over additional product candidates targeting one additional cancer antigen, including other allogeneic anti-CD19 CAR product candidates. In April 2018, Pfizer assigned the agreement to us pursuant to the Pfizer Agreement.

Under the Servier Agreement, we obtain an exclusive license, with the right to grant sublicenses under certain conditions, under certain of Servier's intellectual property, to develop, manufacture and commercialize certain allogeneic anti-CD19 CAR products, including UCART19, in the field of anti-tumor adoptive immunotherapy in the United States, with an exclusive option to obtain the same rights for additional products in the United States and, if Servier does not elect to pursue development or commercialization of those products in certain markets outside of the United States pursuant to its license described below, outside of the United States as well. Our option for each other product is exercisable upon Servier's delivery to us of an IND-enabling data package for such product. We are generally not required to make any additional payments to Servier to exercise an option, except for products directed at a certain target, for which we are required to pay Servier an option fee in the low tens of millions of dollars range upon exercise. If we opt-in to another product, Servier has the right to obtain rights to such product outside the United States and to share development costs for such product.

The Servier Agreement also provides Servier with an exclusive license, with the right to grant sublicenses under certain conditions, under certain of our intellectual property, to develop, manufacture and commercialize allogeneic adaptive T cell products directed at a certain Allogene-selected target in the field of anti-tumor adoptive immunotherapy outside of the United States.

Under the Servier Agreement, both we and Servier are required to use commercially reasonable efforts to carry out the activities assigned to each of us under an agreed-upon global research and development plan. In addition, we are required to use commercially reasonable efforts to develop and obtain marketing approval in the United States in the field of anti-tumor adoptive immunotherapy for at least one product directed against CD19, and Servier is required to use commercially reasonable efforts to develop and obtain marketing approval in the European Union, and one other country in a group of specified countries outside of the European Union and the United States, in the field of anti-tumor adoptive immunotherapy for at least one allogeneic adaptive T cell product directed against a certain Allogene-selected target.

For products that we are co-developing with Servier, including UCART19, we are responsible for 60% of the development costs and Servier is responsible for 40% of the development costs under the global research and development plan. Subject to certain restrictions, each party has the right to conduct activities that are specific to its territory outside the global research and development plan at such party's sole expense. In addition, each party is solely responsible for commercialization activities in its territory at such party's sole expense.

Pfizer made an upfront, non-refundable payment of $29.0 million to Servier. We are required to make milestone payments to Servier upon successful completion of regulatory and sales milestones on a target-by-target basis. For products directed against CD19, including UCART19, we are obligated to pay Servier

aggregate potential payments of up to $137.5 million upon successful completion of various regulatory milestones, and aggregate potential payments of up to $78.0 million upon successful completion of various sales milestones. The total potential payments that we are obligated to make under the Servier Agreement upon successful completion of regulatory and sales milestones are $381.5 million, including the aforementioned CD19-related milestone payments. Similarly, Servier is required to make milestone payments upon successful completion of regulatory and sales milestones for products directed at the Allogene-selected target that achieves such milestones. The total potential payments that Servier is obligated to make to us under the Servier Agreement upon successful completion of regulatory and sales milestones are $42 million and €70.5 million ($82.3 million), respectively. The foregoing milestones are subject to certain adjustments if we obtain rights for certain products outside of the United States upon Servier's election not to pursue such rights.

Each party is also eligible to receive tiered royalties on annual net sales in countries within the paying party's respective territory of any licensed products that are commercialized by such party. The royalty rates range from the low tens to the high teen percentages. Such royalties may be reduced for interchangeable drug entry, expiration of patent rights and amounts paid pursuant to licenses of third party patents. The royalty obligation for each party with respect to a given licensed product in a given country in each party's respective territory, which we refer to as the Servier Royalty Term, begins upon the first commercial sale of such product in such country and ends after a defined number of years.

Unless earlier terminated in accordance with the Servier Agreement, the Servier Agreement will continue, on a licensed product-by-licensed product and country-by-country basis, until the Servier Royalty Term with respect to the sale of such licensed product in such country expires. In addition, the agreement can be terminated (i) by either party for the other party's material breach that remains uncured for 90 days (or 30 days in the event of failure to pay) after written notice, (ii) by either party for certain insolvency-related events, (iii) by the licensed party for convenience on a licensed product-by-licensed product basis, at specified times with respect to the certain licensed products, upon 90 days' written notice and (iv) by the licensed party for safety reasons upon 30 days' written notice after consulting with the licensing party with respect to such safety reasons. In addition, the agreement will terminate immediately with respect to a licensed product if Cellectis terminates certain agreements that cover the relevant intellectual property licensed under the Servier Agreement.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our most advanced product candidate, UCART19, our other product candidates, ALLO-647, ALLO-501 and ALLO-715, future product candidates, as well as novel discoveries, product development technologies, and know-how. Our commercial success also depends in part on our ability to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to develop and maintain protection of our proprietary position by, among other methods, filing or in-licensing U.S. and foreign patents and applications related to our technology, inventions, and improvements that are important to the development and implementation of our business.

We also rely on trademarks, trade secrets, know-how, continuing technological innovation, confidentiality agreements, and invention assignment agreements to develop and maintain our proprietary position. The confidentiality agreements are designed to protect our proprietary information and the invention assignment agreements are designed to grant us ownership of technologies that are developed for us by our employees, consultants, or other third parties. We seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in our agreements and security measures, either may be breached, and we may not have adequate remedies. In addition, our trade secrets may otherwise become known or independently discovered by competitors.

With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our commercial products and methods of using and manufacturing the same.

We are actively building our intellectual property portfolio around our product candidates and our discovery programs, based on our own intellectual property as well as licensed intellectual property. Following the execution of the Pfizer Agreement, we are the owners of, co-owners of, or the licensee of multiple patents and patent applications in the United States and worldwide. These licensed assets include rights to the Cellectis TALEN gene-editing technology to engineer T cells that lack functional TCRs and to inactivate the CD52 gene in donor cells. We have exclusive worldwide rights to these patents for certain antigen targets, including BCMA, and have U.S. rights to these patents for CD19. Our patent rights are composed of patents and pending patent applications that are solely owned by us, co-owned with Servier, co-owned with Cellectis, exclusively licensed from Pfizer, exclusively licensed from Servier, or exclusively licensed from Cellectis.

Our patent portfolio includes protection for our lead product candidates, UCART19, ALLO-501 and ALLO-715, as well as our other research-stage candidates. With respect to UCART19 and ALLO-501, we have an exclusive license from Servier in the United States to patent rights covering composition of matter and methods of making and use covering UCART19 and ALLO-501. With respect to ALLO-715, we have an exclusive license from Pfizer to patent rights covering ALLO-715 in the United States and in foreign jurisdictions. These rights include composition of matter protection for ALLO-715 and methods of making and using ALLO-715. More generally, our patent portfolio and filing strategy is designed to provide multiple layers of protection by pursuing claims directed toward: (1) antigen binding domains directed to the targets of our product candidates; (2) CAR constructs used in our product candidates; (3) methods of treatment for therapeutic indications; (4) manufacturing processes, preconditioning methods, and dosing regimens; and (5) reducing GvHD, and methods for genetically engineering immune cells suitable for allogeneic use.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the date of filing of the first non-provisional application to which priority is claimed. In the United States, patent term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the United States Patent and Trademark Office in granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier-filed patent. In the United States, the term of a patent that covers an FDA-approved drug may also be eligible for a patent term extension of up to five years under the Hatch-Waxman Act, which is designed to compensate for the patent term lost during the FDA regulatory review process. The length of the patent term extension is calculated based on the length of time it takes for regulatory review. A patent term extension under the Hatch-Waxman Act cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be restored. Moreover, a patent can only be restored once, and thus, if a single patent is applicable to multiple products, it can only be extended based on one product. Similar provisions are available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug.

Competition

Our products will compete with novel therapies developed by biopharmaceutical companies, academic research institutions, governmental agencies and public and private research institutions, in addition to standard of care treatments.

Novartis and Kite were the first to achieve FDA approval for autologous T cell therapies. In August 2017, Novartis obtained FDA approval to commercialize Kymriah, the treatment of children and young adults with

B-cell ALL that is refractory or has relapsed at least twice. In May 2018, Kymriah received FDA approval for adults with R/R DLBCL. In October 2017, Kite obtained FDA approval to commercialize Yescarta, the first CAR T cell product candidate for the treatment of adult patients with R/R large B-cell lymphoma. Kite has published data on Yescarta in ALL as well. Juno Therapeutics, Inc. (Juno), a subsidiary of Celgene, has published data on its anti-CD19 CAR therapy, JCAR019. bluebird bio, Inc. (bluebird) was the first company to publish data on an anti-BCMA CAR therapy, bb2121, in multiple myeloma. Data can be found in the Competitor Data section below.

Due to the promising therapeutic effect of T cell therapies in clinical trials, we anticipate increasing competition from existing and new companies developing these therapies, as well as in the development of allogeneic T cell therapies.

Potential cell therapy competitors include:

- *Allogeneic T cell therapy competition*: Celyad S.A., CRISPR Therapeutics AG, Fate Therapeutics Inc., Intellia Therapeutics, Inc., Gilead (acquired Kite), Poseida Therapeutics, Inc., Precision Biosciences, Inc. and Sangamo Therapeutics, Inc. Additionally, Cellectis has several fully-owned allogeneic CAR programs that will compete with programs that fall outside our agreement with Cellectis.
- *Autologous T cell therapy competition*: Autolus Therapeutics plc, bluebird, Gilead, Novartis, Celgene (acquired Juno) and Tmunity Therapeutics, Inc.
- *Cell-therapy competition*: Atara Biotherapeutics, Inc., Adaptimmune Therapeutics PLC, and Celyad S.A.

Competition will also arise from non-cell based immune and other pursued by small-cap biotechnology and large-cap pharmaceutical companies including Amgen Inc., AstraZeneca plc, Bristol-Myers Squibb Company, Incyte Corporation, Merck & Co., Inc., and F. Hoffmann-La Roche AG.

Many of our competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, pre-clinical testing, clinical trials, manufacturing, and marketing than we do. Future collaborations and mergers and acquisitions may result in further resource concentration among a smaller number of competitors.

Our commercial potential could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market or make our development more complicated. The key competitive factors affecting the success of all of our programs are likely to be efficacy, safety, and convenience.

These competitors may also vie for a similar pool of qualified scientific and management talent, sites and patient populations for clinical trials, as well as for technologies complementary to, or necessary for, our programs.

Competitor Data

Kymriah (Novartis) – ALL

In August 2017, tisagenlecleucel (Kymriah) was approved for pediatric and young adults with R/R B-cell precursor ALL based on data from an open-label, multicenter single-arm trial. In total, 107 patients were screened, 88 were enrolled, 68 were dosed, and 63 were evaluable for efficacy. Nine percent of the enrolled patients did not receive the product due to manufacturing failure. Six other patients died awaiting their infusion,

and 3 experienced an adverse event that precluded receiving tisagenlecleucel. Among the 63 evaluable patients, 52 (83%) achieved CR/CRi, all of which were MRD-negative. Grade 3 or greater CRS and neurotoxic events occurred in 47% (n=32) and 15% (n=10) of dosed patients, respectively. Nine (17%) of the 52 responders relapsed within six months and six (12%) underwent stem cell transplantation. *Source: Kymriah BLA and United States product insert.*

Kymriah (Novartis) – Large B-Cell Lymphoma

In May 2018, Kymriah was approved for use in adult patients with R/R large B-cell lymphoma based on data from an open-label, multicenter, single-arm trial. Of the 160 patients enrolled, 106 patients were dosed (66%), including 92 patients who received product manufactured in the United States and were followed for at least three months or discontinued earlier. Eleven out of 160 patients enrolled did not receive Kymriah due to manufacturing failure. Thirty-eight other patients did not receive Kymriah, primarily due to death (n=16), physician decision (n=16), and adverse events (n=3). A retrospectively identified sub-group of 68 patients was evaluable for the major efficacy outcome measures. Twenty-two of these patients (32%) achieved CR while 12 (18%) achieved a partial response. Grade 3 or greater CRS and neurotoxic events occurred in 23% (n=24) and 18% (n=19) of dosed patients, respectively. *Source: Kymriah BLA and United States product insert.*

Yescarta (Kite – Gilead) – DLBCL

In October 2017, axicabtagene ciloleucel (Yescarta) was approved for DLBCL patients who have relapsed within one year of autologous hematopoietic stem cell transplantation and patients who are refractory to two or more lines of salvage therapies. Among the 111 patients enrolled in the Phase 2 ZUMA-1 clinical trial, axicabtagene ciloleucel was successfully manufactured for 110 patients (99%) and administered to 101 patients (91%). Fifty-four percent of the 101 dosed patients (n=55) achieved CR and 28% (n=28) achieved a partial response. Grade 3 or greater CRS and neurotoxic events occurred in 13% (n=13) and 28% (n=28) of patients, respectively. *Source: Neelapu et al., 2017.*

KTE-C19 (Kite – Gilead) – ALL

In 2017 Kite published results from Zuma-3, a Phase 1/2 clinical trial of KTE C19 in adults with high burden R/R ALL. Of the 33 patients enrolled, 29 were dosed with KTE-C19. One patient withdrew consent, two suffered serious adverse events prior to dosing and one was treated under compassionate use. Of the 24 patients evaluable for efficacy by the data cutoff, 17 (71%) patients achieved CR + CRi. All responding patients were MRD-negative. Grade 3 or greater CRS and neurotoxic events occurred in 28% (n=8) and 52% (n=15) of dosed patients, respectively.

In 2017 Kite published results from Zuma-4, a Phase 1 clinical trial of KTE C19 in pediatric and adolescent patients with R/R ALL. Of the eight patients enrolled, seven patients received KTE-C19. There was one manufacturing failure. At the time of data cutoff, 7 (100%) patients achieved either CR + CRh + CRi. All responding patients were MRD-negative. Grade 3 or greater CRS and neurotoxic events occurred in 43% (n=3) and 29% (n=2) of patients, respectively. *Source: ZUMA-4 ESMO 2017 Poster.*

JCAR017 (Juno – Celgene) – ALL

A Phase 1 clinical trial of lisocabtagene maraleucel (JCAR017) in children and young adult patients with R/R B-cell ALL was conducted using a CD19 CAR product of defined CD4/CD8 composition, uniform CAR expression, and limited effector differentiation. Forty-three of forty-five enrolled patients were dosed with treatment. The rate of MRD-CR as measured by multi parameter flow cytometry was 93% (n=40) in patients who received a CAR T cell product and 100% (n=14) in the subset of patients who received fludarabine and cyclophosphamide lymphodepletion. Twenty-three percent (n=10) of patients developed Grade 3 or higher cytokine release syndrome and 21% (n=9) of patients developed Grade 3 or higher neurotoxicity. Eleven patients relapsed within six months and 11 patients underwent consolidative allogeneic HSCT. *Source: Gardner et al., Blood 2017.*

Government Regulation and Product Approval

As a biopharmaceutical company that operates in the United States, we are subject to extensive regulation. Our cell products will be regulated as biologics. With this classification, commercial production of our products will need to occur in registered facilities in compliance with cGMP for biologics. The FDA categorizes human cell- or tissue-based products as either minimally manipulated or more than minimally manipulated, and has determined that more than minimally manipulated products require clinical trials to demonstrate product safety and efficacy and the submission of a BLA for marketing authorization. Our products are considered more than minimally manipulated and will require evaluation in clinical trials and the submission and approval of a BLA before we can market them.

Government authorities in the United States (at the federal, state and local level) and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biopharmaceutical products such as those we are developing. Our product candidates must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in foreign countries. Generally, our activities in other countries will be subject to regulation that is similar in nature and scope as that imposed in the United States, although there can be important differences. Additionally, some significant aspects of regulation in Europe are addressed in a centralized way, but country-specific regulation remains essential in many respects. The process for obtaining regulatory marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Product Development Process

In the United States, the FDA regulates pharmaceutical and biological products under the Federal Food, Drug and Cosmetic Act (FDCA), the Public Health Service Act (PHSA) and their implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. FDA sanctions could include, among other actions, refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us. The process required by the FDA before a biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices (GLPs) and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent Institutional Review Board (IRB) or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as good clinical practices (GCPs) and any additional requirements for the protection of human research patients and their health information, to establish the safety and efficacy of the proposed biological product for its intended use;

- submission to the FDA of a BLA for marketing approval that includes substantial evidence of safety, purity, and potency from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with cGMP, to assure that the facilities, methods and controls are adequate to preserve the biological product's identity, strength, quality and purity and, if applicable, the FDA's current good tissue practices (GTPs) for the use of human cellular and tissue products;
- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA; and
- FDA review and approval, or licensure, of the BLA.

Before testing any biological product candidate, including our product candidates, in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs. The clinical trial sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions regarding the proposed clinical trials and places the trial on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a biological product candidate at any time before or during clinical trials due to safety concerns or non-compliance. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trials.

In addition to the IND submission process, sponsors of certain clinical studies of cells containing recombinant or synthetic nucleic acid molecules, including human gene transfer studies, must comply with the National Institutes of Health's (NIH) Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines). The NIH Guidelines set forth the principles and requirements for NIH and institutional oversight of research with recombinant or synthetic nucleic acid molecules, including the standards for investigators and institutions to follow to ensure the safe handling and containment of such molecules. In April 2016, modifications to the NIH Guidelines went into effect, pursuant to which only a subset of human gene transfer protocols are subject to review by the NIH Recombinant DNA Advisory Committee (RAC), a federal advisory committee that provides recommendations regarding research involving recombinant or synthetic nucleic acid molecules. Specifically, under the modified NIH Guidelines, RAC review of the protocol will be required only in exceptional cases where (1) an oversight body such as an Institutional Biosafety Committee (IBC), which provides local review and oversight of research utilizing recombinant or synthetic nucleic acid molecules, or an IRB determines that the protocol would significantly benefit from RAC review, and (2) the protocol (a) uses a new vector, genetic material, or delivery methodology that represents a first-in-human experience and thus presents an unknown risk, and/or (b) relies on preclinical safety data that were obtained using a new preclinical model system of unknown and unconfirmed value, and/or (c) involves a proposed vector, gene construct, or method of delivery associated with possible toxicities that are not widely known and that may render it difficult for oversight bodies to evaluate the protocol rigorously. The RAC review proceedings are public, and reports are posted publicly to the website for the NIH's Office of Biotechnology Activities. Although compliance with the NIH Guidelines is mandatory for research conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. Independent of RAC review,

the NIH Guidelines also require all human gene transfer protocols subject to the NIH Guidelines to be registered with NIH, with limited exemptions. A study subject to the NIH Guidelines may not begin until the IBC approves the protocol, and the IBC cannot approve the protocol until confirmation from the NIH that such registration is complete. In the event that RAC review is warranted, the protocol registration process cannot be completed until RAC review has taken place.

Clinical trials involve the administration of the biological product candidate to patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's regulations comprising the GCP requirements, including the requirement that all research patients provide informed consent. Further, each clinical trial must be reviewed and approved by an independent IRB at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Certain clinical trials involving human gene transfer research also must be overseen by an IBC, a standing committee established under the NIH Guidelines specifically to provide peer review of the safety of research plans, procedures, personnel training and environmental risks of work involving recombinant DNA molecules. IBCs are typically assigned certain review responsibilities relating to the use of recombinant DNA molecules, including reviewing potential environmental risks, assessing containment levels, and evaluating the adequacy of facilities, personnel training, and compliance with the NIH Guidelines. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1.* The biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2.* The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- *Phase 3.* Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be

submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA, and the investigators for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or *in vitro* testing that suggest a significant risk for human patients, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immunotherapy trials. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Human immunotherapy products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the trials in order to establish the safety, efficacy, purity and potency of immunotherapy products, or that the data generated in these trials will be acceptable to the FDA to support marketing approval.

Concurrently with clinical trials, companies usually complete additional studies and must also develop additional information about the physical characteristics of the biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

After the completion of clinical trials of a biological product, FDA approval of a BLA must be obtained before commercial marketing of the biological product. The BLA submission must include results of product development, laboratory and animal studies, human trials, information on the manufacture and composition of the product, proposed labeling and other relevant information. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the BLA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Under the Prescription Drug User Fee Act (PDUFA), as amended, each BLA must be accompanied by a significant user fee. The FDA adjusts the PDUFA user fees on an annual basis. PDUFA also imposes an annual program fee for biological products. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins

an in-depth substantive review of the BLA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, potent, and/or effective for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may refer applications for novel biological products or biological products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the biological product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy (REMS) is necessary to assure the safe use of the biological product. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve a BLA without a REMS, if required.

Before approving a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. For immunotherapy products, the FDA also will not approve the product if the manufacturer is not in compliance with the GTPs, to the extent applicable. These are FDA regulations and guidance documents that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissue, and cellular and tissue based products (HCT/Ps), which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND trial requirements and GCP requirements. To assure cGMP, GTP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production, and quality control.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the BLA in its present form, the FDA will issue a complete response letter that describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials, sometimes referred to as Phase 4 clinical trials, designed to further assess a biological product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

In addition, under the Pediatric Research Equity Act (PREA), a BLA or supplement to a BLA must contain data to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric

subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any product for an indication for which orphan designation has been granted. However, if only one indication for a product has orphan designation, a pediatric assessment may still be required for any applications to market that same product for the non-orphan indication(s).

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Expedited Development and Review Programs

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. Unique to a fast track product, the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

Any product, submitted to the FDA for approval, including a product with a fast track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new product designated for priority review in an

effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

In addition, the Food and Drug Administration Safety and Innovation Act (FDASIA), which was enacted and signed into law in 2012, established the breakthrough therapy designation. Breakthrough therapy designation is intended to expedite the development and review of products that treat serious or life-threatening conditions. The designation by FDA requires preliminary clinical evidence that a product candidate, alone or in combination with other drugs and biologics, demonstrates substantial improvement over currently available therapy on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. If the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller trials or more efficient trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough therapy designation comes with all of the benefits of fast track designation, which means that the sponsor may file sections of the BLA for review on a rolling basis if certain conditions are satisfied, including an agreement with FDA on the proposed schedule for submission of portions of the application and the payment of applicable user fees before the FDA may initiate a review. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same product if relevant criteria are met. If a product is designated as breakthrough therapy, FDA will expedite the development and review of such product.

Fast Track designation, priority review and breakthrough therapy designation do not change the standards for approval but may expedite the development or approval process.

Post-Approval Requirements

Any products for which we receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, and complying with FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved uses (known as "off-label use"), limitations on industry-sponsored scientific and educational activities, and requirements for promotional activities involving the internet. Although a physician may prescribe a legally available product for an off-label use, if the physicians deems such product to be appropriate in his/her professional medical judgment, a manufacturer may not market or promote off-label uses.

In addition, quality control and manufacturing procedures must continue to conform to applicable manufacturing requirements after approval to ensure the long-term stability of the product. cGMP regulations

require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved BLA, including, among other things, recall or withdrawal of the product from the market. In addition, changes to the manufacturing process are strictly regulated, and depending on the significance of the change, may require prior FDA approval before being implemented. Other types of changes to the approved product, such as adding new indications and claims, are also subject to further FDA review and approval.

The FDA also may require post-marketing testing, known as Phase 4 testing, and surveillance to monitor the effects of an approved product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

U.S. Marketing Exclusivity

The Biologics Price Competition and Innovation Act (BPCIA) amended the PHSA to authorize the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. A competitor seeking approval of a biosimilar must file an application to establish its molecule as highly similar to an approved innovator biologic, among other requirements. The BPCIA, however, bars the FDA from approving biosimilar applications for 12 years after an innovator biological product receives initial marketing approval. This 12-year period of data exclusivity may be extended by six months, for a total of 12.5 years, if the FDA requests that the innovator company conduct pediatric clinical investigations of the product.

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some of our U.S. patents, if granted, may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years, as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application. Only one patent applicable to an approved product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may intend to apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare and Medicaid Services (CMS), other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice (DOJ), and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, our business practices, including any future sales, marketing and scientific/educational grant programs may be required to comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the patient data privacy and security provisions of the Health Insurance Portability and Accountability Act (HIPAA) transparency requirements, and similar state laws, each as amended.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor.

Additionally, the intent standard under the federal Anti-Kickback Statute was amended by the Patient Protection Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively, the Affordable Care Act, to a stricter standard such that a person or entity no longer needs to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation. Rather, if “one purpose” of the remuneration is to induce referrals, the federal Anti-Kickback Statute is violated. In addition, the Affordable Care Act codified case law that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act (discussed below).

The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to, among others, a federal healthcare program that the person knows or should know is for a medical or other item or service that was not provided as claimed or is false or fraudulent.

The federal civil False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes “any request or demand” for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies are being investigated or, in the past, have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies’ marketing of the product for unapproved, and thus non-reimbursable, uses.

HIPAA created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

We may be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH) and their implementing regulations, imposes requirements on certain types of individuals and entities relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to business associates that are independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Additionally, the federal Physician Payments Sunshine Act within the Affordable Care Act, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) report information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private "qui tam" actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and

future earnings, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such products. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price of a product or for establishing the reimbursement rate that such a payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, or also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities, and affect the ability to profitably sell product candidates for which marketing approval is obtained. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the

stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

For example, the Affordable Care Act has substantially changed healthcare financing and delivery by both governmental and private insurers. Among the Affordable Care Act provisions of importance to the pharmaceutical and biotechnology industries, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs that began in 2011;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, retroactive to January 1, 2010, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively, and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price (AMP);
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts, which through subsequent legislative amendments, will be increased to 70%, starting in 2019, off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals beginning in 2014 and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the 340B Drug Discount Program;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- expansion of healthcare fraud and abuse laws, including the FCA and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected;
- requirements to report certain financial arrangements with physicians and teaching hospitals;
- a requirement to annually report certain information regarding drug samples that manufacturers and distributors provide to physicians;
- establishment of a Center for Medicare and Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending that began on January 1, 2011; and
- a licensure framework for follow on biologic products.

Some of the provisions of the Affordable Care Act have yet to be implemented, and there have been legal and political challenges to certain aspects of the Affordable Care Act. Since January 2017, the current U.S. President has signed two executive orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the Affordable Care Act. In December 2017, Congress repealed the tax penalty for an individual's failure to maintain Affordable Care Act-mandated health insurance as part of a tax reform bill.

Further, on January 22, 2018, the current U.S. President signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain Affordable Care Act-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Moreover, the Bipartisan Budget Act of 2018 (BBA), among other things, amends the Affordable Care Act, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". Congress is continuing to consider legislation that would alter other aspects of the Affordable Care Act. The ultimate content, timing or effect of any healthcare reform legislation on the U.S. healthcare industry is unclear.

We anticipate that the Affordable Care Act, if substantially maintained in its current form, will continue to result in additional downward pressure on coverage and the price that we receive for any approved product, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. Such reforms could have an adverse effect on anticipated revenue from product candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop product candidates.

Further legislation or regulation could be passed that could harm our business, financial condition and results of operations. Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, President Obama signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013 and will stay in effect through 2027 unless additional Congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, the U.S. President's administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require authorization through additional legislation to become effective, Congress and the U.S. President's administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act (FCPA) prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political

party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

Europe / Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products. Whether or not we obtain FDA approval of a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the EU, for example, a clinical trial application must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the clinical trial application is approved in accordance with a country's requirements, clinical trial development may proceed. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under EU regulatory systems, we must submit an MAA. The application used to file the BLA in the United States is similar to that required in the EU, with the exception of, among other things, country-specific document requirements.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we or our potential collaborators fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

European Union General Data Protection Regulation

In addition to EU regulations related to the approval and commercialization of our products, we may be subject to the EU's General Data Protection Regulation (GDPR). The GDPR imposes stringent requirements for controllers and processors of personal data of persons in the EU, including, for example, more robust disclosures to individuals and a strengthened individual data rights regime, shortened timelines for data breach notifications, limitations on retention of information, increased requirements pertaining to special categories of data, such as health data, and additional obligations when we contract with third-party processors in connection with the processing of the personal data. The GDPR also imposes strict rules on the transfer of personal data out of the European Union to the United States and other third countries. In addition, the GDPR provides that EU member states may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric or health data.

The GDPR applies extraterritorially, and we may be subject to the GDPR because of our data processing activities that involve the personal data of individuals located in the European Union, such as in connection with our EU clinical trials. Failure to comply with the requirements of the GDPR and the applicable national data protection laws of the EU member states may result in fines of up to €20,000,000 or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. GDPR regulations may impose additional responsibility and liability in relation to the personal data that we process and we may be required to put in place additional mechanisms to ensure compliance with the new data protection rules.

Employees

As of September 30, 2018, we had 78 full-time employees. Of these employees, 37 hold Ph.D. or M.D. degrees, and 48 are engaged in research, development and technical operations. Substantially all of our employees are located in South San Francisco, California. Our employees are not represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Research and Development Expenses

We had no research and development expenses during the period from November 30, 2017 (inception) to December 31, 2017. For the six months ended June 30, 2018, we had $122.5 million in research and development expenses, consisting of $109.4 million of acquired in-process research and development charges associated with the asset acquisition from Pfizer, $4.7 million in external costs for payments to our collaboration partners related to product candidate development activities and manufacturing support for UCART19 clinical trials, $2.3 million for personnel-related costs, and $1.9 million for expenses incurred under the TSA with Pfizer.

Facilities

We occupy approximately 21,544 square feet of office and laboratory space in South San Francisco, California pursuant to our TSA with Pfizer. In August 2018, we entered into a new lease for approximately 68,000 square feet for office and laboratory space in South San Francisco. We expect to complete occupancy in the new facility by the end of the second quarter of 2019. We plan to identify and secure additional office and laboratory space, as well as our own manufacturing facility. One of the manufacturing sites we are evaluating for lease is represented by and may be owned by Bellco Capital LLC or an affiliate thereof (Bellco). Any transaction with Bellco would be subject to review in accordance with our related-person transaction policy described under "Certain Relationships and Related Party Transactions—Policies and Procedures for Transactions with Related Persons." We believe that our existing facilities and other available properties will be sufficient for our needs for the foreseeable future.

Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT

The following table sets forth information about our executive officers and directors.

Name	Age	Position(s)
Executive Officers		
David Chang, M.D., Ph.D.	58	President, Chief Executive Officer and Director
Eric Schmidt, Ph.D.	50	Chief Financial Officer
Alison Moore, Ph.D.	51	Chief Technical Officer
Non-Employee Directors		
Arie Belldegrun, M.D., FACS	68	Executive Chairman of the Board of Directors
David Bonderman (2)	75	Director
John DeYoung (2)	56	Director
Franz Humer, Ph.D. (1)(2)	72	Director
Joshua Kazam	41	Director
Deborah Messemer (1)(3)	61	Director
Todd Sisitsky (1)(3)	46	Director
Owen Witte, M.D. (3)	69	Director
Robert Abraham, Ph.D. (4)	65	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.
(4) Dr. Abraham will resign from our board of directors contingent and effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part.

Executive Officers

David Chang, M.D., Ph.D. is a co-founder of Allogene and has served as our President and Chief Executive Officer and as a member of our board of directors since June 2018. Prior to joining us, Dr. Chang served as the Chief Medical Officer and Executive Vice President, Research and Development of Kite from June 2014 until March 2018. Dr. Chang previously held senior positions at Amgen Inc., a biopharmaceutical company, including Vice President, Global Development from July 2006 to May 2014, Senior Director, Oncology-Therapeutics from July 2005 to June 2006 and Director, Medical Sciences from December 2002 to June 2005. Prior to that, he was an Associate Professor at the University of California, Los Angeles School of Medicine. Dr. Chang has served as a member of the Board of Directors of Peloton Therapeutics, Inc., a privately held biopharmaceutical company, since March 2018. He has also served as a Venture Partner of Vida Ventures, LLC since November 2017, and Two River Consulting, LLC since October 2017. Dr. Chang obtained a B.S. in Biology from the Massachusetts Institute of Technology and an M.D. and Ph.D. from Stanford University. Our board of directors believes Dr. Chang's expertise and experience in the life sciences, including his work in immune-oncology and his educational background, provide him with the qualifications and skills to serve on our board of directors.

Eric Schmidt, Ph.D. has served as our Chief Financial Officer since June 2018. Prior to joining us, Dr. Schmidt was a Managing Director and Senior Research Analyst at Cowen and Company, LLC. He joined Cowen as a Research Analyst in 1998 where he covered biotechnology stocks until June 2018. He was previously a Vice President and Research Analyst for UBS Securities. Before joining UBS in 1995, he co-founded Cambridge Biological Consultants, a scientific consulting and research firm. Dr. Schmidt obtained a Bachelor of Arts in Chemistry from the University of Pennsylvania and a Ph.D. in Biology from the Massachusetts Institute of Technology.

Alison Moore, Ph.D. has served as our Chief Technical Officer since June 2018. Prior to joining us, she most recently served as Senior Vice President, Process Development at Amgen Inc. from January 2013 until June

2018. Dr. Moore has previously held senior roles at Amgen in Operations Technology from January 2013 until August 2014, Process and Product engineering from January 2011 until January 2013, and Corporate Manufacturing from August 2008 until December 2010. Prior to these positions, she was Vice President, Site Operations at Amgen's Fremont, California, manufacturing facility, from March 2006 until August of 2008. Before joining Amgen, from 2005 to 2006, Dr. Moore was a Director in Chemistry, Manufacturing and Controls, and Regulatory Affairs at Genentech, Inc. Prior to Genentech, she was a Postdoctoral Research Fellow at the Medical University of Lübeck, Germany. Dr. Moore holds both a bachelor's degree in Pharmacology with Honors and a Ph.D. in Cell Biology from Manchester University, England.

Non-Employee Directors

Arie Belldegrun, M.D., FACS, is a co-founder of Allogene and has served as Executive Chairman of our board of directors since November 2017. From March 2014 until October 2017 Dr. Belldegrun served as the President and Chief Executive Officer of Kite and as a director from June 2009 until October 2017. Dr. Belldegrun currently serves as Chairman of Urogen Pharma, Ltd., a position he has held since December 2012, as Chairman and Partner of Two River Consulting, LLC, a position he has held since June 2009, and as Chairman of the Board of Directors of Kronos Bio, Inc., a position that he has held since June 2017. Dr. Belldegrun has also served as Senior Managing Director of Vida Ventures, LLC since November 2017. Dr. Belldegrun previously served as a director of Teva Pharmaceutical Industries Ltd. from March 2013 until January 2017, Chairman of Arno Therapeutics, Inc. from March 2008 until January 2017, a director of Capricor Therapeutics, Inc. from September 2009 until November 2013, and a director of SonaCare Medical, LLC from October 2009 until October 2014. In 1996, he founded Agensys, Inc., a biotechnology company, where he served as its founding Chairman from 1996 to 2001, and continued to serve on the board until 2007 when it was acquired by Astellas Pharma Inc. Dr. Belldegrun was also the Founding Vice-Chairman of the board of directors and Chairman of the scientific advisory board of Cougar Biotechnology, Inc., a biotechnology company, from 2003 to 2009, when it was acquired by Johnson & Johnson. He is certified by the American Board of Urology and is a Fellow of the American College of Surgeons and the American Association of Genitourinary Surgeons. Dr. Belldegrun is Professor of Urology, holds the Roy and Carol Doumani Chair in Urologic Oncology, and Director of the Institute of Urologic Oncology at the David Geffen School of Medicine at the University of California, Los Angeles, or UCLA. Prior to joining UCLA in October of 1988, he was a research fellow at NCI/NIH in surgical oncology and immunotherapy from July 1985 to August 1988 under Dr. Steven Rosenberg. Dr. Belldegrun received his M.D. from the Hebrew University Hadassah Medical School in Jerusalem before completing his post graduate studies in Immunology at the Weizmann Institute of Science and his residency in Urologic Surgery at Harvard Medical School. Our board of directors believes Dr. Belldegrun's expertise, experience, and track record in forming successful companies in immune oncology as well as his expertise as a urological oncologist provide him with the qualifications and skills to serve on our board of directors.

David Bonderman has served as a member of our board of directors since April 2018. He is a Founding Partner of TPG, a global alternative asset firm, established in 1992. Mr. Bonderman currently serves or has served during the past five years serves on the board of directors of the following public companies: RyanAir Holdings, plc, a major airlines company, of which he has been Chairman since August 1996; China International Capital Corporation Limited (since November 2010) and TPG Pace Holdings Corp. (since April 2017). Mr. Bonderman previously served on the board of directors of the following public companies: Kite (from February 2011 to October 2017); General Motors Company (from July 2009 to June 2014); JSC VTB Bank (from March 2011 to June 2014); CoStar Group, Inc., a commercial real estate information company (from May 1995 to June 2015); Pace Holdings Corp. (f/k/a Paceline Holdings Corp.) (from September 2015 to March 2017); Caesars Entertainment Corporation (from January 2008 to October 2017); Energy Future Holdings Corp. (from October 2007 to March 2018) and TPG Pace Energy Holdings Corp. (from April 2017 to July 2018). Prior to forming TPG in 1992, Mr. Bonderman was Chief Operating Officer of the Robert M. Bass Group, Inc. (RMBG), now doing business as Keystone Group, L.P., in Fort Worth, Texas. Prior to joining RMBG in 1983, Mr. Bonderman was a partner in the law firm of Arnold & Porter in Washington, D.C., where he specialized in corporate, securities, bankruptcy and antitrust litigation. From 1969 to 1970, Mr. Bonderman was a Fellow in

Foreign and Comparative Law in conjunction with Harvard University, and from 1968 to 1969, he was Special Assistant to the U.S. Attorney General in the Civil Rights division. From 1967 to 1968, Mr. Bonderman was Assistant Professor at Tulane University School of Law in New Orleans, Louisiana. Mr. Bonderman holds a bachelor's degree from the University of Washington and a J.D. from Harvard Law School. Mr. Bonderman graduated magna cum laude from Harvard Law School where he was a member of the Harvard Law Review and Sheldon Fellow. Our board of directors believes that Mr. Bonderman's expertise and experience as a director of other public companies and his educational background provide him with the qualifications and skills to serve on our board of directors.

John DeYoung has served as a member of our board of directors since April 2018. Mr. DeYoung is Vice President of Worldwide Business Development for Pfizer's Oncology Business Unit. He is a member of Pfizer's Oncology Leadership Team and its Worldwide Business Development Leadership Team. Mr. DeYoung joined Pfizer in 1991 and has held leadership positions in Finance, Marketing, Commercial Development and Business Development. Mr. DeYoung received his bachelor's degree in business from Michigan State University in 1985 and his MBA from the University of Chicago in 1990. Our board of directors believes Mr. DeYoung's expertise and experience in the life sciences and his financial background provide him with the qualifications and skills to serve on our board of directors.

Franz Humer, Ph.D. has served as a member of our board of directors since April 2018. Dr. Humer is Chairman of the board of directors of the International Centre for Missing and Exploited Children and Chairman of the Humer Foundation. Dr. Humer previously served as a member of the board of directors of Kite from September 2015 until October 2017. He has also served as an independent director of Citigroup Inc. since 2012, and Chugai Pharmaceuticals Ltd. (Japan) since 2002. Dr. Humer also serves as a director of Bial Pharmaceuticals (Portugal), WISeKey (Cyber Security Company, Switzerland) and as a member of the International Advisory Board of Allianz SE. He served as Chairman of Diageo plc from 2005 to 2017. In addition, Dr. Humer served as Head of Pharmaceuticals and then as Chief Operating Officer of F. Hoffmann-La Roche Ltd. from 1996 to 1998, prior to serving as Chief Executive Officer of Roche Group from 1998 to 2001 and later as chairman and Chief Executive Officer from 2001 to 2008. His tenure as Chairman of Roche Holding Ltd. extended from 2008 to 2014. Before joining Roche Group, he served on the board of Glaxo Holdings plc and was responsible for research, business development, manufacturing, commercial strategy, and all non-US operations for 13 years. In 1973, Dr. Humer joined Schering Plough Corporation where he held various General Management positions in Latin America and Europe. Dr. Humer attended the University of Innsbruck, where he obtained a Ph.D. in Law, and INSEAD in Fontainebleau, where he obtained an MBA. Our board of directors believes that Dr. Humer's expertise and experience in life sciences, his experience as a director of other companies and his educational background provide him with the qualifications and skills to serve on our board of directors.

Joshua Kazam has served as a member of our board of directors since November 2017. Mr. Kazam served as our President from November 2017 until June 2018. He was a founder of Kite and served as a member of Kite's board of directors from Kite's inception in June 2009 until October 2017. Mr. Kazam also served as Kite's President until September 2010. In June 2009, Mr. Kazam co-founded Two River Consulting, LLC, a life-science consulting and investment firm. Since October 2005, he has also served as an officer and director and is the co-owner of Riverbank Capital Securities, Inc., a FINRA member broker dealer. From 2002 to 2004, Mr. Kazam served as the Director of Investment Management for the Orion Biomedical Fund, a private equity fund focused on biotechnology investments. Mr. Kazam has served on the board of directors of Capricor Therapeutics, Inc., a publicly reporting biotechnology company, since May 2005, and Vision Path, Inc. (d/b/a Hubble Contacts) since May 2016, Kronos Bio, Inc. since June 2017 and Platinum Eagle Acquisition Corp., a blank check company formed for the purpose of effecting a business combination with one or more businesses, since January 2018. Mr. Kazam served on the board of directors of Velcera, Inc. from 2003 until it was acquired by Perrigo Company plc in 2013. He is also the co-founder and has served on the board of directors of Veterinary Prime, Inc. since its inception in February 2015 and has served as the President of Desert Flower Foundation since June 2016. Mr. Kazam received his bachelor's degree in Entrepreneurial Management from the Wharton School of the University of Pennsylvania and is a Member of the Wharton School's Undergraduate Executive Board. Our board of directors believes Mr. Kazam's

expertise and experience in the life sciences and venture capital industries and his educational background provide him with the qualifications and skills to serve on our board of directors.

Deborah Messemer has served as a member of our board of directors since September 2018. Ms. Messemer is a certified public accountant and joined KPMG LLP (KPMG), the U.S. member firm of KPMG International, in 1982 and was admitted into the partnership in 1995. Most recently, Ms. Messemer served as the Managing Partner of KPMG's Bay Area and Northwest region until July 2018. In that role, she was responsible for leading over 3,000 team members in 10 offices across all functions, including audit, tax and advisory. Ms. Messemer spent the majority of her career in KPMG's audit practice as an audit engagement partner serving public and private clients in a variety of industry sectors. In addition to audit signing responsibilities, she has significant experience in SEC filings, due diligence, initial public offerings, mergers and acquisitions, and internal controls over financial reporting. Ms. Messemer is a member of the National Association of Corporate Directors and the San Francisco Chapter of Women Corporate Directors. She has served extensively on non-profit and advisory boards including the Bay Area Council, the San Francisco Committee on Jobs, the California Chamber of Commerce, the San Francisco Chamber of Commerce, the UC Berkeley Fisher Center Policy Advisory Board, San Francisco Ballet, and Posse. Ms. Messemer received a bachelor's degree in accounting from the University of Texas at Arlington. Our board of directors believes Ms. Messemer's expertise in the accounting and finance industry, her experience advising public companies and her education provide her with the qualifications and skills to serve on our board or directors.

Todd Sisitsky has served as a member of our board of directors since April 2018. Mr. Sisitsky is Managing Partner of TPG Capital, where he co-leads the firm's investment activities in healthcare services and pharmaceutical/medical device sectors. He has played leadership roles in connection with TPG's investments in companies such as Aptalis Pharma, a GI-focused specialty pharmaceutical company, Biomet, a broad-based orthopedic product manufacturer, Exactech, an orthopedic implant manufacturer with a focus on extremities, hips and knees, Fenwal Transfusion Therapies, a blood product technologies business, IASIS Healthcare, a Tennessee-based acute care hospital company, Surgical Care Affiliates, an ambulatory surgery center business, HealthScope, a hospital and pathology company based in Australia, IMS Health, a leading global data services and consulting business to several segments of the healthcare industry, Immucor, a leading automated blood screening and testing business, and Par Pharmaceutical Companies, Inc. Mr. Sisitsky currently serves as director of Endo International plc, a position he has held since April 2016, and director of IQVIA Holdings, Inc., a position he has held since April 2018. Mr. Sisitsky previously served as a director of Par Pharmaceutical Companies, Inc. from September 2012 to September 2015, director of IMS Health Holdings, Inc. from February 2010 until October 2016 and Surgical Care Affiliates, Inc. from October 2013 until March 2017. Mr. Sisitsky also serves on the board of directors of the global not-for-profit organization, the Campaign for Tobacco Free Kids, as well as on the Dartmouth Medical School Board of Advisors, where he serves as chairman. Prior to joining TPG in 2003, Mr. Sisitsky worked at Forstmann Little & Company and Oak Hill Capital Partners. He received an MBA from the Stanford Graduate School of Business and earned his bachelor's degree from Dartmouth College. Our board of directors believes Mr. Sisitsky's expertise and experience in life science investing and the finance industry provide him with the qualifications and skills to serve on our board of directors.

Owen Witte, M.D., has served as a member of our board of directors since April 2018. Dr. Witte previously served as a member of the board of directors of Kite from March 2017 until October 2017. Dr. Witte joined the UCLA faculty in 1980, where he is presently a University Professor of microbiology, immunology and molecular genetics, the UCLA David Saxon Presidential Chair in Developmental Immunology and the director of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research. Dr. Witte was appointed a University Professor by the University of California Board of Regents, an honor reserved for scholars of the highest international distinction. Dr. Witte is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the National Academy of Medicine. Dr. Witte currently serves on several editorial and advisory boards. He previously served on the board of directors for the American Association for Cancer Research. He was appointed by President Obama to the President's Cancer Panel. Dr. Witte holds a

bachelor's degree from Cornell University and an M.D. from Stanford University. He completed postdoctoral research at the Massachusetts Institute of Technology. Our board of directors believes Dr. Witte's expertise and experience in cancer research, his experience in academia and his educational background provide him with the qualifications and skills to serve on our board of directors.

Robert Abraham, Ph.D. has served as a member of our board of directors since April 2018. Dr. Abraham is Senior Vice President and Group Head, Oncology R&D Group in Pfizer's Worldwide Research and Development organization. Prior to joining Pfizer in 2009, he served in Wyeth Research as Vice President of Oncology Research, one of the five therapeutic areas in Wyeth Discovery Research. Prior to joining Wyeth in 2005, he was a professor at the Sanford-Burnham Institute for Medical Research, or SBIMR in La Jolla, CA. He was the founding Director of the Signal Transduction Research Program and served as the Director of the SBIMR Cancer Research Center. Dr. Abraham retains an appointment as an Adjunct Professor at the SBIMR, together with an Adjunct Professor Appointment in Pharmacology at the University of California, San Diego. From 1998 to 2001, he was a Professor in the Department of Pharmacology and Cancer Biology at the Duke University Medical Center. He also served as Associate Director of Translational Research in the Duke Comprehensive Cancer Center. Before his arrival at Duke University, he was at the Mayo Clinic where he served as a Professor in both the Department of Immunology and Department of Pharmacology. From 1997 to 1998, he also served as Director of Basic Sciences in the Mayo Comprehensive Cancer Center. He received his B.S. in Biology from Bucknell University in 1974 and subsequently completed his Ph.D. studies in Pharmacology at the University of Pittsburgh. In 1981, he worked as a Postdoctoral Fellow in Pharmacology and Immunology at the Mayo Clinic. Our board of directors believes Dr. Abraham's expertise and experience in the life sciences and his educational background provide him with the qualifications and skills to serve on our board of directors. Dr. Abraham has informed of us of his intention to resign from our board of directors contingent and effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part.

Scientific Advisory Board

We have established a scientific advisory board comprised of scientific leaders that regularly provides advice and input on matters related to our research and development programs. Our scientific advisory board consists of experts across a range of key disciplines relevant to our programs and science. We intend to continue to leverage the broad expertise of our advisors by seeking their counsel on important topics relating to our research and development programs. Some members of our scientific advisory board have entered into consulting agreements with us covering their respective confidentiality, non-disclosure and proprietary rights matters and own or have owned shares of our common stock or options to purchase shares of our common stock.

All of the scientific advisors are employed by or have consulting arrangements with other entities and devote only a small portion of their time to us. Our current advisors are:

Name	Titles
Ton Schumacher, Ph.D. (Chair)	Senior Member at the Netherlands Cancer Institute, Professor of Immunotechnology at Leiden University Medical Center, Postdoctoral Fellow at the Massachusetts Institute of Technology, Postdoctoral Researcher at the Whitehead Institute, founder of three biotechnology companies in the area of immuno-oncology
Donald B. Kohn, M.D.	Professor of Microbiology, Immunology and Molecular Genetics and Pediatrics, Director of the UCLA Human Gene and Stem Cell Therapy Program, member of the Broad Stem Cell Research Center and the Jonsson Comprehensive Cancer Center, pediatric intern and resident at the University of Wisconsin Hospitals, medical staff fellowship in the Metabolism Branch of the National Cancer Institute. Professor and Head of the Division of Research Immunology/Bone Marrow

Name	Titles
	Transplantation at the Children's Hospital Los Angeles, USC Keck School of Medicine, President of the American Society of Gene and Cell Therapy and the Clinical Immunology Society
Crystal Mackall, M.D.	Endowed Professor of Pediatrics and Medicine at the Stanford University School of Medicine, Director of the Parker Institute for Cancer Immunotherapy at Stanford, Founding Director of the Stanford Center for Cancer Cell Therapy and Associate Director of the Stanford Cancer Institute, Head of the Immunology Section and Chief of the Pediatric Oncology Branch at the National Institute of Health's National Cancer Institute, co-leader of StandUp2Cancer, St. Baldrick's Foundation and NCI Pediatric Dream Team
Matthew Porteus, M.D., Ph.D.	Associate Professor of Pediatrics in the Department of Pediatrics, Divisions of Hematology/Oncology and Human Gene Therapy at Stanford University School of Medicine, intern and resident in pediatrics at Boston Children's Hospital, pediatric hematology/oncology fellow in the combined Boston Children's Hospital/Dana Farber Cancer Institute program, postdoctoral fellow at the Massachusetts Institute of Technology and Caltech, independent faculty member at UT Southwestern in the Departments of Pediatrics and Biochemistry, Associate Professor at Stanford University
Owen Witte, M.D.	Investigator of the Howard Hughes Medical Institute, Professor of Microbiology, Immunology and Molecular Genetics and Medical Pharmacology at UCLA, where he holds the President's Chair in Developmental Immunology at UCLA's David Geffen School of Medicine, Founding Director of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA, member of the National Academy of Science and National Academy of Medicine, postdoctoral fellow at the Massachusetts Institute of Technology Center for Cancer Research, predoctoral fellow Stanford University

Board Composition

Our business and affairs are organized under the direction of our board of directors, which currently consists of 10 members but will be reduced to nine members in connection with Dr. Abraham's resignation upon the effectiveness of the registration statement of which this prospectus forms a part. The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling and direction to our management. Our board of directors meets on a regular basis and on an ad hoc basis as required.

Our board of directors has determined that all of our directors other than Dr. Belldegrun, Mr. Kazam and Dr. Chang are independent directors, as defined by Rule 5605(a)(2) of the Nasdaq Listing Rules.

In accordance with the terms of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to and upon the closing of this offering, respectively, we will divide our board of directors into three classes, as follows:

- Class I, which will consist of Dr. Belldegrun, Dr. Chang and Mr. Bonderman, whose terms will expire at our annual meeting of stockholders to be held in 2019;
- Class II, which will consist of Dr. Witte, Ms. Messemer and Mr. Sisitky, whose terms will expire at our annual meeting of stockholders to be held in 2020; and

- Class III, which will consist of Dr. Humer, Mr. Kazam and Mr. DeYoung, whose terms will expire at our annual meeting of stockholders to be held in 2021.

At each annual meeting of stockholders to be held after the initial classification, the successors to directors whose terms then expire will serve until the third annual meeting following their election and until their successors are duly elected and qualified. The authorized size of our board of directors is currently 10 members but will be reduced to nine members effective upon the effectiveness of the registration statement of which this prospectus forms a part. The authorized number of directors may be changed only by resolution of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed between the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of our board of directors may have the effect of delaying or preventing changes in our control or management. Our directors may be removed for cause by the affirmative vote of the holders of at least 66-2/3% of our voting stock.

Board Leadership Structure

Our board of directors is currently chaired by Dr. Belldegrun, who has authority, among other things, to call and preside over board of directors meetings, to set meeting agendas and to determine materials to be distributed to the board of directors. Accordingly, the Executive Chairman has substantial ability to shape the work of the board of directors. We believe that separation of the positions of Executive Chairman and Chief Executive Officer reinforces the independence of the board of directors in its oversight of our business and affairs. In addition, we have a separate chair for each committee of our board of directors. The chair of each committee is expected to report annually to our board of directors on the activities of their committee in fulfilling their responsibilities as detailed in their respective charters or specify any shortcomings should that be the case.

In addition, our board of directors has appointed Mr. Bonderman to serve as our lead independent director upon the closing of this offering. As lead independent director, Mr. Bonderman will preside over periodic meetings of our independent directors, serve as a liaison between our Executive Chairman and the independent directors and perform such additional duties as set forth in our bylaws and as our board of directors may otherwise determine and delegate.

Role of the Board in Risk Oversight

The audit committee of our board of directors is primarily responsible for overseeing our risk management processes on behalf of our board of directors. Going forward, we expect that the audit committee will receive reports from management periodically regarding our assessment of risks. In addition, the audit committee reports regularly to our board of directors, which also considers our risk profile. The audit committee and our board of directors focus on the most significant risks we face and our general risk management strategies. While our board of directors oversees our risk management, management is responsible for day-to-day risk management processes. Our board of directors expects management to consider risk and risk management in each business decision, to proactively develop and monitor risk management strategies and processes for day-to-day activities and to effectively implement risk management strategies adopted by the audit committee and our board of directors. We believe this division of responsibilities is the most effective approach for addressing the risks we face and that our board of directors' leadership structure, which also emphasizes the independence of our board of directors in its oversight of its business and affairs, supports this approach.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee.

Audit Committee

Our audit committee consists of Dr. Humer, Ms. Messemer and Mr. Sisitsky. Our board of directors has determined that each of the members of our audit committee satisfies the Nasdaq Stock Market and SEC independence requirements. Dr. Humer serves as the chair of our audit committee. The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;
- reviewing, with our independent auditors and management, significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing with management and our independent auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters and other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related-person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management are implemented;
- reviewing on a periodic basis our investment policy; and
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter.

Our board of directors has determined that Ms. Messemer qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the Nasdaq Listing Rules. In making this determination, our board has considered Ms. Messemer's prior experience, business acumen and independence. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee

Our compensation committee consists of Mr. Bonderman, Dr. Humer and Mr. DeYoung, Mr. Bonderman serves as the chair of our compensation committee. Our board of directors has determined that each of the members of our compensation committee is a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act and satisfies the Nasdaq Stock Market independence requirements. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- reviewing and making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;
- evaluating risks associated with our compensation policies and practices and assessing whether risks arising from our compensation policies and practices for our employees are reasonably likely to have a material adverse effect on us;
- reviewing and making recommendations to the full board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- establishing policies with respect to votes by our stockholders to approve executive compensation as required by Section 14A of the Exchange Act and determining our recommendations regarding the frequency of advisory votes on executive compensation, to the extent required by law;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans;
- establishing policies with respect to equity compensation arrangements;
- reviewing the competitiveness of our executive compensation programs and evaluating the effectiveness of our compensation policy and strategy in achieving expected benefits to us;
- reviewing and making recommendations to the full board of directors regarding the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption “Compensation Discussion and Analysis” in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;
- preparing the report that the SEC requires in our annual proxy statement; and
- reviewing and assessing on an annual basis the performance of the compensation committee and the compensation committee charter.

We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Ms. Messemer, Mr. Sisitsky and Dr. Witte. Our board of directors has determined that each of the members of this committee satisfies the Nasdaq Stock Market independence requirements. Dr. Witte serves as the chair of our nominating and corporate governance committee. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors consistent with criteria approved by our board of directors;
- determining the minimum qualifications for service on our board of directors;
- evaluating director performance on the board and applicable committees of the board and determining whether continued service on our board is appropriate;
- evaluating, nominating and recommending individuals for membership on our board of directors;
- evaluating nominations by stockholders of candidates for election to our board of directors;
- considering and assessing the independence of members of our board of directors;
- developing a set of corporate governance policies and principles, including a code of business conduct and ethics, periodically reviewing and assessing these policies and principles and their application and recommending to our board of directors any changes to such policies and principles;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and assessing on an annual basis the performance of the nominating and corporate governance committee and the nominating and corporate governance committee charter.

We believe that the composition and functioning of our nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee Interlocks and Insider Participation

None of our current or former executive officers serve as a member of the compensation committee. None of our officers serve, or have served during the last completed fiscal year, on the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our board of directors or our compensation committee. For a description of transactions between us and members of our compensation committee and affiliates of such members, please see “Certain Relationships and Related Party Transactions.”

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or person performing similar functions. Following this offering, a current copy of the code will be available on the Corporate Governance section of our website, www.allogene.com.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, limits the liability of directors to the maximum extent permitted by Delaware law. Delaware law allows a corporation to eliminate the personal liability of directors of a corporation to the

corporation and its stockholders for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- breach of his or her duty of loyalty to the corporation or its stockholders;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- transaction from which the director derived an improper personal benefit.

Our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, will remain available under Delaware law. These limitations also do not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Our amended and restated bylaws, which will become effective upon the closing of this offering, provide that we will indemnify our directors and executive officers and may indemnify other officers, employees and other agents, to the fullest extent permitted by law. Our amended and restated bylaws, which will become effective upon the closing of this offering, also provide that we are obligated to advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding and also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us, regardless of whether our amended and restated bylaws permit such indemnification. We have obtained a policy of directors' and officers' liability insurance.

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, will require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or any other company or enterprise to which the person provides services at our request. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Except as otherwise disclosed under the heading "Legal Proceedings" in the "Business" section of this prospectus, at present, there is no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

EXECUTIVE AND DIRECTOR COMPENSATION

Our only named executive officer for the year ended December 31, 2017 was Joshua Kazam, our former President. During the period from November 30, 2017 (inception) through December 31, 2017, we did not have any other executive officers.

Summary Compensation Table

Name and principal position	Year	Salary ($)	Bonus ($)	Option awards ($)	All other compensation ($)	Total ($)
Joshua Kazam[1]	2017	—	—	—	—	—
Former President						

(1) Mr. Kazam resigned as our President on June 25, 2018.

Annual Base Salary

Our named executive officer for 2017, Joshua Kazam, did not receive a salary for 2017 .

The base salary of our executive officers is generally determined and approved by our board of directors in connection with the executive officer's commencement of employment.

Bonus Compensation

From time to time our board of directors or compensation committee may approve bonuses for our executive officers based on individual performance, company performance or as otherwise determined to be appropriate. In 2017, our sole named executive officer was not entitled to any target or minimum bonus and no specific performance goals or bonus program were established.

Equity-Based Incentive Awards

Our equity-based incentive awards are designed to align our interests and those of our stockholders with those of our employees and consultants, including our executive officers. The board of directors or an authorized committee thereof is responsible for approving equity grants. As of the date of this prospectus, stock option awards were the only form of equity awards we have granted to any of our executive officers.

We have historically used stock options as an incentive for long-term compensation to our executive officers because the stock options allow our executive officers to profit from this form of equity compensation only if our stock price increases relative to the stock option's exercise price, which exercise price is set at the fair market value of our common stock on the date of grant. We may grant equity awards at such times as our board of directors determines appropriate. Our executives generally are awarded an initial grant in the form of a stock option in connection with their commencement of employment with us. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to this offering, we have granted all stock options pursuant to our Prior Plan. Following this offering, we will grant equity incentive awards under the terms of the 2018 Plan. The terms of our equity plans are described below under "— Equity Benefit Plans."

All options are granted with an exercise price per share that is no less than the fair market value of our common stock on the date of grant of such award. Our stock option awards generally vest over a four-year period and may be subject to acceleration of vesting and exercisability under certain termination and change in control events.

Agreements with Named Executive Officer and Principal Officers

Before his resignation as our President, we did not enter into an employment agreement with our named executive officer. However, we have entered into employment agreements with our current Principal Executive Officer and our current Principal Financial and Accounting Officer. Each of these current officers' employment began after December 31, 2017 and their employment agreements are described below.

David Chang, M.D., Ph.D. We entered into a letter agreement with Dr. Chang, our President and Chief Executive Officer, in June 2018 that governs the current terms of his employment with us. Pursuant to the agreement, Dr. Chang is entitled to an annual base salary of $525,000, is eligible to receive an annual target performance bonus of up to 45% of his base salary, as determined by our board of directors, and was granted initial new hire options to purchase 1,955,625 shares of common stock. Additionally, we entered into a vesting restriction agreement with Dr. Chang in April 2018, pursuant to which the 2,568,142 shares of common stock beneficially owned by Dr. Chang and issued in December 2017 became subject to vesting over a 52-month period commencing in December 2017. Subject to Dr. Chang's continuous service through each vesting date.

Eric Schmidt, Ph.D. We entered into a letter agreement with Dr. Schmidt, our Chief Financial Officer, in June 2018 that governs the current terms of his employment with us. Pursuant to the agreement, Dr. Schmidt is entitled to an annual base salary of $375,000, is eligible to receive an annual target performance bonus of up to 35% of his base salary, as determined by our board of directors, and was granted initial new hire options to purchase 1,464,750 shares of common stock.

Each of the options granted to Drs. Chang and Schmidt are subject to a four-year vesting schedule, with 25% vesting one year after the vesting commencement date and the balance vesting monthly over the remaining 36 months, subject to each individual's continued service through each vesting date.

Each of these current officers' employment is at will and may be terminated by us at any time. Any potential payments and benefits due upon a qualifying termination of employment or a change in control are further described below under "— Potential Payments and Benefits upon Termination or Change in Control."

Potential Payments and Benefits upon Termination or Change in Control

Regardless of the manner in which an executive officer's service terminates, each executive officer is entitled to receive amounts earned during his or her term of service, including unpaid salary and unused vacation, as applicable. In addition, our Board has approved a Change in Control Plan described below.

Change in Control and Severance Benefit Plan

Our current executive officers are entitled to certain severance and change of control payments and benefits pursuant to our change in control and severance benefit plan (Change in Control Plan). The Change in Control Plan provides for a combination of a lump-sum cash severance payment, continued health benefits and accelerated vesting of outstanding equity awards in the event of an involuntary termination without "cause" or a resignation with "good reason," or an involuntary termination. In the event that the involuntary termination occurs within the period commencing three months before and ending 12 months after a change in control, then the participants in the Change in Control Plan are entitled to enhanced severance benefits, as well as accelerated vesting of their outstanding equity compensation awards.

Under the Change in Control Plan, the term "cause" generally means (i) the employee's commission of any crime involving fraud, dishonesty or moral turpitude; (ii) the employee's attempted commission of or participation in a fraud or act of dishonesty against us that results in (or might have reasonably resulted in) material harm to our business; (iii) the employee's intentional, material violation of any contract or agreement between us and the employee or any statutory duty that the employee owes to us; or (iv) the employee's conduct

that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or might have reasonably resulted in) material harm to our business. The term "change in control" generally means (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity) in substantially the same proportions as their ownership immediately prior to such transaction, (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction, or (4) a complete dissolution or liquidation of the company.

The term "good reason" generally means (i) a material reduction of such employee's annual base salary, which is a reduction of at least 10% of such employee's base salary (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); (ii) a material reduction in such employee's authority, duties or responsibilities; (iii) a relocation of such employee's principal place of employment with the Company (or successor to the Company, if applicable) to a place that increases such employee's one-way commute by more than 50 miles as compared to such employee's then-current principal place of employment immediately prior to such relocation (excluding regular travel in the ordinary course of business).

Perquisites, Health, Welfare and Retirement Benefits

Our executive officers, during their employment with us, are eligible to participate in our employee benefit plans, including our medical, dental, group term life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. In addition, we provide a 401(k) plan to our employees, including our executive officers, as discussed in the section below entitled "— 401(k) Plan."

We generally do not provide perquisites or personal benefits to our executive officers, except in limited circumstances. We do, however, pay the premiums for medical, dental, group term life, disability and accidental death and dismemberment insurance for all of our employees. Our board of directors may elect to adopt qualified or nonqualified benefit plans in the future if it determines that doing so is in our best interests.

401(k) Plan

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our executive officers are eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(a) of the Code. The 401(k) plan provides that each participant may contribute up to the lesser of 100% of his or her compensation or the statutory limit, which is $18,000 and $18,500 for calendar years 2017 and 2018, respectively. Participants that are 50 years or older can also make "catch-up" contributions, which in calendar years 2017 and 2018 may be up to an additional $6,000 above the statutory limit. We currently make matching contributions into the 401(k) plan on behalf of participants. Participant contributions are held and invested, pursuant to the participant's instructions, by the plan's trustee.

Nonqualified Deferred Compensation

We do not maintain nonqualified defined contribution plans or other nonqualified deferred compensation plans. Our board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Equity Benefit Plans

Amended and Restated 2018 Equity Incentive Plan

Our board of directors adopted our 2018 Plan in September 2018 and our stockholders approved our 2018 Plan in October 2018. Our 2018 Plan is a successor to and continuation of our Prior Plan. No stock awards may be granted under the 2018 Plan until the date of the underwriting agreement related to this offering. Once the 2018 Plan is effective, no further grants will be made under the Prior Plan.

Stock Awards. Our 2018 Plan provides for the grant of incentive stock options (ISOs) within the meaning of Section 422 of the Code, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory stock options (NSOs) stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other forms of stock awards to employees, directors and consultants, including employees and consultants of our affiliates.

Authorized Shares. Initially, the maximum number of shares of our common stock that may be issued under our 2018 Plan after it becomes effective will be 20,432,250 shares, which is the sum of (1) 8,223,097 new shares, plus (2) the number of shares (not to exceed 12,209,153 shares) (i) that remain available for the issuance of awards under our Prior Plan at the time our 2018 Plan becomes effective, and (ii) any shares subject to outstanding stock options or other stock awards that were granted under our Prior Plan that terminate or expire prior to exercise or settlement; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of shares of our common stock reserved for issuance under our 2018 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2019 (assuming the 2018 Plan becomes effective in 2018) through January 1, 2028, in an amount equal to 5% of the total number of shares of our capital stock outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued on the exercise of ISOs under our 2018 Plan is 40,864,500.

Shares subject to stock awards granted under our 2018 Plan that expire or terminate without being exercised in full or that are paid out in cash rather than in shares do not reduce the number of shares available for issuance under our 2018 Plan. If any shares of common stock issued pursuant to a stock award are forfeited back to or repurchased or reacquired by us for any reason, the shares that are forfeited or repurchased or reacquired will revert to and again become available for issuance under the 2018 Plan. Any shares reacquired in satisfaction of tax withholding obligations or as consideration for the exercise or purchase price of a stock award will again become available for issuance under the 2018 Plan.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2018 Plan and is referred to as the "plan administrator" herein. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified stock awards and (2) determine the number of shares subject to such stock awards. Under our 2018 Plan, our board of directors has the authority to determine award recipients, grant dates, the numbers and types of stock awards to be granted, the applicable fair market value, and the provisions of each stock award, including the period of exercisability and the vesting schedule applicable to a stock award.

Under the 2018 Plan, the board of directors also generally has the authority to effect, with the consent of any adversely affected participant, (A) the reduction of the exercise, purchase, or strike price of any outstanding award; (B) the cancellation of any outstanding award and the grant in substitution therefore of other awards, cash, or other consideration; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock options, within the terms and

conditions of the 2018 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2018 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

The plan administrator determines the term of stock options granted under the 2018 Plan, up to a maximum of 10 years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us or any of our affiliates ceases for any reason other than disability, death, or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 18 months following the date of death. If an optionholder's service relationship with us or any of our affiliates ceases due to disability, the optionholder may generally exercise any vested options for a period of 12 months following the cessation of service. In the event of a termination for cause, options generally terminate upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker- assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, or (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will or the laws of descent and distribution. Subject to approval of the plan administrator or a duly authorized officer in each case, (i) an option may be transferred pursuant to a domestic relations order, official marital settlement agreement, or other divorce or separation instrument and (ii) an optionholder may designate a beneficiary who may exercise the option following the optionholder's death.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an award holder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock unit awards are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock unit awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past or future services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the

participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Stock Appreciation Rights. Stock appreciation rights are granted under stock appreciation right agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under the 2018 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2018 Plan, up to a maximum of 10 years. If a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability, or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. This period may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. The 2018 Plan permits the grant of performance-based stock and cash awards. Our compensation committee may structure awards so that the stock or cash will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (i) sales; (ii) revenues; (iii) assets; (iv) expenses; (v) market penetration or expansion; (vi) earnings from operations; (vii) earnings before or after deduction for all or any portion of interest, taxes, depreciation, amortization, incentives, service fees or extraordinary or special items, whether or not on a continuing operations or an aggregate or per share basis; (viii) net income or net income per common share (basic or diluted); (ix) return on equity, investment, capital or assets; (x) one or more operating ratios; (xi) borrowing levels, leverage ratios or credit rating; (xii) market share; (xiii) capital expenditures; (xiv) cash flow, free cash flow, cash flow return on investment, or net cash provided by operations; (xv) stock price, dividends or total stockholder return; (xvi) development of new technologies or products; (xvii) sales of particular products or services; (xviii) economic value created or added; (xix) operating margin or profit margin; (xx) customer acquisition or retention; (xxi) raising or refinancing of capital; (xxii) successful hiring of key individuals; (xxiii) resolution of significant litigation; (xxiv) acquisitions and divestitures (in whole or in part); (xxv) joint ventures and strategic alliances; (xxvi) spin-offs, split-ups and the like; (xxvii) reorganizations; (xxviii) recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; (xxix) or strategic business criteria, consisting of one or more objectives based on the following goals: achievement of timely development, design management or enrollment, meeting specified market penetration or value added, payor acceptance, patient adherence, peer reviewed publications, issuance of new patents, establishment of or securing of licenses to intellectual property, product development or introduction (including, without limitation, any clinical trial accomplishments, regulatory or other filings, approvals or milestones, discovery of novel products, maintenance of multiple products in pipeline, product launch or other product development milestones), geographic business expansion, cost targets, cost reductions or savings, customer satisfaction, operating efficiency, acquisition or retention, employee satisfaction, information technology, corporate development (including, without limitation, licenses, innovation, research or establishment of third-party collaborations), manufacturing or process development, legal compliance or risk reduction, patent application or issuance goals, or goals relating to acquisitions, divestitures or other business combinations (in whole or in part), joint ventures or strategic alliances; and (xxx) other measures of performance selected by the board of directors.

The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Our board of directors is authorized at any time in its sole discretion, to adjust or modify the calculation of a performance goal for such performance period in order to prevent the dilution or enlargement of the rights of participants, (a) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event or development; (b) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting us, or our financial statements in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions; or (c) in view of the board of director's assessment of our business strategy, performance of comparable organizations, economic and business conditions, and any other circumstances deemed relevant. Specifically, the board of directors is authorized to make adjustment in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude the dilutive effects of acquisitions or joint ventures; (ii) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; and (iii) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends. In addition, the board of directors is authorized to make adjustment in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude restructuring and/or other nonrecurring charges; (ii) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated net sales and operating earnings; to exclude the effects of changes to generally accepted accounting standards required by the Financial Accounting Standards Board; (iv) to exclude the effects of any items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (v) to exclude the effects to any statutory adjustments to corporate tax rates; and (vi) to make other appropriate adjustments selected by the board of directors.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2018 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued on the exercise of ISOs and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. Our 2018 Plan provides that in the event of certain specified significant corporate transactions (or a change in control, as defined below), unless otherwise provided in an award agreement or other written agreement between us and the award holder, the plan administrator may take one or more of the following actions with respect to such stock awards:

- arrange for the assumption, continuation, or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting, in whole or in part, of the stock award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- cancel or arrange for the cancellation of the stock award, to the extent not vested or not exercised before the effective time of the transaction, in exchange for a cash payment, if any; or

- make a payment equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise.

The plan administrator is not obligated to treat all stock awards or portions of stock awards in the same manner and is not obligated to take the same actions with respect to all participants.

Under the 2018 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control. In the event of a change in control, the plan administrator may take any of the above-mentioned actions. Awards granted under the 2018 Plan may be subject to additional acceleration of vesting and exercisability upon or after a change in control as may be provided in the applicable stock award agreement or in any other written agreement between us or any affiliate and the participant, but in the absence of such provision, no such acceleration will automatically occur. Under the 2018 Plan, a change in control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity) in substantially the same proportions as their ownership immediately prior to such transaction, (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction, (4) a complete dissolution or liquidation of the company or (5) when a majority of our board of directors becomes comprised of individuals who were not serving on our board of directors on the date of the underwriting agreement related to this offering, or the incumbent board, or whose nomination, appointment, or election was not approved by a majority of the incumbent board still in office.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2018 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopts our 2018 Plan. No stock awards may be granted under our 2018 Plan while it is suspended or after it is terminated.

Prior Amended and Restated 2018 Equity Incentive Plan

Our board of directors adopted our prior Amended and Restated 2018 Equity Incentive Plan, or the Prior Plan, in June 2018 and our stockholders approved the Prior Plan in July 2018. All references in this prospectus to the Prior Plan shall be deemed to refer to our Amended and Restated 2018 Equity Incentive Plan, as amended, unless the context otherwise requires. As of September 30, 2018, there were 1,112,753 shares remaining available for the future grant of stock awards under our Prior Plan. As of September 30, 2018, there were outstanding stock options covering a total of 6,075,825 shares of our common stock that were granted under our Prior Plan.

Stock Awards. Our Prior Plan provides for the grant of ISOs within the meaning of Section 422 of the Code to employees, including employees of any parent or subsidiary, and for the grant of NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards and other stock awards to employees, directors and consultants, including employees and consultants of our affiliates. We have granted stock options under the Prior Plan.

Authorized Shares. Subject to certain capitalization adjustments, the aggregate number of shares of common stock that may be issued pursuant to stock awards under the Prior Plan will not exceed 12,209,153 shares. The

maximum number of shares of our common stock that may be issued pursuant to the exercise of ISOs under our Prior Plan is 36,627,459 shares.

Shares subject to stock awards granted under our Prior Plan that expire or terminate without being exercised in full or that are settled in cash rather than in shares do not reduce the number of shares available for issuance under our Prior Plan. Additionally, if any shares issued pursuant to a stock award are forfeited back to or repurchased because of the failure to meet a contingency or condition required to vest, then the shares that are forfeited or repurchased will revert to and again become available for issuance under the Prior Plan. This includes shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our Prior Plan and is referred to as the "plan administrator" herein. The plan administrator may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified stock awards and (2) determine the number of shares subject to such stock awards. Under our Prior Plan, the plan administrator has the authority to determine award recipients, dates of grant, the numbers and types of stock awards to be granted, the applicable fair market value and the provisions of each stock award, including the period of their exercisability and the vesting schedule applicable to a stock award.

Under the Prior Plan, the plan administrator also generally has the authority to effect, with the consent of any adversely affected participant, (A) the reduction of the exercise, purchase, or strike price of any outstanding award or (B) any other action that is treated as a repricing under generally accepted accounting principles.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock options, within the terms and conditions of the Prior Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the Prior Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

The plan administrator determines the term of stock options granted under the Prior Plan, up to a maximum of 10 years. If an optionholder's service relationship with us or any of our affiliates ceases for any reason other than disability, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 18 months following the date of death. If an optionholder's service relationship with us or any of our affiliates ceases due to disability, the optionholder may generally exercise any vested options for a period of 12 months following the cessation of service.

In the event of a termination for cause, options generally terminate upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, (5) a deferred payment arrangement or (6) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will or the laws of descent and distribution.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock unit awards are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit awards may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock unit awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past or future services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the Prior Plan, (2) the class and maximum number of shares that may be issued on the exercise of ISOs and (3) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. Our Prior Plan provides that in the event of certain specified significant corporate transactions, unless otherwise provided in an award agreement or other written agreement between us and the award holder, the plan administrator may take one or more of the following actions with respect to such stock awards:

- arrange for the assumption, continuation, or substitution of a stock award by a surviving or acquiring corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring corporation;
- accelerate the vesting, in whole or in part, of the stock award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- cancel or arrange for the cancellation of the stock award, to the extent not vested before the effective time of the transaction, in exchange for no consideration or for a cash payment, if any as the plan administrator deems appropriate; and
- cancel or arrange for the cancellation of the stock award in exchange for a payment equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise.

The plan administrator is not obligated to treat all stock awards or portions of stock awards in the same manner and is not obligated to treat all participants in the same manner.

Under the Prior Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of at least 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control. A stock award under the Prior Plan may be subject to additional acceleration of vesting and exercisability upon or after a change in control as may be provided in the award agreement or other written agreement between us and the participant, but in the absence of such provision, no such acceleration will occur, except as described above. Under the Prior Plan, a change in control is a transaction that qualifies as a "deemed liquidation event" as defined in our amended and restated certificate of incorporation, but excluding (1) a capitalization adjustment, (2) a public offering of our securities, (3) a captial raising transaction, (4) a transaction exclusively for the purpose of changing our domicile or corporate form, or (5) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction continue to hold, directly or indirectley, at the least a majority of our combined voting power or the combined voting power of the surviving entity (as applicable) immediately following such transaction.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our Prior Plan, provided that such action does not impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. Unless terminated sooner, the Prior Plan will automatically terminate on June 24, 2028. No stock awards may be granted under our Prior Plan while it is suspended or after it is terminated.

2018 Employee Stock Purchase Plan

Our board of directors adopted, and our stockholders approved, our ESPP in October 2018. The ESPP will become effective immediately prior to and contingent upon the date of the underwriting agreement related to this offering. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code for U.S. employees.

Share Reserve. Following this offering, the ESPP authorizes the issuance of 1,160,000 shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, beginning on January 1, 2019 (assuming the ESPP becomes effective in 2018) through January 1, 2028, by the lesser of (1) 1% of the total number of shares of our common stock outstanding on the last day of the calendar month before the date of the automatic increase and (2) 2,320,000 shares; provided that before the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (1) and (2). As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors administers the ESPP and may delegate its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. An offering under the ESPP may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share that is at least the lesser of (1) 85% of the fair market value of a share of our common stock on the first date of an offering or (2) 85% of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (1) being customarily employed for more than 20 hours per week, (2) being customarily employed for more than five months per calendar year or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each calendar year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or similar transaction, the board of directors will make appropriate adjustments to: (1) the class(es) and maximum number of shares reserved under the ESPP, (2) the class(es) and maximum number of shares by which the share reserve may increase automatically each year, (3) the class(es) and number of shares subject to and purchase price applicable to outstanding offerings and purchase rights and (4) the class(es) and number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued, or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within 10 business days before such corporate transaction, and such purchase rights will terminate immediately.

Under the ESPP, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction and (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

ESPP Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

Director Compensation

Except as indicated below, historically, we have not paid cash, equity or other compensation to any of our non-employee directors for service on our board of directors, and our non-employee directors did not receive any compensation for their board service in 2017. We have reimbursed and will continue to reimburse all of our non-employee directors for their travel, lodging and other reasonable expenses incurred in attending meetings of our board of directors and committees of our board of directors.

In June 2018, our board of directors approved a compensation package for Arie Belldegrun, M.D., FACS, our Executive Chairman, which includes an option to purchase 976,500 shares of our common stock. In addition, Franz Humer, Ph.D., and Owen Witte, M.D., were each granted an option to purchase 183,750 shares of our common stock and an annual cash retainer of $40,000, payable quarterly. In connection with her appointment to our board of directors in September 2018, Ms. Messemer was granted an option to purchase 210,000 shares of our common stock and an annual cash retainer of $40,000, payable quarterly. Each of the options granted to Drs. Belldegrun, Humer and Witte and to Ms. Messemer are subject to a four-year vesting schedule, with 25% vesting one year after the vesting commencement date and the balance vesting monthly over the remaining 36 months, subject to each individual's continued service through each vesting date. As chair of the audit committee, Dr. Humer also received an annual cash retainer of $25,000, payable quarterly. Please see "Certain Relationships and Related Party Transactions—Consulting Arrangements" for additional information relating to Dr. Belldegrun's compensation.

Our board of directors adopted a new compensation policy in September 2018 that will become effective upon the execution and delivery of the underwriting agreement related to this offering and will be applicable to all of our non-employee directors. This compensation policy provides that each such non-employee director will receive the following compensation for service on our board of directors:

- an annual cash retainer of $40,000;
- an additional annual cash retainer of $12,500, $7,500 and $5,000 for service as a member of the audit committee, compensation committee and the nominating and corporate governance committee, respectively;
- an additional annual cash retainer of $25,000, $15,000 and $10,000 for service as chairman of the audit committee, compensation committee and the nominating and corporate governance committee, respectively (in lieu of the committee member retainer above);
- an initial option grant to purchase 54,075 shares of our common stock, vesting in 36 equal monthly installments, and a restricted stock unit award that may be settled for 16,275 shares of our common stock, vesting annually over a three-year period from the date of grant; and
- an annual option grant to purchase 27,300 shares of our common stock, vesting in 12 equal monthly installments, and a restricted stock unit award that may be settled for 7,875 shares of our common stock, vesting on the one-year anniversary from the date of grant. The annual grants shall be made on the date of each of our annual stockholder meetings.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since November 30, 2017, our inception, to which we have been a party, in which the amount involved in the transaction exceeded $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under "Executive And Director Compensation."

Series A and A-1 Convertible Preferred Stock Financing

In April 2018, we entered into a Series A and A-1 preferred stock purchase agreement with various investors, pursuant to which we issued and sold to participating investors an aggregate of 7,557,900 shares of our Series A convertible preferred stock and 998,225 shares of our Series A-1 convertible preferred stock at a purchase price of $35.06 per share, and received aggregate gross proceeds of approximately $300 million. Half of this funding was received in April 2018 and the remainder was received in July and August 2018.

The participants in the Series A and A-1 convertible preferred stock financing included the following executive officers and members of our board of directors and holders of more than 5% of our capital stock or entities affiliated with them. The following table sets forth the aggregate number of shares of convertible preferred stock issued to these related parties in the Series A and A-1 convertible preferred stock financing:

Participants	Shares of Series A Convertible Preferred Stock	Shares of Series A-1 Convertible Preferred Stock	Consideration
Executive Officers and Directors			
David Chang, M.D., Ph.D.(1)	5,704	—	$ 199,995
Joshua Kazam	3,565	—	$ 124,997
Arie Belldegrun, M.D., FACS(2)	27,095	—	$ 950,011
Owen Witte, M.D.	7,130	—	$ 249,994
Franz Humer, Ph.D.	14,261	—	$ 500,023
Greater than 5% stockholders			
Pfizer Inc.	—	998,225	$ 34,999,998
Entities affiliated with TPG Carthage Holdings, L.P.(3)	4,278,107	—	$149,999,984
Gilead Sciences, Inc.	1,426,036	—	$ 50,000,007
Entities affiliated with VVAG Special Fund LLC (4)	1,426,036	—	$ 50,000,007
Seaview Trust	57,042	—	$ 2,000,020

(1) Consists of 5,704 shares of Series A convertible preferred stock held by the Chang 2006 Family Trust (Chang Trust). Dr. Chang, our President and Chief Executive Officer and a member of our board of directors, is a trustee of the Chang Trust.

(2) Consists of 27,095 shares of Series A convertible preferred stock held by the Belldegrun Family Trust (Belldegrun Trust). Dr. Belldegrun, a member of our board of directors, is a trustee of the Belldegrun Trust.

(3) Consists of (i) 2,852,071 shares of Series A convertible preferred stock held by TPG Carthage Holdings, L.P. and (ii) 1,426,036 shares of Series A convertible preferred stock held by The Rise Fund Carthage, L.P.

(4) Consists of (i) 1,140,829 shares of Series A convertible preferred stock held by VVAG Special Fund LLC (VVAG), and (ii) 285,207 shares of Series A convertible preferred stock held by Vida Ventures, LLC (Vida). Arie Belldegrun, M.D., FACS, the Executive Chairman of our board of directors, is a Co-Founder and Managing Director of VVAG, Vida and certain of their affiliated entities.

Pfizer Asset Purchase Transaction

In April 2018, we entered into an asset contribution agreement with Pfizer. The Pfizer asset contribution agreement is described above in "Business—Strategic Agreements."

In April 2018, we entered into a transition services agreement with Pfizer for certain research and development and general and administrative services relating to our development of the assets and products that we purchased from Pfizer. The Pfizer transition services agreement is described above in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Transition Services Agreement."

Investor Agreements

In connection with our Series A and A-1 convertible preferred stock financing, we entered into an investors' rights agreement, voting agreement and right of first refusal and co-sale agreement containing registration rights, information rights, voting rights and rights of first refusal and co-sale, among other things, with certain of our stockholders. In addition, in connection with our sale and issuance of the 2018 Notes in September 2018, we amended our investors' rights agreement to provide certain registration rights to the purchasers of the 2018 Notes. The foregoing agreements will terminate upon the closing of this offering, except for the registration rights set forth in the investors' rights agreements, as more fully described below in "Description of Capital Stock—Registration Rights."

Consulting Arrangements

In April 2018, we entered into an Independent Contractor Agreement with David Chang, M.D., Ph.D., our President and Chief Executive Officer and member of our board of directors, for services consistent with the role and duties of Chief Executive Officer. In exchange for the services agreed upon under the consulting agreement, we paid Dr. Chang at a rate of $8,250 per week. The agreement was terminated in June 2018.

In June 2018, we entered into a letter agreement with TPG Capital – FO LLC (TPG FO), an affiliate of TPG Carthage Holdings, L.P. and The Rise Fund Carthage, L.P., beneficial owners of more than 5% of our capital stock, for consulting services. Pursuant to the letter agreement, TPG FO is to provide strategic, operations and transition consulting services for a consulting fee not to exceed $150,000 per quarter, paid in arrears beginning in April 2018, unless a higher rate is approved by our board of directors or our audit committee.

In June 2018, we entered into a consulting agreement with Two River Consulting LLC (Two River). Arie Belldegrun, M.D., FACS, the Executive Chairman of our board of directors and Joshua Kazam, a member of our board of directors, are each partners of Two River, and David Chang, M.D., Ph.D., our President and Chief Executive Officer, is a venture partner of Two River. Pursuant to the consulting agreement, Two River provides strategic, financial, business development and secretarial consulting services and is compensated for such services rendered at a rate of no more than $150,000 per quarter, paid in arrears beginning in April 2018, unless a higher rate is approved by our board of directors or our audit committee. Dr. Belldegrun and Dr. Chang do not receive any salary, commission or other fees for serving as partners of Two River.

In August 2018 we entered into a consulting agreement with Bellco Capital LLC (Bellco). Our executive chairman, Arie Belldegrun, M.D., FACS, is the Chairman and an owner of Bellco. Pursuant to the consulting agreement, Bellco provides certain services for us, which are performed by Dr. Belldegrun and include without limitation, providing advice and analysis with respect to our business, business strategy and potential opportunities in the field of allogeneic CAR T cell therapy and any other aspect of the CAR T cell therapy business as we may agree. In consideration for these services, we pay Bellco $26,250 per month in arrears commencing June 2018 and, in our discretion, may pay Bellco an annual performance award in an amount up to 60% of the aggregate compensation payable to Bellco in a calendar year. We also reimburse Bellco for out of pocket expenses incurred in performing the services.

Stock Options Granted to Executive Officers and Directors

We have granted stock options to our executive officers and directors, as more fully described in the section entitled "Executive and Director Compensation."

Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, as described in "Management — Limitation of Liability and Indemnification."

Policies and Procedures for Transactions with Related Persons

We have adopted a written related-person transactions policy that sets forth our policies and procedures regarding the identification, review, consideration and oversight of "related-person transactions." For purposes of our policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any "related person" are participants involving an amount that exceeds $120,000. Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A related person is any executive officer, director, nominee to become a director or a holder of more than five percent of our common stock, including any of their immediate family members and affiliates, including entities owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to our audit committee (or, where review by our audit committee would be inappropriate, to another independent body of our board of directors) for review. The presentation must include a description of, among other things, all of the parties thereto, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-person transactions in advance, we rely on information supplied by our executive officers, directors and certain significant stockholders. In considering related-person transactions, our audit committee or another independent body of our board of directors takes into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our directors;
- our named executive officer; and
- all of our current executive officers and directors as a group.

The percentage ownership information under the column entitled “Before Offering” is based on 89,370,665 shares of common stock outstanding as of June 30, 2018, assuming conversion of all outstanding shares of our convertible preferred stock into 61,655,922 shares of common stock, which will occur in connection with the closing of this offering. The percentage ownership information under the column entitled “After Offering” is based on (i) the sale of 16,000,000 shares of common stock in this offering and (ii) the automatic settlement of the 2018 Notes into an aggregate of 8,318,317 shares of our common stock, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering. The following table does not reflect any potential purchases pursuant to the directed share program or otherwise in this offering, which purchases, if any, will increase the percentage of shares owned by certain of our directors and executive officers after this offering.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable on or before August 29, 2018, which is 60 days after June 30, 2018. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Allogene Therapeutics, Inc., 210 East Grand Avenue, South San Francisco, California 94080.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% Stockholders			
Pfizer Inc.(1)	21,976,484	24.6%	19.3%
Entities affiliated with TPG Carthage Holdings, L.P. (2)	22,460,061	25.1%	19.8%
Gilead Sciences, Inc.(3)	7,486,689	8.4%	6.6%
Entities affiliated with VVAG Special Fund LLC(4)	7,486,689	8.4%	6.6%
Seaview Trust(5)	7,986,037	8.9%	7.0%
Directors and Named Executive Officers			
David Chang, M.D., Ph.D.(6)	4,553,713	5.0%	3.9%
Joshua Kazam(7)	1,737,151	1.9%	1.5%
Arie Belldegrun, M.D., FACS(8)	12,540,696	13.9%	10.9%
Franz Humer, Ph.D.(9)	258,620	*	*
Owen Witte, M.D.(10)	221,182	*	*
David Bonderman(11)	22,460,061	25.1%	19.8%
Todd Sisitsky	—	—	—
John DeYoung	—	—	—
Robert Abraham, Ph.D.	—	—	—
Deborah Messemer	—	—	—
All current executive officers and directors as a group (13 persons)(12)	44,128,671	47.2%	37.4%

* Represents beneficial ownership of less than 1%.

(1) Consists of 21,976,484 shares of common stock issuable upon conversion of preferred stock held by Pfizer Inc. (Pfizer). The address of Pfizer is 235 E. 42nd Street, New York, NY 10017.

(2) Consists of (i) 14,973,372 shares of common stock issuable upon conversion of preferred stock held by TPG Carthage Holdings, L.P. (TPG Carthage), and (ii) 7,486,689 shares of common stock issuable upon conversion of preferred stock held by The Rise Fund Carthage, L.P. (Rise Carthage). The general partner of TPG Carthage is TPG GenPar VII, L.P., whose general partner is TPG GenPar VII Advisors, LLC, whose sole member is TPG Holdings I, L.P., whose general partner is TPG Holdings I-A, LLC, whose sole member is TPG Group Holdings (SBS), L.P. (Group Holdings), whose general partner is TPG Group Holdings (SBS) Advisors, LLC, whose sole member is TPG Group Holdings (SBS) Advisors, Inc. (Group Advisors). The general partner of Rise Carthage is The Rise Fund GenPar, L.P., whose general partner is The Rise Fund GenPar Advisors, LLC, whose sole member is TPG Holdings I, L.P., whose general partner is TPG Holdings I-A, LLC, whose sole member is Group Holdings, whose general partner is TPG Group Holdings (SBS) Advisors, LLC, whose sole member is Group Advisors. David Bonderman, a member of our board of directors, and James G. Coulter are sole shareholders of Group Advisors and may therefore be deemed to be the beneficial owners of the common shares held by TPG Carthage and Rise Carthage. Messrs. Bonderman and Coulter disclaim beneficial ownership of the TPG Shares except to the extent of their pecuniary interest therein. The address of each of TPG Carthage and Rise Carthage, Group Advisors is c/o TPG Global, LLC, 301 Commerce Street, Suite 3300, Fort Worth, Texas 76102.

(3) Consists of 7,486,689 shares of common stock issuable upon conversion of preferred stock held by Gilead Sciences, Inc. (Gilead). The address of Gilead is 333 Lakeside Drive, Foster City, CA 94404.

(4) Consists of (i) 5,989,352 shares of common stock issuable upon conversion of preferred stock held by VVAG Special Fund LLC (VVAG), and (ii) 1,497,336 shares of common stock issuable upon conversion of preferred stock held by Vida Ventures, LLC (Vida). VVAG LLC is the manager of VVAG. Arie Belldegrun, M.D., FACS, Executive Chairman of our board of directors, Leonard Potter and Fred Cohen, M.D., D.Phil., are Senior Managing Directors, and each may therefore be deemed to be the beneficial owners of the common shares held by VVAG. VV Manager LLC is the manager of Vida. Dr. Belldegrun, Mr. Potter, and Dr. Cohen, are Senior Managing Directors of VV Manager LLC and may therefore be deemed to be the beneficial owners of the common shares held by Vida. Dr. Belldegrun, Mr. Potter and Cohen each disclaim beneficial ownership of such shares, except to the extent of any pecuniary interest therein. The address of VVAG LLC and VV Manager LLC is 40 Broad Street, Suite 201, Boston MA 02109.

(5) Consists of (i) 7,686,567 shares of common stock and (ii) 299,470 shares of common stock issuable upon conversion of preferred stock. Hanna Ackerman is trustee of the Seaview Trust and may therefore be deemed to be the beneficial owner of the common shares held by the Seaview Trust. Dr. Belldegrun is an economic beneficiary of the Seaview Trust, but he does not have voting or investment control over the shares held by the Seaview Trust. The address of the Seaview Trust is 811 Strada Vecchia Rd., Los Angeles, CA 90077.

(6) Consists of (i) 2,568,142 shares of common stock and 29,946 shares of common stock issuable upon conversion of preferred stock held by the Chang 2006 Family Trust (Chang Trust) and (ii) 1,955,625 shares of common stock issuable upon exercise of options, all of which will be unvested but exercisable within 60 days of June 30, 2018. David Chang, M.D., Ph.D., our President and Chief Executive Officer and member of our board or directors, is co-trustee of the Chang Trust.

(7) Consists of 1,718,435 shares of common stock and 18,716 shares of common stock issuable upon conversion of preferred stock held by Joshua Kazam. Mr. Kazam resigned as our President in June 2018.

(8) Consists of (i) 3,935,258 shares of common stock and 142,248 shares of common stock issuable upon conversion of preferred stock held by the Belldegrun Family Trust, (ii) the shares of common stock issuable upon the conversion of preferred stock held by VVAG and Vida as described in note (4) above and (iii) 976,500 shares of common stock issuable upon exercise of options, all of which will be unvested but exercisable within 60 days of June 30, 2018. Dr. Belldegrun is the co-trustee of the Belldegrun Family Trust and a Senior Managing Director of VVAG LLC and VV Manager LLC and may be deemed to beneficially own the shares held by the Belldegrun Family Trust, VVAG and Vida. Dr. Belldegrun disclaims beneficial ownership of the shares, except to the extent of any pecuniary interest therein, to the shares held by each of the Belldegrun Family Trust, VVAG and Vida.

(9) Consists of (i) 74,870 shares of common stock issuable upon conversion of preferred stock and (ii) 183,750 shares of common stock issuable upon exercise of options, all of which will be unvested but exercisable within 60 days of June 30, 2018 held by Franz Humer, Ph.D.

(10) Consists of (i) 37,432 shares of common stock issuable upon conversion of preferred stock and (ii) 183,750 shares of common stock issuable upon exercise of options, all of which will be unvested but exercisable within 60 days of June 30, 2018 held by Owen Witte, M.D.

(11) Consists of the shares described in note (2) above.

(12) Includes the shares described in notes (6) through (11), and shares held or issuable upon early exercise of stock options by executive officers who are not named in the table above.

DESCRIPTION OF CAPITAL STOCK

Upon filing and effectiveness of our amended and restated certificate of incorporation and the closing of this offering, our authorized capital stock will consist of 200,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share. All of our authorized preferred stock upon the closing of this offering will be undesignated. The following is a summary of the rights of our common and preferred stockholders and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to and upon the closing of this offering, respectively, and of the Delaware General Corporation Law. This summary is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

Common Stock

Outstanding Shares

As of June 30, 2018, there were 27,714,743 shares of common stock issued and outstanding held of record by 41 stockholders. This amount excludes our outstanding shares of convertible preferred stock, which will convert into 61,655,922 shares of common stock in connection with the closing of this offering. Based on the number of shares of common stock outstanding as of June 30, 2018, and assuming (i) the conversion of all outstanding shares of our convertible preferred stock, (ii) the settlement of all outstanding 2018 Notes into an aggregate of 8,318,317 shares of our common stock, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering and (iii) the issuance by us of 16,000,000 shares of common stock in this offering, there will be 113,688,982 shares of common stock outstanding upon the closing of this offering.

As of June 30, 2018, there were 7,344,225 shares of common stock subject to outstanding options under our equity incentive plan.

Voting

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding-up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of

the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Convertible Preferred Stock

As of June 30, 2018, there were 11,743,987 shares of convertible preferred stock outstanding, held of record by 23 stockholders. In connection with the closing of this offering, all outstanding shares of convertible preferred stock will be converted into 61,655,922 shares of our common stock. Immediately prior to the closing of this offering, our certificate of incorporation will be amended and restated to delete all references to such shares of convertible preferred stock. Under the amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of convertible preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Registration Rights

After the closing of this offering, certain holders of shares of our common stock, including all of the current preferred stockholders, including certain holders of more than five percent of our capital stock and entities affiliated with certain of our directors, and the holders of the 2018 Notes, will be entitled to certain rights with respect to registration of the shares of common stock issued upon conversion of our convertible preferred stock and the 2018 Notes under the Securities Act. These shares are referred to as registrable securities. The holders of these registrable securities possess registration rights pursuant to the terms of the investors' rights agreement and are described in additional detail below.

The registration of shares of our common stock pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We are required to pay all registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, (collectively, Selling Expenses), of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares the holders may include. The demand, piggyback and Form S-3 registration rights described below will expire upon the earliest to occur of (i) the closing of a "Deemed Liquidation Event", as such term is defined in our amended and restated certificate of incorporation (as currently in effect), (ii) five years after the effective date of the registration statement, of which this prospectus forms a part, (iii) with respect to any particular holder, at such time after consummation of the our first underwritten public offering that such holder can sell its shares under Rule 144 of the Securities Act during any three-month period, or (iv) upon termination of the investors' rights agreement.

Demand Registration Rights

The holders of the registrable securities will be entitled to certain demand registration rights. Subject to the terms of the lockup agreements described under "Underwriters", at any time beginning on the earlier of April 6, 2021 or 180 days following the closing of this offering, the holders of at least 51% of the registrable securities then outstanding, may make a written request that we register all or a portion of their shares, subject to certain specified exceptions. Such request for registration must cover securities the aggregate offering price of which, after payment of Selling Expenses, would exceed $20,000,000. We will not be required to effect more than two registrations pursuant to these demand registration rights.

Piggyback Registration Rights

In connection with this offering, the holders of registrable securities were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. If we propose to register for offer and sale any of our securities under the Securities Act in another offering, either for our own account or for the account of other security holders, the holders of registrable securities will be entitled to certain "piggyback" registration rights allowing them to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, including a registration statement on Form S-3 as discussed below, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration.

Form S-3 Registration Rights

The holders of the registrable securities will be entitled to certain Form S-3 registration rights. Holders of at least 30% of the registrable securities may request that we register for offer and sale their shares on Form S-3 if we are qualified to file a registration statement on Form S-3, subject to certain specified exceptions. Such request for registration on Form S-3 must cover securities the aggregate offering price of which, after payment of Selling Expenses, equals or exceeds $2,000,000. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Amended and Restated Bylaws and Delaware Law

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law (Section 203). Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- at or subsequent to such time, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to and upon the closing of this offering, respectively, may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);
- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least 66-2/3% of the voting power of all of our then outstanding common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide our board of directors into three classes;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner and also specify requirements as to the form and content of a stockholder’s notice;

- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our Chief Executive Officer or by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors; and
- provide that to the fullest extent permitted by law the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, and (iv) any action asserting a claim against us governed by the internal affairs doctrine. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the holders of at least 66-2/3% of our then-outstanding common stock.

Nasdaq Global Select Market Listing

We have applied for listing of our common stock on the Nasdaq Global Select Market under the symbol “ALLO.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent’s address is 6201 15th Avenue, Brooklyn, NY 11219.

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of common stock in the public market could adversely affect prevailing market prices. Furthermore, since only a limited number of shares will be available for sale shortly after this offering because of contractual and legal restrictions on resale described below, sales of substantial amounts of common stock in the public market after the restrictions lapse could adversely affect the prevailing market price for our common stock as well as our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of June 30, 2018, upon the closing of this offering and assuming (i) the conversion of all of our outstanding shares of convertible preferred stock as of June 30, 2018 into an aggregate of 61,655,922 shares of common stock, (ii) the settlement of all outstanding 2018 Notes into an aggregate of 8,318,317 shares of common stock, assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), in connection with the closing of this offering (iii) no exercise of the underwriters' option to purchase additional shares of common stock and (iv) no exercise of outstanding options, an aggregate of 113,688,982 shares of common stock will be outstanding. All of the shares sold in this offering will be freely tradable in the public market without restriction or further registration under the Securities Act (excluding any shares sold to our directors and officers in the directed share program), unless held by an affiliate of ours. Except as set forth below, the remaining shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements. In addition, any shares sold in this offering to entities affiliated with our existing stockholders and directors will be subject to lock-up agreements. These remaining shares will generally become available for sale in the public market as follows:

- no restricted shares will be eligible for immediate sale upon the closing of this offering;
- up to 97,688,982 restricted shares will be eligible for sale under Rule 144 or Rule 701 upon expiration of lock-up agreements 180 days after the date of this offering; and
- the remainder of the restricted shares will be eligible for sale from time to time thereafter upon expiration of their respective holding periods under Rule 144, as described below, but could be sold earlier if the holders exercise any available registration rights.

Rule 144

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, any person who is not an affiliate of ours and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, provided current public information about us is available. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the closing of this offering without regard to whether current public information about us is available. Beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of restricted shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume of our common stock on the Nasdaq Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales of restricted shares under Rule 144 held by our affiliates are also subject to requirements regarding the manner of sale, notice and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted shares have entered into lock-up agreements as described below and their restricted shares will become eligible for sale at the expiration of the restrictions set forth in those agreements.

Rule 701

Under Rule 701, shares of our common stock acquired upon the exercise of currently outstanding options or pursuant to other rights granted under our stock plans may be resold by:

- persons other than affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject only to the manner-of-sale provisions of Rule 144; and
- our affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the manner-of-sale and volume limitations, current public information and filing requirements of Rule 144, in each case, without compliance with the six-month holding period requirement of Rule 144.

As of June 30, 2018, options to purchase a total of 7,344,225 shares of common stock were outstanding, of which none were vested. Of the total number of shares of our common stock issuable under these options, substantially all are subject to contractual lock-up agreements with us or the underwriters described below under “Underwriting” and will become eligible for sale at the expiration of those agreements unless held by an affiliate of ours.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our other stockholders and optionholders, have agreed that for a period of 180 days, after the date of this prospectus, except with the prior written consent of the representatives of the underwriters and subject to specified exceptions, we or they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant for the sale of, or otherwise dispose of or transfer, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of the common stock. The representatives of the underwriters have advised us that they has no current intent or arrangement to release any of the shares subject to the lock-up agreements prior to the expiration of the lock-up agreements.

After this offering, certain of our employees, including our executive officers and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Registration Rights

Upon the closing of this offering and assuming an initial public offering price of $17.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), the holders of an aggregate of 69,974,239 shares of our common stock will have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. After registration pursuant to these rights, these shares will become freely tradable without restriction under the Securities Act. See “Description of Capital Stock—Registration Rights” for additional information regarding these registration rights.

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the shares of common stock reserved for issuance under the Prior Plan, the 2018 Plan and the ESPP. The registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under the registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a discussion of the material U.S. federal income tax consequences applicable to non-U.S. holders (as defined below) with respect to their purchase, ownership and disposition of shares of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. All prospective non-U.S. holders of our common stock should consult their own tax advisors with respect to the U.S. federal income tax consequences of the purchase, ownership and disposition of our common stock, as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local and non-U.S. tax consequences and any U.S. federal non-income tax consequences. In general, a non-U.S. holder means a beneficial owner of our common stock (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the trust's administration and one or more "United States persons" have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a "United States person."

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing U.S. Treasury Regulations promulgated thereunder, published administrative rulings and judicial decisions, all as in effect as of the date of this prospectus supplement. These laws are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus supplement.

This discussion is limited to non-U.S. holders that hold shares of our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any aspects of U.S. estate or gift tax, or any state, local or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as holders that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below), corporations that accumulate earnings to avoid U.S. federal income tax, tax-exempt organizations, banks, financial institutions, insurance companies, brokers, dealers or traders in securities, commodities or currencies, tax-qualified retirement plans, holders subject to the alternative minimum tax or Medicare contribution tax, holders who hold or receive our common stock pursuant to the exercise of employee stock options or otherwise as compensation, holders holding our common stock as part of a hedge, straddle or other risk reduction strategy, conversion transaction or other integrated investment, holders deemed to sell our common stock under the constructive sale provisions of the Code, controlled foreign corporations, passive foreign investment companies, U.S. expatriates and certain former citizens or long-term residents of the United States and "qualified foreign pension funds" as defined in Section 897(1)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

In addition, this discussion does not address the tax treatment of partnerships (or entities or arrangements that are treated as partnerships for U.S. federal income tax purposes) or persons that hold their common stock through such partnerships or such entities or arrangements. If a partnership, including any entity or arrangement

treated as a partnership for U.S. federal income tax purposes, holds shares of our common stock, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner, the activities of the partnership and certain determinations made at the partner level. Such partners and partnerships should consult their own tax advisors regarding the tax consequences of the purchase, ownership and disposition of our common stock.

There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling with respect to the U.S. federal income tax consequences with respect to the matters discussed below.

Distributions on Our Common Stock

Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's adjusted tax basis in the common stock. Any remaining excess will be treated as capital gain from the sale or exchange of such common stock, subject to the tax treatment described below in "Gain on Sale, Exchange or Other Disposition of Our Common Stock."

Subject to the discussions below regarding effectively connected income, backup withholding and foreign accounts, dividends paid to a non-U.S. holder will generally be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy relevant certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. To claim the exemption, the non-U.S. holder must furnish to us or the applicable withholding agent a valid IRS Form W-8ECI (or applicable successor form), certifying that the dividends are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States. However, such U.S. effectively connected income is taxed, on a net income basis, at the same graduated U.S. federal income tax rates applicable to "United States persons" (as defined in the Code), unless a specific treaty exemption applies. Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

Sale, Exchange or Other Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and foreign accounts, in general, a non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale, exchange or other disposition of shares of our common stock unless:

- the gain is effectively connected with a U.S. trade or business of the non-U.S. holder and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base

maintained in the United States by such non-U.S. holder, in which case the non-U.S. holder generally will be taxed, on a net income basis, at the graduated U.S. federal income tax rates applicable to "United States persons" (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" may also apply;

- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the net gain derived from the disposition, which may be offset by U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- our common stock constitutes a U.S. real property interest because we are, or have been, at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation" (as defined in the Code). Even if we are or become a U.S. real property holding corporation, provided that our common stock is "regularly traded" (as defined in the applicable Treasury Regulations) on an established securities market, our common stock will be treated as a U.S. real property interest only with respect to a non-U.S. holder that holds more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the five-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. In such case, such non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to "United States persons" (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the dividends on our common stock paid to such holder and the tax withheld, if any, with respect to such dividends. Non-U.S. holders will have to comply with specific certification procedures to establish that the holder is not a "United States persons" (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. U.S. backup withholding generally will not apply to a non-U.S. holder who provides a properly executed IRS Form W-8BEN or W-8BEN-E or otherwise establishes an exemption.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is established under the provisions of a specific income tax treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder may be allowed as a credit against the non-U.S. holder's U.S. federal income tax liability, if any, and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

Foreign Accounts

The Code generally imposes a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid to a "foreign financial institution" (as specifically defined for this purpose), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which may include certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing these withholding and reporting requirements may be subject to different rules. This U.S. federal withholding tax of 30% also applies to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity, unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or information regarding substantial direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. The withholding provisions described above currently apply to dividends on our common stock and, beginning on January 1, 2019, will apply with respect to gross proceeds of a sale or other disposition of our common stock. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. Non-U.S. holders are encouraged to consult with their own tax advisors regarding the possible implications of these rules on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED OR RECENT CHANGES IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS OR UNDER ANY APPLICABLE TAX TREATY.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, Cowen and Company, LLC and Jefferies LLC are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
J.P. Morgan Securities LLC	
Cowen and Company, LLC	
Jefferies LLC	
Total	16,000,000

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional 2,400,000 shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following tables show the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase 2,400,000 additional shares.

Paid by us	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our officers, directors, and holders of substantially all of our common stock have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the representatives. This agreement does not apply to any existing employee benefit plans. See "Shares Available for Future Sale" for a discussion of certain transfer restrictions.

Prior to the offering, there has been no public market for the shares. The initial public offering price has been negotiated among us and the representatives. Among the factors to be considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be our historical performance, estimates of the business potential and our earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to list our common stock on the Nasdaq Global Select Market under the symbol "ALLO".

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on NYSE, NASDAQ NMS or relevant exchange, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $3.5 million. We will reimburse the underwriters for certain of their expenses incurred in connection with this offering in an amount up to $50,000.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses, including acting as a placement agent in our previous private placement financings.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or

publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

At our request, the underwriters have reserved up to 800,000 shares of our common stock offered by this prospectus for sale, at the initial public offering price, to our directors and officers and certain other parties related to us. Shares purchased by our directors and officers will be subject to the 180-day lock-up restriction described in the "Underwriting" section of this prospectus. The number of shares of common stock available for sale to the general public will be reduced to the extent these individuals purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relative Member State") an offer to the public of our common shares may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of our common shares may be made at any time under the following exemptions under the Prospectus Directive:

- To any legal entity which is a qualified investor as defined in the Prospectus Directive;
- To fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Representatives for any such offer; or
- In any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer or shares of our common stock shall result in a requirement for the publication by us or any Brazilian placement agent of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to public" in relation to our common shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common shares to be offered so as to enable an investor to decide to purchase our common shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (as amended), including by Directive 2010/73/EU and includes any relevant implementing measure in the Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

In the United Kingdom, this prospectus is only addressed to and directed as qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or relay on this prospectus or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this offering memorandum (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of

whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32")

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, San Diego, California. The underwriters are being represented by Latham & Watkins LLP, Menlo Park, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements at December 31, 2017 and for the period from November 30, 2017 (inception) to December 31, 2017, as set forth in their report. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 210 East Grand Avenue, South San Francisco, California 94080 or telephoning us at (650) 457-2700.

Upon the completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We also maintain a website at www.allogene.com, at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

ALLOGENE THERAPEUTICS, INC.

INDEX TO FINANCIAL STATEMENTS

Period From November 30, 2017 (inception) to December 31, 2017 and Six Months Ended June 30, 2018

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
Allogene Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheet of Allogene Therapeutics, Inc. (the Company) as of December 31, 2017, the related statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit and cash flows for the period from November 30, 2017 (inception) to December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017, and the results of its operations and its cash flows for the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2018.
Redwood City, California
August 10, 2018, except for the fifth paragraph of Note 1, as to which the date is October 1, 2018

ALLOGENE THERAPEUTICS, INC.

Balance Sheets

(in thousands, except share and per share amounts)

	December 31, 2017	June 30, 2018 (Unaudited)	Pro Forma June 30, 2018 (Unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ —	$ 143,927	$ 293,927
Prepaid expenses and other current assets	—	337	337
Total current assets	—	144,264	294,264
Property and equipment, net	—	3,526	3,526
Intangible assets, net	—	1,055	1,055
Total assets	$ —	$ 148,845	$ 298,845
Liabilities, convertible preferred stock and stockholders' (deficit) equity			
Current liabilities:			
Accounts payable	$ —	$ 1,268	$ 1,268
Accrued and other current liabilities	2	13,477	13,477
Total current liabilities	2	14,745	14,745
Other long-term liabilities	—	2,488	2,488
Total liabilities	2	17,233	17,233
Commitments and Contingencies (Notes 5 and 6)			
Convertible preferred stock, $0.001 par value; 1,000,000 and 11,743,987 shares authorized as of December 31, 2017 and June 30, 2018 (unaudited), respectively; no shares and 11,743,987 shares issued and outstanding as of December 31, 2017 and June 30, 2018 (unaudited), respectively, actual; aggregate liquidation preference of $411.8 million as of June 30, 2018 (unaudited), actual; no shares issued and outstanding as of June 30, 2018, pro forma (unaudited)	—	411,052	—
Subscriptions receivable from preferred stockholders	—	(150,000)	—
Stockholders' (deficit) equity:			
Common stock, $0.001 par value: 47,250,000 and 101,000,000 shares authorized as of December 31, 2017 and June 30, 2018 (unaudited), respectively; 26,249,993 and 27,714,743 shares issued and outstanding at December 31, 2017 and June 30, 2018 (unaudited), respectively, actual; 89,370,665 shares issued and outstanding at June 30, 2018, pro forma (unaudited)	26	28	89
Notes receivable from common stockholders	(5)	—	—
Additional paid-in capital	—	8,054	419,045
Accumulated deficit	(23)	(137,522)	(137,522)
Total stockholders' (deficit) equity	(2)	(129,440)	281,612
Total liabilities, convertible preferred stock and stockholders' (deficit) equity	$ —	$ 148,845	$ 298,845

The accompanying notes are an integral part of these financial statements.

ALLOGENE THERAPEUTICS, INC.

Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	Period from November 30, 2017 (Inception) to December 31, 2017	Six Months Ended June 30, 2018 (Unaudited)
Operating expenses:		
Research and development	$ —	$ 122,486
General and administrative	2	15,123
Total operating expenses	2	137,609
Loss from operations	(2)	(137,609)
Interest and other income, net	—	110
Net and comprehensive loss	$ (2)	$ (137,499)
Net loss per share, basic and diluted	$ 0.00	$ (9.42)
Weighted-average number of shares used in computing net loss per share, basic and diluted	26,249,993	14,600,379
Pro forma net loss per share, basic and diluted (unaudited)		$ (3.12)
Weighted-average number of shares used in computing pro forma net loss per share, basic and diluted (unaudited)		44,011,274

The accompanying notes are an integral part of these financial statements.

ALLOGENE THERAPEUTICS, INC.

Statements of Convertible Preferred Stock and Stockholders' Deficit

(in thousands, except share and per share amounts)

	Convertible Preferred Stock		Subscriptions Receivable from Preferred Stockholders	Common Stock		Notes Receivable from Common Stockholders	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount		Shares	Amount				
Balance — November 30, 2017 (Inception)	—	$ —	$ —	—	$ —	$ —	$ —	$ —	$ —
Issuance of common stock	—	—	—	26,249,993	26	—	—	(21)	5
Notes receivable from common stockholders	—	—	—	—	—	(5)	—	—	(5)
Net and comprehensive loss	—	—	—	—	—	—	—	(2)	(2)
Balance — December 31, 2017	—	—	—	26,249,993	26	(5)	—	(23)	(2)
Issuance of Series A convertible preferred shares at $35.06 per share, net of issuance costs of $635 (unaudited)	7,557,990	264,365	—	—	—	—	—	—	—
Issuance of Series A-1 convertible preferred shares at $35.06 per share in connection with asset acquisition (unaudited)	3,187,772	111,770	—	—	—	—	—	—	—
Issuance of Series A-1 convertible preferred shares at $35.06 per share, net of issuance costs of $84 (unaudited)	998,225	34,917	—	—	—	—	—	—	—
Subscriptions receivable from preferred stockholders (unaudited)	—	—	(150,000)	—	—	—	—	—	—
Proceeds received from common stockholders (unaudited)	—	—	—	—	—	5	—	—	5
Issuance of common stock for early exercise of stock options (unaudited)	—	—	—	1,464,750	1	—	—	—	1
Stock-based compensation (unaudited)	—	—	—	—	—	—	8,056	—	8,056
Net and comprehensive loss (unaudited)	—	—	—	—	—	—	—	(137,499)	(137,499)
Adjustment for fractional shares from forward stock split					1		(2)		(1)
Balance — June 30, 2018 (unaudited)	11,743,987	$411,052	$ (150,000)	27,714,743	$ 28	$ —	$ 8,054	$ (137,522)	$ (129,440)

The accompanying notes are an integral part of these financial statements.

ALLOGENE THERAPEUTICS, INC.

Statements of Cash Flows
(in thousands)

	Period From November 30, 2017 (Inception) to December 31, 2017	Six Months Ended June 30, 2018 (Unaudited)
Cash flows from operating activities:		
Net loss	$ (2)	$ (137,499)
Adjustments to reconcile net loss to net cash used in operating activities:		
Acquired in-process research and development	—	109,436
Amortization of other intangible assets acquired	—	151
Depreciation and amortization of fixed assets	—	299
Stock-based compensation	—	8,056
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	—	(337)
Accounts payable	—	1,268
Accrued and other current liabilities	2	12,584
Net cash used in operating activities	—	(6,042)
Cash flows from investing activities:		
Purchase of property and equipment	—	(536)
Cash paid for acquisition of assets	—	(2,098)
Net cash used in investing activities	—	(2,634)
Cash flows from financing activities:		
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	149,282
Proceeds from issuance of common stock and upon exercise of stock options	—	3,321
Net cash provided by financing activities	—	152,603
Net increase in cash and cash equivalents	—	143,927
Cash and cash equivalents — beginning of period	—	—
Cash and cash equivalents — end of period	$ —	$ 143,927
Non-cash investing and financing activities:		
Subscriptions receivable from common shareholders	$ 5	$ —
Subscriptions receivable from preferred shareholders	$ —	$ 150,000
Series A-1 convertible preferred stock issued in asset acquisition	$ —	$ 111,770
Property and equipment purchase in accounts payable and accrued liabilities	$ —	$ 60

The accompanying notes are an integral part of these financial statements.

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

1. Basis of Presentation

Allogene Therapeutics, Inc. (the Company or Allogene) was incorporated on November 30, 2017 in the State of Delaware and is headquartered in South San Francisco, California. Allogene is a clinical-stage immuno-oncology company pioneering the development and commercialization of genetically engineered allogeneic T cell therapies for the treatment of cancer. The Company is developing a pipeline of off-the-shelf T cell product candidates that are designed to target and kill cancer cells.

For the period from November 30, 2017 (inception) to December 31, 2017, the Company incurred $2,000 in start-up costs to establish the Company. Principal operations commenced in April 2018 when Allogene acquired certain assets from Pfizer Inc. (Pfizer) (see Note 5) and completed a Series A and A-1 preferred stock financing (see Note 7).

Need for Additional Capital

The Company has sustained operating losses and expects to continue to generate operating losses for the foreseeable future. The Company's ultimate success depends on the outcome of its research and development activities. The Company had cash and cash equivalents of $143.9 million and subscriptions receivable from its preferred shareholders of $150.0 million as of June 30, 2018. Since inception through June 30, 2018, the Company has incurred cumulative net losses of $137.5 million. Management expects to incur additional losses in the future to fund its operations and conduct product research and development and recognizes the need to raise additional capital to fully implement its business plan.

The Company intends to raise such additional capital through the issuance of equity securities, debt financings or other sources. However, if such financing is not available at adequate levels, the Company will need to reevaluate its operating plan and may be required to delay the development of its product candidates. Management considers that there are no conditions or events, in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern for a period of at least one year from the date the financial statements are issued. The Company expects that its cash and cash equivalents as of June 30, 2018 and amounts received in July and August 2018 from its subscriptions receivable (see Note 12) will be sufficient to fund its operations through 2019.

Forward Stock Split

On October 1, 2018, the Company filed an amendment to the Company's amended and restated certificate of incorporation to effect a forward split of shares of the Company's common stock on a 1-for-5.25 basis (the "Forward Stock Split"). In connection with the Forward Stock Split, the conversion ratio for the Company's outstanding convertible preferred stock was proportionately adjusted such that the common stock issuable upon conversion of such preferred stock was increased in proportion to the Forward Stock Split. The par value of the common stock was not adjusted as a result of the Forward Stock Split. All references to common stock, options to purchase common stock, early exercised options, share data, per share data, convertible preferred stock (to the extent presented on an as-converted to common stock basis) and related information contained in the financial statements have been retrospectively adjusted to reflect the effect of the Forward Stock Split for all periods presented.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions made in the accompanying financial statements include but are not limited to the fair value of common stock, the fair value of stock options, income tax uncertainties, and certain accruals. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could differ from those estimates.

Unaudited Interim Financial Information

The accompanying interim balance sheet as of June 30, 2018, the interim statements of operations and comprehensive loss and cash flows for the six months ended June 30, 2018 and the interim statements of convertible preferred stock and stockholders' deficit for the six months ended June 30, 2018 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly the balance sheet as of June 30, 2018, the statements of operations and comprehensive loss and cash flows for the six months ended June 30, 2018 and the statements of convertible preferred stock and stockholders' deficit for the six months ended June 30, 2018. The financial data disclosed in these notes to the financial statements related to the six months ended June 30, 2018 and as of June 30, 2018 are also unaudited. The results of operations for the six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the full year ending December 31, 2018, or for any other future annual or interim period.

Unaudited Pro Forma Balance Sheet

The unaudited pro forma balance sheet as of June 30, 2018 reflects the conversion of all shares of the Company's outstanding convertible preferred stock into 61,655,922 shares of common stock immediately prior to the consummation of an initial public offering (IPO) and the receipt of the $150.0 million in subscriptions receivable from the preferred stockholders that were received in July and August 2018. The shares of common stock issuable and the proceeds expected to be received in the IPO are excluded from such pro forma financial information.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less from the purchase date to be cash equivalents. Cash equivalents consist primarily of amounts invested in money market accounts.

Fair Value Measurement

Assets and liabilities recorded at fair value on a recurring basis in the balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Fair value is defined as the exchange price that would be received for an asset or an exit price that would be paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The authoritative guidance on fair value measurements establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

Level 1—Observable inputs such as unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

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Level 2—Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the asset or liability. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3— Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Property and Equipment, Net

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets, generally three to seven years. Maintenance and repairs are charged to operations as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is reflected in operations.

Definite-Lived Intangible Assets

Identifiable intangible assets consist of in-process research and development and workforce associated with asset acquisition. Intangible assets with finite lives are amortized over their estimated useful lives on a straight-line basis, generally two years. Acquired in-process research and development intangible assets with no alternative future use are charged to research and development expense when acquired. The straight-line method of amortization represents the Company's best estimate of the distribution of the economic value of the identifiable intangible assets. Intangible assets are carried at cost less accumulated amortization. Amortization of intangible assets is included in research and development expenses.

Impairment of Long-Lived Assets

Long-lived assets are reviewed annually for impairment or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is measured by comparison of the carrying amount of an asset group to the future net undiscounted cash flows that the assets are expected to generate. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset. There has been no impairment of long-lived assets for any of the periods presented.

Deferred Offering Costs

Deferred offering costs, consisting of legal, accounting and filing fees relating to an IPO, are capitalized. The deferred offering costs will be offset against offering proceeds upon the completion of the offering. In the event the offering is terminated or delayed, deferred offering costs will be expensed. No deferred offering costs were incurred during the six months ended June 30, 2018.

Accrued Research and Development Costs

The Company records accrued liabilities for estimated costs of research and development activities conducted by collaboration partners and third-party service providers, which include the conduct of preclinical studies and clinical trials, and contract manufacturing activities. The Company records the estimated costs of research and

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development activities based upon the estimated amount of services provided but not yet invoiced, and includes these costs in accrued and other current liabilities on the balance sheets and within research and development expense on the statements of operations.

The Company accrues for these costs based on factors such as estimates of the work completed and in accordance with agreements established with its collaboration partners and third-party service providers. The Company makes significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, the Company adjusts its accrued liabilities. The Company has not experienced any material differences between accrued costs and actual costs incurred since its inception.

Research and Development Expenses

Research and development costs are expensed as incurred. Research and development expenses for the six months ended June 30, 2018 primarily consist of acquired intangible assets as research and development costs pursuant to the Asset Contribution Agreement with Pfizer (see Note 5) as, at the time of acquisition of the asset, the technology is under development; is not approved by the U.S. Food and Drug Administration or other regulatory agencies for marketing; has not reached technical feasibility; or otherwise has no foreseeable alternative future use. For the six months ended June 30, 2018, the Company recognized expense of $109.4 million related to the acquired intangible in-process research and development.

Research and development expenses also include costs incurred for internal and sponsored and collaborative research and development activities. Research and development costs consist of salaries and benefits, including associated stock-based compensation, and laboratory supplies and facility costs, as well as fees paid to other entities that conduct certain research and development activities on the Company's behalf. Costs associated with co-development activities performed under the various license and collaboration agreements are included in research and development expenses.

Stock-Based Compensation

The Company measures its stock-based awards granted to employees and directors based on the estimated fair values of the awards and recognizes the compensation over the requisite service period. The Company uses the Black-Scholes option-pricing model to estimate the fair value of its stock-based awards. Stock-based compensation is recognized using the straight-line method. As the stock compensation expense is based on awards ultimately expected to vest, it is reduced by forfeitures. The Company accounts for forfeitures as they occur.

Income Taxes

Income taxes are accounted for under the asset and liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Management makes an assessment of the likelihood that the resulting deferred tax assets will be realized. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized. Due to the Company's historical operating performance and the recorded cumulative net losses in prior fiscal periods, the net deferred tax assets have been fully offset by a valuation allowance.

The Company recognizes uncertain income tax positions at the largest amount that is more likely than not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if

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it has less than a 50% likelihood of being sustained. Changes in recognition or measurement are reflected in the period in which judgment occurs. The Company's policy is to recognize interest and penalties related to the underpayment of income taxes as a component of the provision for income taxes.

Comprehensive Loss

Comprehensive loss is composed of net loss and other comprehensive income or loss. To date, the Company has not had any transactions that are required to be reported in comprehensive loss other than the net loss incurred from operations.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period, without consideration for potential dilutive shares of common stock. Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share since the effects of potentially dilutive securities are antidilutive. Shares of common stock subject to repurchase are excluded from the weighted-average shares.

Unaudited Pro Forma Net Loss Per Share

Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of the shares of the Company's convertible preferred stock into common stock as if such conversion had occurred at the beginning of the period. The pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from an IPO.

Segments

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the Chief Operating Decision Maker (CODM) in deciding how to allocate resources to an individual segment and in assessing performance. The Company's CODM is its Chief Executive Officer. The Company has determined it operates in a single operating segment and has one reportable segment.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it is (i) no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2016-09, *Stock Compensation—Improvements to Employee Share-Based Payment Accounting* (ASU

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2016-09). ASU 2016-09 was issued to simplify accounting guidance by identifying, evaluating, and improving areas for which cost and complexity can be reduced while maintaining or improving the usefulness of the information provided to users of financial statements. The areas affected by ASU 2016-09 include accounting for income taxes, classification of excess tax benefits on the statement of cash flows, minimum statutory tax withholding requirements, and classification of employee taxes paid on the statement of cash flows when an employer withholds shares for tax-withholding purposes. In addition, under this guidance, an entity can make an accounting policy election to either estimate the number of awards that are expected to vest or account for forfeitures when they occur. The Company adopted this guidance beginning with the period from November 30, 2017 (inception) to December 31, 2017, and elected a policy to account for forfeitures as they occur.

In January 2017, the FASB issued Accounting Standards Update, *Business Combinations (Topic 805): Clarifying the Definition of a Business* (ASU 2017-01). ASU 2017-01 clarifies the framework for determining whether an integrated set of assets and activities meets the definition of a business. The revised framework establishes a screen for determining whether an integrated set of assets and activities is a business and narrows the definition of a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated. This new accounting guidance is effective for public or private companies for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early adoption is permitted. The new accounting guidance should be applied prospectively on or after the effective date. The Company adopted this guidance on January 1, 2018.

In June 2018, the FASB issued Accounting Standards Update No. 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting* (ASU 2018-07). ASU 2018-07 simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. Some of the areas of simplification apply only to nonpublic entities. For all entities, the amendments are effective for annual periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted for any entity in any interim or annual period for which financial statements haven’t been issued or made available for issuance, but not before an entity adopts ASC 606. The Company early adopted this guidance on January 1, 2018.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases* (ASU 2016-02), which provides accounting guidance for both lessee and lessor accounting models. The principle of ASU 2016-02 is that a lessee should recognize the assets and liabilities that arise from leases. Lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based on the liability. For income statement purposes, ASU 2016-02 requires leases to be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. ASU 2016-02 is effective for public companies for fiscal years beginning after December 15, 2018. For all other entities, this standard is effective for annual reporting periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted. The new standard must be adopted using a modified-retrospective transition and provides for certain practical expedients. The Company is currently evaluating the effects of the adoption of this ASU on its financial statements.

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3. Fair Value Measurements

The Company measures and reports its cash equivalents at fair value.

Money market funds are measured at fair value on a recurring basis using quoted prices and are classified as Level 1. There were no transfers between Levels 1, 2 or 3 for any of the periods presented. As of June 30, 2018, the Company held $125.0 million in money market funds (Level 1) with no unrealized gains or losses.

4. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31, 2017	June 30, 2018
	(In thousands)	
Laboratory equipment	$ —	$3,755
Computer equipment and software	—	70
	—	3,825
Less: Accumulated depreciation and amortization	—	(299)
Total property and equipment, net	$ —	$3,526

Depreciation and amortization expense for property and equipment amounted to $0.3 million for the six months ended June 30, 2018.

Intangible Assets, Net

The intangible assets consist of the following:

	June 30, 2018		
	Cost	Accumulated Amortization	Carrying value
		(In thousands)	
Assembled workforce	$ 1,206	$ (151)	$ 1,055

As of June 30, 2018, the weighted-average remaining amortization period of the assembled workforce was 1.76 years. Amortization expense related to the other intangible asset was $0.2 million for the six months ended June 30, 2018.

Accrued Liabilities

Accrued liabilities consist of the following:

	December 31, 2017	June 30, 2018
	(In thousands)	
Accrued research and development expenses	$ —	$ 8,621
Accrued compensation	—	1,777
Other	2	3,079
Total accrued liabilities	$ 2	$13,477

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5. Asset Acquisition

In April 2018, the Company entered into an Asset Contribution Agreement (the Pfizer Agreement) with Pfizer pursuant to which the Company acquired certain assets, including certain contracts described in Note 6, and intellectual property for the development and administration of CAR T cells for the treatment of cancer.

As consideration for the purchased assets, the Company issued Pfizer 3,187,772 shares of its Series A-1 convertible preferred stock with an estimated fair value of $111.8 million or $35.06 per share. The Company also incurred $2.1 million of direct expenses related to the asset acquisition, bringing the total consideration to $113.9 million. The fair value of the Series A-1 convertible preferred stock was established using the price per share paid by third-party investors in the concurrent closing of the Series A and A-1 convertible preferred stock financing of $35.06 per share as well as the price per share paid by Pfizer to purchase additional shares of Series A-1 convertible preferred stock at $35.06 per share at the same time and at the same price per share as the rest of Series A and A-1 financing (see Note 7 for additional details). The Series A-1 convertible preferred shares issued to Pfizer have the same rights, preferences and privileges as the Series A convertible preferred shares issued to the third-party investors.

The Company accounted for the transaction as an asset acquisition as substantially all of the estimated fair value of the gross assets acquired was concentrated in a single identified asset, anti-CD19 CAR T cell therapy, thus satisfying the requirements of the screen test in ASU 2017-01. The assets acquired in the transaction were measured based on the fair value of the Series A-1 convertible preferred stock issued to Pfizer and direct transaction costs of $2.1 million, as the fair value of the equity given was more readily determinable than the fair value of the assets received. The following table summarizes the fair value of assets acquired (in thousands):

Property and equipment	$ 3,258
In-process research and development (IPR&D):	
anti-CD19 CAR T cell therapy	103,936
anti-BCMA CAR T cell therapy	5,500
Assembled workforce	1,206
Total assets acquired	$ 113,900

The estimated fair values of anti-CD19 CAR T cell therapy and anti-BCMA CAR T cell therapy were determined using a risk-adjusted discounted cash flow approach, which used the present value of the direct cash flows expected to be generated by anti-CD19 CAR T cell therapy and anti-BCMA CAR T cell therapy during their estimated economic lives, net of returns on contributory assets such as working capital, property and equipment, and the assembled workforce. The discount rate of 16.5% was based on rates of return available from alternative investments of similar type and quality as of the valuation date. The remaining IPR&D targets were determined to be more conceptual in nature with nominal value being attributed to them. The estimate of the fair value of the assembled workforce was determined using a replacement cost approach, based off the estimated cost of recruiting and training an equivalent workforce as of the acquisition date.

The amount allocated to intangible IPR&D assets was charged to research and development expense as these assets had no alternative future use at the time of the acquisition transaction. The remaining intangible asset relates to the assembled workforce which was capitalized and is being amortized over its estimated economic life of two years.

In addition, under the terms of the Pfizer Agreement, the Company is also required to make milestone payments to Pfizer of $30.0 million or $60.0 million per target (depending on the target, and $840.0 million in the

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aggregate for all targets) upon successful completion of certain regulatory and sales milestones for certain targets covered by the Pfizer Agreement. These contingent payments are not part of the consideration for the purchased assets.

As part of the asset acquisition, the Company also assumed licensing agreements Pfizer had entered into with two third-party entities holding certain intellectual property. Both agreements cover use of the intellectual property held by the parties and certain research collaboration activities. See Note 6 for additional details on these agreements.

Under the Pfizer Agreement, the Company is required to use commercially reasonable efforts to develop and seek regulatory approval in and for the United States and the European Union for certain products covered by the Pfizer Agreement and to commercialize each product covered by the Pfizer Agreement in the applicable royalty territory in which regulatory approval for such product has been obtained.

6. License Agreements and Other Commitments

Asset Contribution Agreement with Pfizer

In connection with the Pfizer Agreement (see Note 5), the Company is required to make milestone payments upon successful completion of regulatory and sales milestones on a target-by-target basis for the targets including CD19 and BCMA, covered by the Pfizer Agreement. The aggregate potential milestone payments upon successful completion of various regulatory milestones in the United States and the European Union are $30.0 million or $60.0 million, depending on the target, with aggregate potential regulatory and development milestones of up to $840.0 million, provided that we are not obligated to pay a milestone for regulatory approval in the European Union for an anti-CD19 allogeneic CAR T cell product, to the extent Servier has commercial rights to such territory. The aggregate potential milestone payments upon reaching certain annual net sales thresholds in North America, Europe, Asia, Australia and Oceania (the Territory) for a certain number of targets covered by the Pfizer Agreement are $325.0 million per target. The sales milestones in the foregoing sentence are payable on a country-by-country basis until the last to expire of any Pfizer Royalty Term, as described below, for any product in such country in the Territory.

Pfizer is also eligible to receive, on a product-by-product and country-by-country basis, royalties in single-digit percentages on annual net sales for products covered by the Pfizer Agreement or that use certain Pfizer intellectual property and for which an IND is first filed on or before April 6, 2023. The Company’s royalty obligation with respect to a given product in a given country begins upon the first sale of such product in such country and ends on the later of (i) expiration of the last claim of any applicable patent or (ii) 12 years from the first sale of such product in such country.

Research Collaboration and License Agreement with Cellectis

As part of the Pfizer Agreement (see Note 5), Pfizer assigned to the Company a Research Collaboration and License Agreement (the Cellectis Agreement), with Cellectis S.A. (Cellectis). Pursuant to the Cellectis Agreement, the Company has an exclusive, worldwide, royalty-bearing, sublicensable license, on a target-by-target basis, under certain of Cellectis’s intellectual property to make, use, sell, import, and otherwise commercialize products directed at certain targets for the treatment of cancer.

The Cellectis Agreement included a research collaboration to conduct discovery and pre-clinical development activities to generate CAR T cells directed at targets selected by each party. Pursuant to the terms of the Cellectis

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Agreement, the research collaboration ended in June 2018. Cellectis has a non-exclusive, worldwide, royalty-free, perpetual and irrevocable license, with sublicensing rights under certain conditions, under certain of the Company's intellectual property to conduct research, and to make, use, sell, import and otherwise commercialize products directed at Cellectis-selected targets.

The Cellectis Agreement requires Allogene to make payments of up to $185.0 million per product that is directed against a Company-selected target, with aggregate maximum potential pre-clinical, clinical and commercial milestone payments totaling up to $2.8 billion across all potential targets. Cellectis is also eligible to receive tiered royalties on annual worldwide net sales of any products that are commercialized by the Company that contain or incorporate, or are covered by, certain of Cellectis's intellectual property at rates in the high single-digit percentages.

Unless earlier terminated in accordance with the agreement, the Cellectis Agreement will expire on a product-by-product and country-by-country basis, on the later of (i) the expiration of the last to expire of the licensed patents covering such product; (ii) the loss of regulatory exclusivity afforded such product in such country, and (iii) the tenth anniversary of the date of the first commercial sale of such product in such country; however, in no event will the term extend, with respect to a particular licensed product, past the twentieth anniversary of the first commercial sale for such product.

All costs the Company incurred in connection with this agreement were recognized as research and development expenses. For the six months ended June 30, 2018, $0.4 million of costs have been incurred associated with research services performed by Cellectis. As of June 30, 2018, $0.4 million was recorded in the accrued and other current liabilities.

License and Collaboration Agreement with Servier

As part of the Pfizer Agreement (see Note 5), Pfizer assigned to the Company an Exclusive License and Collaboration Agreement (the Servier Agreement), with Les Laboratoires Servier SAS and Institut de Recherches Internationales Servier SAS (collectively, Servier) to develop, manufacture and commercialize certain allogeneic anti-CD19 CAR T cell product candidates, including UCART19, in the United States with the option to obtain the rights over additional products, including other anti-CD19 product candidates.

Under the Servier Agreement, the Company has an exclusive license to develop, manufacture and commercialize UCART19 in the field of anti-tumor adoptive immunotherapy in the United States, with an exclusive option to obtain the same rights for additional product candidates in the United States and, if Servier does not elect to pursue development or commercialization of those product candidates in certain markets outside of the United States pursuant to its license, outside of the United States as well. The Company is generally not required to make any additional payments to Servier to exercise an option, except for products directed at a certain target, for which the Company is required to pay Servier an option fee in the low tens of millions of dollars range upon exercise. If the Company opts-in to another product candidate, Servier has the right to obtain rights to such product candidate outside the United States and to share development costs for such product candidate.

Under the Servier Agreement, the Company is required to use commercially reasonable efforts to develop and obtain marketing approval in the United States in the field of anti-tumor adoptive immunotherapy for at least one product directed against CD19, and Servier is required to use commercially reasonable efforts to develop and obtain marketing approval in the European Union, and one other country in a group of specified countries outside of the European Union and the United States, in the field of anti-tumor adoptive immunotherapy for at least one allogeneic adaptive T cell product directed against a certain Company-selected target.

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For product candidates that the Company is co-developing with Servier, including UCART19, the Company is responsible for 60% of the development costs and Servier is responsible for the remaining 40% of the development costs under the global research and development plan. Subject to certain restrictions, each party has the right to conduct activities that are specific to its territory outside the global research and development plan at such party's sole expense. In addition, each party is solely responsible for commercialization activities in its territory at such party's sole expense.

The Company is required to make milestone payments to Servier upon successful completion of regulatory and sales milestones on a target-by-target basis. For products directed against CD19, including UCART19, the Servier Agreement provides for aggregate potential payments by the Company to Servier of up to $137.5 million upon successful completion of various regulatory milestones, and aggregate potential payments by the Company to Servier of up to $78.0 million upon successful completion of various sales milestones. The total potential payments that the Company is obligated to make under the Servier Agreement upon successful completion of regulatory and sales milestones are $381.5 million, including the CD19-related milestone payments described above. Similarly, Servier is required to make milestone payments upon successful completion of regulatory and sales milestones for products directed at the Allogene-target covered by the Servier Agreement that achieves such milestones. The total potential payments that Servier is obligated to make to the Company under the Servier Agreement upon successful completion of regulatory and sales milestones are $42 million and €70.5 million ($82.3 million), respectively. The foregoing milestones are subject to certain adjustments if the Company obtains rights for certain products outside of the United States upon Servier's election not to pursue such rights.

Each party is also eligible to receive tiered royalties on annual net sales in countries within the paying party's respective territory of any licensed products that are commercialized by such party that are directed at the targets licensed by such party under the Servier Agreement. The royalty rates are in a range from the low tens to the high teen percentages. Such royalties may be reduced for interchangeable drug entry, expiration of patent rights and amounts paid pursuant to licenses of third party patents. The royalty obligation for each party with respect to a given licensed product in a given country in each party's respective territory (the Servier Royalty Term) begins upon the first commercial sale of such product in such country and ends after a defined number of years.

Unless earlier terminated in accordance with the Servier Agreement, the Servier Agreement will continue, on a licensed product-by-licensed product and country-by-country basis, until the Servier Royalty Term with respect to the sale of such licensed product in such country expires.

For the six months ended June 30, 2018, the Company recorded $3.2 million of the costs incurred under the cost-sharing terms of the Servier Agreement as research and development expense.

Operating Lease

As of June 30, 2018, the Company has not entered into any long-term operating lease agreements.

Indemnification

From time to time, the Company enters into certain types of contracts that contingently requires the Company to indemnify various parties against claims from third parties. These contracts primarily relate to (i) the Company's bylaws, under which the Company must indemnify directors and executive officers, and may indemnify other officers and employees, for liabilities arising out of their relationship, (ii) contracts under which the Company must indemnify directors and certain officers for liabilities arising out of their relationship, (iii) contracts under which the Company may be required to indemnify partners against certain claims, including claims from third

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parties asserting, among other things, infringement of their intellectual property rights, and (iv) procurement, consulting, or license agreements under which the Company may be required to indemnify vendors, consultants or licensors for certain claims, including claims that may be brought against them arising from the Company's acts or omissions with respect to the supplied products, technology or services. From time to time, the Company may receive indemnification claims under these contracts in the normal course of business. In addition, under these contracts, the Company may have to modify the accused infringing intellectual property and/or refund amounts received.

In the event that one or more of these matters were to result in a claim against the Company, an adverse outcome, including a judgment or settlement, may cause a material adverse effect on the Company's future business, operating results or financial condition. It is not possible to determine the maximum potential amount under these contracts due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement.

The Company also maintains director and officer insurance, which may cover certain liabilities arising from our obligation to indemnify the Company's directors. To date, the Company has not incurred any material costs and has not accrued any liabilities in the financial statements as a result of these provisions.

7. Convertible Preferred Stock and Stockholders' Deficit

Convertible Preferred Stock

As discussed in Note 5, the Company issued 3,187,772 shares of its Series A-1 convertible preferred stock to Pfizer in connection with the Pfizer Agreement entered into in April 2018.

In April 2018, the Company issued 7,557,990 shares of its Series A convertible preferred stock at a price per share of $35.06 for net cash proceeds of $264.4 million and issued 998,225 shares of Series A-1 convertible preferred stock at a price per share of $35.06 for net cash proceeds of $34.9 million. Fifty percent of the aggregate purchase price of $300.0 million was paid in April 2018. The remaining subscriptions receivable of $150.0 million was received in July and August 2018, at the election of the Company's board of directors. The subscriptions receivable are classified as mezzanine equity on the balance sheet as of June 30, 2018 as the shares are issued but unpaid.

Convertible preferred stock consists of the following:

	June 30, 2018			
	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
	(In thousands, except share amounts)			
Series A	7,557,990	7,557,990	$ 264,365	$ 265,000
Series A-1	4,185,997	4,185,997	146,687	146,770
	11,743,987	11,743,987	$ 411,052	$ 411,770

The Company classifies the convertible preferred stock outside of stockholders' deficit because, in the event of certain "liquidation events" that are not solely within the control of the Company (including merger, acquisition, or sale of all or substantially all of the assets), the shares would become redeemable at the option of the holders. The Company did not adjust the carrying values of the convertible preferred stock to the deemed liquidation

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values of such shares since a liquidation event was not probable at any of the reporting dates. Subsequent adjustments to increase or decrease the carrying values to the ultimate liquidation values will be made only if and when it becomes probable that such a liquidation event will occur.

The holders of the Company's convertible preferred stock have various rights, preferences and privileges as follows:

Optional Conversion Rights

Each share of convertible preferred stock shall be convertible, at the option of the holder, into such number of fully paid shares of common stock as is determined by dividing the original issuance price by the conversion price in effect at the time of conversion. As of June 30, 2018, the initial conversion price per share of convertible preferred stock is equivalent to the original issue price. The original issuance price was $35.06 per share for the Series A and A-1 convertible preferred stock. Based on the conversion ratios in effect as of June 30, 2018, the Series A and A-1 convertible preferred stock will convert on a one-for-one basis into common stock. The respective applicable conversion price is subject to adjustment upon any future stock splits or stock combinations, reclassifications or exchanges of similar stock, upon a reorganization, merger or consolidation of the Company, or upon the issuance or sale by the Company of common stock for consideration less than the applicable conversion price.

Mandatory Conversion Rights

Each share of Series A and A-1 convertible preferred stock automatically converts into the number of shares of common stock determined in accordance with the conversion rate upon any of the following: (a) written consent of a majority of each of (i) the holders of a majority of Series A convertible preferred stock, and (ii) the holders of a majority of Series A-1 convertible preferred stock, each voting separately, as a separate class and series or (b) the closing of a public offering with a pre-money valuation of the Company of at least $600.0 million and in which the gross cash proceeds are at least $100.0 million (Qualified Initial Public Offering) or (c) the closing of a public offering, other than Qualified Initial Offering, that is approved by at least 51% of the outstanding shares of Series A and A-1 convertible preferred stock, voting together as a class.

Dividends

The holders of the outstanding shares of convertible preferred stock are entitled to first receive, when and if declared by the board of directors, a dividend at least equal to the dividend payable on common stock as if all convertible preferred stock had been converted to common stock. No dividends had been declared as of June 30, 2018.

Liquidation

In the event of any liquidation, dissolution, or winding up of the Company, either voluntary or involuntary, the holders of convertible preferred stock shall be entitled to receive pro rata, prior and in preference to any distribution to the holders of the common stock, an amount equal to the greater of (i) the original issuance prices of each series (in each case, as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) and all declared but unpaid dividends, if any or (ii) such amount per share as would have been payable had all shares of convertible preferred stock been converted to common stock. If the assets and funds to be distributed among the holders of convertible preferred stock are insufficient to permit the payment to such

ALLOGENE THERAPEUTICS, INC.

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(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

holders, then the entire assets and funds of the Company legally available for distribution will be distributed ratably among the holders of convertible preferred stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

Voting Rights

Each share of convertible preferred stock has a number of votes equal to the number of shares of common stock into which it is convertible. The holders of convertible preferred stock, voting together as a single class, shall be entitled to elect five members of the Company's board of directors. The holders of common stock have the right to elect two members of the Company's board of directors. The holders of common stock and convertible preferred stock, voting together as a single class on an as-converted basis, are entitled to elect three members of the board of directors.

Redemption

The Series A and A-1 convertible preferred stocks are not currently redeemable.

Common Stock

Pursuant to the Amended and Restated Certificate of Incorporation filed on April 5, 2018, as amended, the Company is authorized to issue a total of 101,000,000 shares of common stock, of which 27,714,743 shares were issued and outstanding at June 30, 2018.

In connection with the issuance of the Company's Series A convertible preferred stock in April 2018, the Company's founders agreed to modify their common shares outstanding to include vesting provisions that require continued service to the Company in order to vest in those shares. As such, the 26,249,993 modified shares of common stock became compensatory upon such modification. The total compensation cost resulting from the modification is approximately $59.5 million and is being recognized over the four-year vesting term. For the six-month period ended June 30, 2018, the Company recognized $8.0 million of this amount in general and administrative expense.

Common stockholders are entitled to dividends if and when declared by the Board of Directors subject to the prior rights of the preferred stockholders. As of June 30, 2018, no dividends on common stock had been declared by the Board of Directors.

8. Stock-Based Compensation

In June 2018, the Company adopted the 2018 Equity Incentive Plan (2018 Plan). The 2018 Plan provides for the Company to sell or issue common stock or restricted common stock, or to grant incentive stock options or nonqualified stock options for the purchase of common stock, to employees, members of the Board of Directors and consultants of the Company under terms and provisions established by the Board of Directors. Under the terms of the Plan, options may be granted at an exercise price not less than fair market value. The Company generally grants stock-based awards with service conditions only. Options granted typically vest over a four-year period but may be granted with different vesting terms.

As of June 30, 2018, there were 958,350 shares reserved by the Company under the 2018 Plan for the future issuance of equity awards.

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

The following summarizes option activity under the 2018 Plan:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contract Term (In years)	Aggregate Intrinsic Value (In thousands)
Balance, December 31, 2017	—	—		
Options granted	8,808,975	$ 2.27		
Options exercised	(1,464,750)	$ 2.27		
Options forfeited	—	—		
Balance outstanding, June 30, 2018	7,344,225	$ 2.27	9.99	—
Exercisable, June 30, 2018	5,268,375	$ 2.27	9.99	—
Vested and expected to vest, June 30, 2018	7,344,225	$ 2.27	9.99	—

The aggregate intrinsic values of options outstanding, exercisable, vested and expected to vest were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock, as determined by the board of directors, as of June 30, 2018. No intrinsic value of options exercised existed for the six months ended June 30, 2018.

During the six months ended June 30, 2018, the estimated weighted-average grant-date fair value of employee options granted was $1.57 per share. As of June 30, 2018, there was $13.8 million of unrecognized stock-based compensation related to unvested stock options, which is expected to be recognized over a weighted-average period of 3.7 years.

The fair value of employee and director stock option awards was estimated at the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Six Months Ended June 30, 2018
Fair value of common stock	$2.27
Expected term (years)	5.99 to 6.25 years
Expected volatility	77.00%
Expected risk-free interest rate	2.87%
Expected dividend	0%

The Black-Scholes option-pricing model requires the use of subjective assumptions which determine the fair value of stock-based awards. These assumptions include:

Fair value of common stock—Historically, because there has been no public market for the Company's common stock, the fair value of the Company's common stock underlying share-based awards was estimated on each grant date by the Company's board of directors. In order to determine the fair value of the Company's common stock underlying option grants, the Company's board of directors considered, among other things, valuations of the Company's common stock prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*.

ALLOGENE THERAPEUTICS, INC.

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(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

Expected term— The expected term represents the period that stock-based awards are expected to be outstanding. The expected term for option grants is determined using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the stock-based awards.

Expected volatility—Since the Company is a privately held company and does not have any trading history for its common stock, the expected volatility is estimated based on the average volatility for comparable publicly traded biotechnology companies over a period equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, stage in the life cycle or area of specialty. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Risk-free interest rate—The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of option.

Expected dividend—The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

For the six months ended June 30, 2018, total stock-based compensation expense related to stock options was $53,000, of which $40,000 was recorded in general and administrative expense and $13,000 in research and development expense. As discussed in Note 7, the Company also recorded in general and administrative expenses $8.0 million in stock-based compensation related to the modification of its founders' common stock.

Early Exercised Options

The Company allows its executive employees and directors to exercise options granted under the 2018 Plan prior to vesting. The shares related to early exercised stock options are subject to the Company's lapsing repurchase right upon termination of employment at the lesser of the original purchase price or fair market value at the time of repurchase. In order to vest, the holders are required to provide continued service to the Company. The proceeds are initially recorded in accrued and other liabilities and other long-term liabilities for the noncurrent portion. The proceeds are reclassified to common stock and paid-in capital as the repurchase right lapses. As of June 30, 2018, there was $0.8 million recorded in accrued and other liabilities and $2.5 million recorded in other long-term liabilities related to shares held by employees and directors that were subject to repurchase. The underlying shares are shown as outstanding in the financial statements since the exercise date.

9. Related Party Transactions

As of June 30, 2018, Pfizer holds 4,185,997 shares of Series A-1 convertible preferred stock and has appointed two members to the Company's board of directors.

In April 2018, the Company entered into a transition services agreement (the Pfizer TSA) for Pfizer to provide the Company professional services related to research and development, project management, and other administrative functions. For the six months ended June 30, 2018, the costs incurred under the Pfizer TSA were $3.7 million, which were recorded as general and administrative expense of $1.8 million and research and development expense of $1.9 million. The Company also purchased certain lab supplies from Pfizer in connection with its research and development activities. For the six months ended June 30, 2018, the total lab supplies purchased from Pfizer was $3.3 million, which is recorded as research and development expense.

As of June 30, 2018, the Company has an amount payable to Pfizer of $6.6 million which is recorded in the accrued and other current liabilities on the accompanying balance sheets.

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

Consulting Agreements

In June 2018, the Company entered into a services agreement with a firm affiliated with the Company's President and Chief Executive Officer, the Company's Executive Chairman of the board of directors, and a director of the Company to provide various managerial, administrative, accounting and financial services to the Company. Additionally, in June 2018 the Company entered into a consulting services agreement with a firm affiliated with a beneficial owner of more than 5% of our capital stock. The costs incurred for services provided under these agreements were $0.3 million for the six months ended June 30, 2018 and were included in general and administrative expenses.

10. Income Taxes

For the period from November 30, 2017 to December 31, 2017 and for the six months ended June 30, 2018, the Company recorded no income tax expense. The Company has incurred net operating losses for all the periods presented. The Company has not reflected any benefit of such net operating loss carryforwards in the accompanying financial statements. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets.

The components of the deferred tax assets and liabilities are as follows:

	December 31, 2017	June 30, 2018
	(In thousands)	
Net operating loss carryforwards	$ —	$ 5,999
Depreciation and amortization	—	73
Accrual and allowances	—	23
In-process research and development	—	23,121
Total deferred tax assets	—	29,216
Less: valuation allowance	—	(29,216)
Net deferred tax assets	$ —	$ —

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Due to the lack of earnings history, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by approximately $29.2 million during the six months ended June 30, 2018.

The Company records a liability related to uncertain tax positions in the financial statements. It is the Company's policy to include penalties and interest expense related to income taxes as a component of interest and other income, net, as necessary. As of June 30, 2018, there were no accrued interest and penalties related to uncertain tax positions.

The Company had $0 and $0.5 million in unrecognized tax benefits as of December 31, 2017 and June 30, 2018, respectively. The reversal of the uncertain tax benefits would not affect the effective tax rate to the extent that the Company continues to maintain a full valuation allowance against its deferred tax assets. Unrecognized tax benefits may change during the next 12 months for items that arise in the ordinary course of business.

In December 2017, the Tax Cuts and Jobs Acts (Tax Act) was signed into law. The Tax Act, among other changes, lowers the Company's federal tax rate from 34% to 21%. Since the Company established a valuation

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

allowance to offset its deferred tax assets, there is no impact to the effective tax rate, as any changes to deferred taxes were offset by an equal change in the valuation allowance.

11. Net Loss and Unaudited Pro Forma Net Loss Per Share

The following outstanding potentially dilutive shares have been excluded from the calculation of diluted net loss per share for the periods presented due to their anti-dilutive effect:

	December 31, 2017	June 30, 2018
Convertible preferred stock	—	11,743,987
Stock options to purchase common stock	—	7,344,225
Founder shares of common stock subject to future vesting		22,716,329
Early exercised stock options subject to future vesting	—	1,464,750

Pro Forma Net Loss Per Share

The following table sets forth the computation of unaudited pro forma basic and diluted net loss per share during the six months ended June 30, 2018:

	Six Months Ended June 30, 2018
Net loss per share, basic and diluted	$ (9.42)
Weighted-average number of shares used in computing net loss per share, basic and diluted	14,600,379
Pro forma adjustment to reflect assumed conversion of convertible preferred stock	29,410,895
Weighted-average number of shares used in computing pro forma net loss per share, basic and diluted	44,011,274
Pro forma net loss per share, basic and diluted	$ (3.12)

12. Subsequent Events

Subsequent events have been evaluated through August 10, 2018, which is the date that the financial statements were available to be issued.

Receipt of Subscriptions Receivable

In July and August 2018, the Company received an aggregate of $150.0 million in cash proceeds from its Series A and A-1 convertible preferred stockholders related to subscriptions receivable (see Note 7).

Operating Lease Agreement

In August 2018, the Company entered into an operating lease agreement for new office and laboratory space in South San Francisco, California. The lease term is expected to commence on March 1, 2019 and expires ten years from the commencement date. The initial annual base rent is approximately $4.1 million, and such amount will increase by 3.5% annually on each anniversary of the commencement date. In connection with the lease, the Company will maintain a letter of credit for the benefit of the landlord in the amount of $0.9 million.

ALLOGENE THERAPEUTICS, INC.

Notes to the Financial Statements

(Information as of June 30, 2018 and for the six months ended June 30, 2018 is unaudited)

Convertible Notes

In September 2018, the Company entered into a note purchase agreement pursuant to which it sold and issued $120.2 million aggregate principal amount of convertible promissory notes (2018 Notes) and received net cash proceeds of $116.9 million. The 2018 Notes do not accrue interest and will be settled with shares of common stock in connection with the closing of the IPO at a settlement price equal to 85% of the IPO price per share. If the Company is acquired, completes a business combination resulting in a change of control or sells all or substantially all of its assets (each, a "liquidation transaction") prior to the one-year anniversary of the issuance date of the 2018 Notes, the 2018 Notes, unless previously settled into shares of common stock in the IPO, will settle into shares of common stock at a price per share equal to 85% of the estimated fair value of the consideration per share payable to the holders of common stock in connection with such liquidation transaction. If neither the IPO nor a liquidation transaction occurs prior to the one-year anniversary of the issuance date of the 2018 Notes, the 2018 Notes will be converted into shares of newly designated Series B convertible preferred stock of the Company at settlement price per share that will be determined based on a stipulated $900.0 million valuation of the Company and its fully diluted capitalization as of immediately prior to the conversion of the 2018 Notes. The 2018 Notes contain additional redemption features contingent upon the occurrence of certain future events. The Company will elect to account for the 2018 Notes at fair value with any changes in fair value being recognized through the statement of operations until settlement of the 2018 Notes.

16,000,000 Shares

Common Stock

Goldman Sachs & Co. LLC **J.P. Morgan** **Cowen** **Jefferies**

, 2018

Through and including , 2018 (the 25th day after the commencement of this offering), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by Allogene Therapeutics, Inc. (the Registrant), in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission (SEC) registration fee, the FINRA filing fee and the Nasdaq Global Select Market listing fee.

	Amount paid or to be paid
SEC registration fee	$ 40,141
FINRA filing fee	47,420
Nasdaq Global Select Market listing fee	125,000
Printing and engraving expenses	500,000
Legal fees and expenses	1,300,000
Accounting fees and expenses	1,350,000
Transfer agent and registrar fees and expenses	7,300
Miscellaneous expenses	130,139
Total	$ 3,500,000

Item 14. Indemnification of Directors and Officers.

The Registrant is incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who were, are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who were, are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) actually and reasonably incurred.

The Registrant's amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to and upon the closing of this offering, respectively, provide for the indemnification of its directors and officers to the fullest extent permitted under the Delaware General

Corporation Law. Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

The Registrant's amended and restated certificate of incorporation, as currently in effect, includes such a provision, and the Registrant's amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering will include such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition shall be paid by the Registrant upon delivery to it of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by the Registrant.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the Registrant has entered into indemnity agreements with each of its directors and executive officers, that require the Registrant to indemnify such persons against any and all costs and expenses (including attorneys', witness or other professional fees) actually and reasonably incurred by such persons in connection with any action, suit or proceeding (including derivative actions), whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director or officer or is or was acting or serving as an officer, director, employee or agent of the Registrant or any of its affiliated enterprises. Under these agreements, the Registrant is not required to provided indemnification for certain matters, including:

- indemnification beyond that permitted by the Delaware General Corporation Law;
- indemnification for any proceeding with respect to the unlawful payment of remuneration to the director or officer;
- indemnification for certain proceedings involving a final judgment that the director or officer is required to disgorge profits from the purchase or sale of the Registrant's stock;
- indemnification for proceedings involving a final judgment that the director's or officer's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct or a breach of his or her duty of loyalty, but only to the extent of such specific determination;
- indemnification for proceedings or claims brought by an officer or director against us or any of the Registrant's directors, officers, employees or agents, except for claims to establish a right of indemnification or proceedings or claims approved by the Registrant's board of directors or required by law;
- indemnification for settlements the director or officer enters into without the Registrant's consent; or
- indemnification in violation of any undertaking required by the Securities Act of 1933, as amended (Securities Act), or in any registration statement filed by the Registrant.

The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. Except as otherwise disclosed under the heading “Legal Proceedings” in the “Business” section of the prospectus included in this registration statement, there is at present no pending litigation or proceeding involving any of the Registrant’s directors or executive officers as to which indemnification is required or permitted, and the Registrant is not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

The Registrant has an insurance policy in place that covers its officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act, or otherwise.

The Registrant plans to enter into an underwriting agreement which provides that the underwriters are obligated, under some circumstances, to indemnify the Registrant’s directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

Item 15. Recent sales of unregistered securities.

Set forth below is information regarding securities issued and options granted by us since November 30, 2017 that were not registered under the Securities Act. Also included is the consideration, if any, received by us, for such securities and options and information relating to the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(1) In December 2017, we issued and sold 26,249,993 shares of common stock to our founders pursuant to a series of stock purchase agreements at a purchase price of $0.001 per share, and received aggregate gross proceeds of $5,000.

(2) In April 2018, we entered into a Series A and A-1 preferred stock purchase agreement with various investors, pursuant to which we issued and sold to such investors an aggregate of 7,557,990 shares of our Series A convertible preferred stock and 998,225 shares of our Series A-1 convertible preferred stock at a purchase price of $35.06 per share, and received aggregate gross proceeds of approximately $300 million. Half of this funding was received in April 2018 and the remainder was received in July and August 2018.

(3) In April 2018, we entered into an asset contribution agreement with Pfizer Inc., pursuant to which we issued and sold to Pfizer an aggregate of 3,187,772 shares of our Series A-1 convertible preferred stock in exchange for certain assets and rights relating to investigational drugs.

(4) In June 2018, we granted stock options under our amended and restated 2018 equity incentive plan, as amended (the Prior Plan), to purchase up to an aggregate of 8,808,975 shares of our common stock to our employees, directors and consultants, at a weighted-average exercise price of $2.27 per share. Subsequent to June 30, 2018, we granted stock options under the Prior Plan to purchase up to an aggregate of 2,347,275 shares of our common stock to our employees and consultants, at a weighted-average exercise price of $6.87 per share. From June 2018 to the effective date of this registration statement, 5,020,575 shares of common stock were issued upon the exercise of options granted to employees, directors and consultants and the payment of $11,370,407 to us was made.

(5) In September 2018, we entered into a note purchase agreement with certain individual and institutional accredited investors, pursuant to which we sold and issued $120.2 million aggregate principal amount of convertible promissory notes in exchange for $116.9 million in net cash proceeds.

The offers, sales and issuances of the securities described in paragraphs (1) through (3) and (5) were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) (or Regulation D promulgated thereunder) in that the issuance of securities to the accredited investors did not involve a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to

the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor under Rule 501 of Regulation D. No underwriters were involved in these transactions.

The offers, sales and issuances of the securities described in paragraph (4) were deemed to be exempt from registration under the Securities Act in reliance on either Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701 or Section 4(a)(2) in that the issuance of securities to the accredited investors did not involve a public offering. The recipients of such securities were our employees, directors or bona fide consultants and received the securities under the Prior Plan.

Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about us.

Item 16. Exhibits and financial statement schedules.

(a) Exhibits.

EXHIBIT INDEX

Exhibit number	Description of document
1.1	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation, as amended and currently in effect.
3.2	Form of Amended and Restated Certificate of Incorporation to become effective immediately prior to the closing of this offering.
3.3#	Amended and Restated Bylaws, as currently in effect.
3.4	Form of Amended and Restated Bylaws to become effective upon the closing of this offering.
4.1	Form of Common Stock Certificate of the Registrant.
4.2#	Investors' Rights Agreement, dated April 6, 2018, by and among the Registrant and certain of its securityholders, as amended September 5, 2018.
5.1	Opinion of Cooley LLP.
10.1+	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.2+	Indemnification Agreement, dated April 6, 2018, by and between the Registrant and John DeYoung.
10.3+#	Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan (Prior Plan) and Forms of Stock Option Grant Notice, Option Agreement, Notice of Exercise and Early Exercise Stock Purchase Agreement thereunder, as amended.
10.4+	Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan and Forms of Stock Option Grant Notice, Option Agreement, Notice of Exercise, Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement thereunder.
10.5+	Allogene Therapeutics, Inc. 2018 Employee Stock Purchase Plan.
10.6+	Allogene Therapeutics, Inc. 2018 Change in Control Plan and Severance Benefit Plan.
10.7+	Non-Employee Director Compensation Policy.
10.8*#	Research Collaboration and License Agreement, dated June 17, 2014, by and between the Registrant (assignee of Pfizer Inc.) and Cellectis SA, as amended.
10.9*#	Exclusive License and Collaboration Agreement, dated October 30, 2015, by and between the Registrant (assignee of Pfizer Inc.) and Les Laboratoires Servier and Institut de Recherches Internationales Servier.
10.10*	Asset Contribution Agreement, dated April 2, 2018, by and between the Registrant and Pfizer Inc.

Exhibit number	Description of document
10.11*#	Transition Services Agreement, dated April 6, 2018, by and between the Registrant and Pfizer Inc.
10.12*#	Option for Rights to Retained Territory Letter Agreement, dated April 2, 2018, by and between the Registrant and Pfizer Inc.
10.13#	Lease, dated August 1, 2018, by and between the Registrant and Britannia Pointe Grand Limited Partnership.
10.14+#	Employment Agreement by and between the Registrant and David Chang, M.D., Ph.D.
10.15+#	Employment Agreement by and between the Registrant and Eric Schmidt, Ph.D.
10.16+#	Employment Agreement by and between the Registrant and Alison Moore, Ph.D.
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1#	Power of Attorney.

Previously filed.
+ Indicates management contract or compensatory plan.
* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

(b) Financial statement schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on the 2nd day of October, 2018.

ALLOGENE THERAPEUTICS, INC.

By: /s/ David Chang, M.D., Ph.D.
David Chang, M.D., Ph.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ David Chang, M.D., Ph.D. David Chang, M.D., Ph.D.	President, Chief Executive Officer and Member of the Board of Directors *(Principal Executive Officer)*	October 2, 2018
/s/ Eric Schmidt, Ph.D. Eric Schmidt, Ph.D.	Chief Financial Officer *(Principal Financial and Accounting Officer)*	October 2, 2018
* Arie Belldegrun, M.D., FACS	Executive Chairman of the Board of Directors	October 2, 2018
* David Bonderman	Member of the Board of Directors	October 2, 2018
* Franz Humer, Ph.D.	Member of the Board of Directors	October 2, 2018
* John DeYoung	Member of the Board of Directors	October 2, 2018
* Joshua Kazam	Member of the Board of Directors	October 2, 2018
* Owen Witte, M.D.	Member of the Board of Directors	October 2, 2018
* Todd Sisitsky	Member of the Board of Directors	October 2, 2018
* Robert Abraham, Ph.D.	Member of the Board of Directors	October 2, 2018
/s/ Deborah Messemer Deborah Messemer	Member of the Board of Directors	October 2, 2018

*By: /s/ David Chang, M.D., Ph.D.
David Chang, M.D., Ph.D.
Attorney-in-fact

Exhibit 1.1

Execution Version

Allogene Therapeutics, Inc.

Common Stock

Underwriting Agreement

_____, 2018

Goldman Sachs & Co. LLC
J.P. Morgan Securities LLC
Cowen and Company, LLC
Jefferies LLC

As representatives (the "Representatives") of the several Underwriters named in Schedule I hereto,

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

c/o Jefferies LLC
520 Madison Avenue
New York, NY 10022

Ladies and Gentlemen:

Allogene Therapeutics, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of [•] shares of the Company's common stock, par value $0.001 per share ("Stock, and such shares "the "Firm Shares") and, at the election of the Underwriters, up to [•] additional shares (the "Optional Shares") of Stock (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the "Shares").

J.P. Morgan Securities LLC (the "Directed Share Underwriter") has agreed to reserve a portion of the Shares to be purchased by it under this Agreement for sale to the Company's directors, officers, employees and business associates and other parties related to the Company (collectively, "Participants"), as set forth in the Prospectus (as defined in Section 1(a) hereof) under the heading "Underwriting" (the "Directed Share Program"). The Shares to be sold by the Directed Share Underwriter and its affiliates pursuant to the Directed Share Program, at the direction of the Company, are referred to hereinafter as the "Directed Shares". Any Directed Shares not orally confirmed for purchase by any Participant by the end of the business day on which this Agreement is executed will be offered to the public by the Underwriters as set forth in the Prospectus.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) A registration statement on Form S-1 (File No. 333-227333) (the "Initial Registration Statement") in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission"); the Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to you, have been declared effective by the Commission in such form; other than a registration statement, if any, increasing the size of the offering (a "Rule 462(b) Registration Statement"), filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act"), which became effective upon filing, no other document with respect to the Initial Registration Statement has been filed with the Commission; and no stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and no proceeding for that purpose has been initiated or, to the Company's knowledge, threatened by the Commission (any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424(a) of the rules and regulations of the Commission under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of the Initial Registration Statement and the Rule 462(b) Registration Statement, if any, including all exhibits thereto and including the information contained in the form of final prospectus filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof and deemed by virtue of Rule 430A under the Act to be part of the Initial Registration Statement at the time it was declared effective, each as amended at the time such part of the Initial Registration Statement became effective or such part of the Rule 462(b) Registration Statement, if any, became or hereafter becomes effective, are hereinafter collectively called the "Registration Statement"; the Preliminary Prospectus relating to the Shares that was included in the Registration Statement immediately prior to the Applicable Time (as defined in Section 1(c) hereof) is hereinafter called the "Pricing Prospectus"; such final prospectus, in the form first filed pursuant to Rule 424(b) under the Act, is hereinafter called the "Prospectus"; any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Act is hereinafter called a "Section 5(d) Communication"; any Section 5(d) Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a "Section 5(d) Writing"; and any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Shares is hereinafter called an "Issuer Free Writing Prospectus");

(b) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided*, *however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(b) of this Agreement);

(c) For the purposes of this Agreement, the "Applicable Time" is [•] p.m. (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule II(c) hereto, taken together (collectively, the "Pricing Disclosure Package"), as of the Applicable Time, did not, and as of each Time of Delivery (as defined in Section 4(a) of this Agreement) (as supplemented by any post-effective amendment thereto) will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus and each Section 5(d) Writing does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each Issuer Free Writing Prospectus and each Section 5(d) Writing, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not, and as of each Time of Delivery (as supplemented by any post-effective amendment thereto) will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(d) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(e) The Company has not, since the date of the latest audited financial statements included in the Pricing Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company or incurred any liability or obligation, direct or contingent, that is material to the Company, other than as set forth or contemplated

in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been (x) any change in the capital stock of the Company (other than as a result of (i) the exercise, if any, of stock options or the award, if any, of stock options, restricted stock or other awards in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of shares of Stock upon conversion of Company securities as described in the Pricing Prospectus and the Prospectus), or (y) any Material Adverse Effect (as defined below); as used in this Agreement, "Material Adverse Effect" shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, prospects, stockholders' equity or results of operations of the Company, except as set forth or contemplated in the Pricing Prospectus, or (ii) the ability of the Company to issue and sell the Shares;

(f) The Company does not own any real property and the Company has good and marketable title to all personal property owned by it (other than with respect to Intellectual Property (as defined below), which is addressed exclusively in subsection (aa) below), in each case free and clear of all liens, encumbrances and defects except such as are described in the Pricing Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company are, to the Company's knowledge, held by the Company under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company;

(g) The Company has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own and/or lease its properties and conduct its business as described in the Pricing Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing (where such concept exists) under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect;

(h) The Company has no subsidiaries;

(i) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and Prospectus;

(j) The Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and

non-assessable and will conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights that have not been complied with or otherwise effectively waived;

(k) The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties, except, in the case of clauses (A) or (C), for such defaults, breaches, or violations that would not, individually or in the aggregate, have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority ("FINRA") of the underwriting terms and arrangements and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(l) The Company is not (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its properties, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(m) The statements set forth in the Pricing Prospectus and Prospectus under the captions "Description of Capital Stock" and "Shares Eligible for Future Sale", insofar as they purport to constitute a summary of the terms of the Stock, and under the caption "Material U.S. Federal Income Tax Consequences to Non-U.S. Holders of Our Common Stock", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate and fair in all material respects;

(n) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company, or to the Company's knowledge any officer or director of the Company, is a party or of which any property of the Company is the subject which, if determined adversely to the Company (or such officer or director), would individually or in the aggregate have a Material Adverse Effect; and, to the

Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others;

(o) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Pricing Prospectus, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(p) At the time of filing the Initial Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined under Rule 405 under the Act;

(q) Ernst & Young LLP, who have certified certain financial statements of the Company, is an independent registered public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(r) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934 (the "Exchange Act")) that (i) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (ii) is designed to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law);

(s) Since the date of the latest audited financial statements included in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(t) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within the Company; and such disclosure controls and procedures are effective in all material respects;

(u) This Agreement has been duly authorized, executed and delivered by the Company;

(v) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person associated with or acting on behalf of the Company has (i) directly or indirectly made, offered, promised or authorized any unlawful payment, contribution, gift, entertainment or other unlawful expense; (ii) made, offered, promised or authorized any direct or indirect unlawful payment; or (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law;

(w) The operations of the Company are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company conducts business (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(x) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company is currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, Her Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "Sanctions"), and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions;

(y) The financial statements included in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included

therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder;

(z) From the time of initial confidential submission of a registration statement relating to the Shares with the Commission (or, if earlier, the first date on which a Section 5(d) Communication was made) through the date hereof, the Company has been and is an "emerging growth company" as defined in Section 2(a)(19) of the Act (an "Emerging Growth Company");

(aa) Except as disclosed in the Pricing Prospectus, the Company owns or has obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement and the Pricing Prospectus as being owned or licensed by it or which are necessary for the conduct of its business as currently conducted (collectively, "Intellectual Property"). To the Company's knowledge: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement and the Prospectus as licensed to the Company; (ii) the Company is not infringing the intellectual property rights of third parties; and (iii) the Company is either the sole owner or the co-owner of the Intellectual Property owned by it and has the valid right to use such Intellectual Property. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property; (B) challenging the validity, enforceability or scope of any Intellectual Property; or (C) asserting that the Company infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement and the Prospectus as under development, infringe, misappropriate or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others. The Company has complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect. ;

(bb) Except as described in the Registration Statement, the Pricing Disclosure and the Prospectus, all patents and patent applications owned by or licensed to the Company or under which the Company has rights have, to the knowledge of the Company, been duly and properly filed and maintained; to the knowledge of the Company, the parties prosecuting such applications have complied with their duty of candor and disclosure to the U.S. Patent and Trademark Office (the "USPTO") in connection with such applications; ; and the Company is not aware of any facts required to be disclosed to the USPTO that were not disclosed to the USPTO and which would preclude the grant of a patent in connection with any such application or would reasonably be expected to form the basis of a finding of invalidity with respect to any patents that have been issued with respect to such applications;

(cc) Except as described in the Registration Statement and the Prospectus, the Company: (i) has operated and currently operates its business in compliance in all material respects with applicable provisions of the Health Care Laws (as defined below) of the Food

and Drug Administration ("FDA"), the Department of Health and Human Services ("HHS") and any comparable foreign or other regulatory authority to which they are subject (collectively, the "Applicable Regulatory Authorities") applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates or any product manufactured or distributed by the Company; (ii) has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or the Applicable Regulatory Authorities alleging or asserting non-compliance with any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Health Care Laws ("Regulatory Authorizations"); (iii) possesses all Regulatory Authorizations required to conduct its business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and the Company is not in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or the Applicable Regulatory Authorities or any other third party alleging that any product operation or activity is in material violation of any Health Care Laws and has no knowledge that the Applicable Regulatory Authorities or any other third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) has not received notice that any of the Applicable Regulatory Authorities has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Regulatory Authorizations and has no knowledge that any of the Applicable Regulatory Authorities is considering such action; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were materially corrected or supplemented by a subsequent submission); (vii) is not a party to or have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Applicable Regulatory Authority; and (viii) along with its employees, officers and directors, has not been excluded, suspended or debarred from participation in any government health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

The term "Health Care Laws" means Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395hhh (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., ("HIPAA"); the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a and 1320a-7b; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the Exclusion Laws, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for

Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq.; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations;

(dd) To the Company's knowledge, the manufacturing facilities and operations of its suppliers are operated in compliance in all material respects with all applicable statutes, rules, regulations and policies of the Applicable Regulatory Authorities;

(ee) None of the Company's product candidates have received marketing approval from any Applicable Regulatory Authority. All clinical and pre-clinical studies and trials conducted by or on behalf of or sponsored by the Company, or in which the Company has participated, with respect to the Company's product candidates, including any such studies and trials that are described in the Registration Statement and the Prospectus, or the results of which are referred to in the Registration Statement and the Prospectus, as applicable (collectively, "Company Trials"), were, and if still pending are, to the Company's knowledge, being conducted in all material respects in accordance with all applicable Health Care Laws of the Applicable Regulatory Authorities and current Good Clinical Practices and Good Laboratory Practices, standard medical and scientific research procedures and any applicable rules, regulations and policies of the jurisdiction in which such trials and studies are being conducted; the descriptions in the Registration Statement, Disclosure Package and the Prospectus of the results of any Company Trials are accurate and complete descriptions in all material respects and fairly present the data derived therefrom; the Company has no knowledge of any other studies or trials not described in the Registration Statement and the Prospectus, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement and the Prospectus; the Company has not received, nor does the Company have knowledge that any of their respective collaboration partners have received, any written notices, correspondence or other communications from the Applicable Regulatory Authorities or any other governmental entity requiring or threatening the termination, material modification or suspension of Company Trials, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies or trials, and, to the Company's knowledge, there are no reasonable grounds for the same. No investigational new drug application or comparable submission filed by or on behalf of the Company with the FDA has been terminated or suspended by the FDA or any other Applicable Regulatory Authority. The Company has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in a Company Trial. In using or disclosing patient information received by the Company in connection with a Company Trial, the Company has complied in all material respects with all applicable laws and regulatory rules or requirements, including, without limitation, HIPAA and the rules and regulations thereunder. To the Company's knowledge, none of the Company Trials involved any investigator who has been disqualified as a clinical investigator or has been found by the FDA to have engaged in scientific misconduct;

(ff) The Company is, and at all prior times was, in material compliance with all applicable data privacy and security laws and regulations, including without limitation, as applicable, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (the "HITECH Act") (42 U.S.C. Section 17921 et seq.) and the Company

has taken any required and necessary actions to comply in all material respects with the European Union General Data Protection Regulation ("GDPR") (EU 2016/679) (and all other applicable laws and regulations with respect to Personal Data that have been announced as of the date hereof as becoming effective within 12 months after the date hereof, and for which any non-compliance with same would be reasonably likely to create a material liability) as soon they take effect (collectively, the "Privacy Laws"). To ensure material compliance with the Privacy Laws, the Company has in place and is in material compliance with commercially reasonable policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the "Policies") as applicable. "Personal Data" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; (iv) "personal data" as defined by GDPR; and (v) any other piece of information that allows the identification of such natural person or permits the collection or analysis of any data related to an identified person's health or sexual orientation. The Company has since inception made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and has provided accurate notice of its Policies then in effect to its customers, employees, third party vendors and representatives as required by applicable laws and regulatory rules or requirements, except where the failure to do so would not, individually or in the aggregate, have a Material Adverse Effect. None of such disclosures made or contained in any of the Policies have been inaccurate, misleading, deceptive or in violation of any Privacy Laws or Policies in any material respect. The execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach of violation of any Privacy Laws or Policies. The Company further certifies that it: (i) has not received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is not currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law; and

(gg) Except as would not reasonably be expected to have a Material Adverse Effect, the Company's information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company as currently conducted, and to the Company's knowledge, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company has implemented and maintained commercially reasonable controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personal, personally identifiable, sensitive, confidential or regulated data ("Personal Data")) used in connection with their businesses, and there have been no breaches, violations, outages or known unauthorized uses of or known accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any

incidents under internal review or investigations relating to the same and except as would not reasonably be expected to have a Material Adverse Effect. The Company is presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect.

(hh) The Company represents and warrants that (i) the Registration Statement, the Pricing Disclosure Package and the Prospectus, any Preliminary Prospectus and any Issuer Free Writing Prospectuses comply in all material respects, and any further amendments or supplements thereto will comply in all material respects, with any applicable laws or regulations of foreign jurisdictions in which the Pricing Disclosure Package, the Prospectus, any Preliminary Prospectus and any Issuer Free Writing Prospectus, as amended or supplemented, if applicable, are distributed in connection with the Directed Share Program, and that (ii) no authorization, approval, consent, license, order, registration or qualification of or with any government, governmental instrumentality or court, other than such as have been obtained, is necessary under the securities laws and regulations of foreign jurisdictions in which the Directed Shares are offered outside the United States. The Company has not offered, or caused the underwriters to offer, Shares to any person pursuant to the Directed Share Program with the specific intent to unlawfully influence (i) a customer or supplier of the Company to alter the customer or supplier's level or type of business with the Company, or (ii) a trade journalist or publication to write or publish favorable information about the Company or its products

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per share of $[•], the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per share set forth in clause (a) of this Section 2 (provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares), that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by you so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to [•] Optional Shares, at the purchase price per share set forth in the paragraph above, for the sole purpose of covering sales of shares in excess of the number of Firm

Shares, provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from the Representatives to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by the Representatives but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless the Representatives and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Pricing Prospectus and the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in book-entry form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representatives, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representatives at least forty-eight hours in advance. The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York City time, on [•], 2018 or such other time and date as the Representatives and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York time, on the date specified by the Representatives in the written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the "First Time of Delivery", such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein called the "Second Time of Delivery", and each such time and date for delivery is herein called a "Time of Delivery".

The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(m) hereof, will be delivered at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, CA 94025 (the "Closing Location"), and the Shares will be delivered at the Designated Office, all at such Time of Delivery. A meeting will be held at the Closing Location at [•] p.m., New York City time, on the New York Business Day next preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Act; to make no further amendment or any supplement to the Registration Statement or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order;

(b) Promptly from time to time to take such action as you may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares, provided that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction;

(c) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by the Representatives and the Company) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus in order to comply with the Act, to notify you and upon your request to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in

Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(d) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering, Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(i) During the period beginning from the date hereof and continuing to, and including, the 180th day after the date of the Prospectus (the "Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Stock or any such substantially similar securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities (whether any such transaction described in clauses (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise), or (iii) publicly disclose the intention to do any of the foregoing, in each case, without the prior written consent of the Representatives; provided, however, that the foregoing restrictions shall not apply to (1) the Shares to be sold hereunder, (2) any shares of Stock issued upon the conversion of convertible preferred stock outstanding on the date of this Agreement in connection with the offering contemplated by this Agreement, (3) any shares of Stock or any securities or other awards (including without limitation options, restricted stock or restricted stock units) convertible into, exercisable for, or that represent the right to receive, shares of Stock pursuant to any stock option plan, incentive plan or stock purchase plan of the Company (collectively, "Company Stock Plans") or otherwise in equity compensation arrangements described in the Registration Statement and the Prospectus, provided that any directors or officers who are the recipients thereof have provided to the Representatives a signed lock-up letter substantially in the form of Annex I hereto, (4) any shares of Stock issued upon the conversion, exercise or exchange of convertible, exercisable or exchangeable securities, including convertible notes, outstanding on the date of this Agreement, in each case if such convertible, exercisable or exchangeable securities is described in the Registration Statement and the holders of such convertible, exercisable or exchangeable securities have provided to the Representatives a signed lockup-letter substantially in the form of Annex I hereto, (5) the filing by the Company of any registration statement on Form S-8 or a successor form thereto relating to any Company Stock Plan described in the Registration Statement and the Prospectus, and (6) any shares of Stock or any securities convertible into or exchangeable for, or that represent the right to receive, shares of Stock

issued in connection with any joint venture, commercial or collaborative relationship or the acquisition or license by the Company of the securities, businesses, property or other assets of another person or entity or pursuant to any employee benefit plan assumed by the Company in connection with any such acquisition, provided that in the case of clause (6), the aggregate number of shares that the Company may sell or issue or agree to sell or issue pursuant to clause (6), (x) shall not exceed 10.0% of the total number of shares of Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement) and (y) the recipients thereof provide to the Representatives a signed lock-up letter substantially in the form of Annex I hereto;

(ii) If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter in the form attached as Annex I for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Annex II hereto through a major news service at least two business days before the effective date of the release or waiver.

(e) During a period of three years from the effective date of the Registration Statement, for so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company for such quarter in reasonable detail, provided, that no reports, documents or other information needs to be furnished pursuant to this Section 5(e) to the extent they are available on EDGAR;

(f) During a period of three years from the effective date of the Registration Statement, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as you may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company are consolidated in reports furnished to its stockholders generally or to the Commission), provided, that no reports, documents or other information needs to be furnished pursuant to this Section 5(f) to the extent they are available on EDGAR;

(g) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds";

(h) To use its best efforts to list, subject to notice of issuance, the Shares on the Nasdaq Stock Exchange (the "Exchange");

(i) If the Company elects to rely upon Rule 462(b), the Company shall file a Rule 462(b) Registration Statement with the Commission in compliance with Rule 462(b) by 10:00 P.M., Washington, D.C. time, on the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Act;

(j) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company's trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Shares (the "License"); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred;

(k) To promptly notify you if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Shares within the meaning of the Act and (ii) the last Time of Delivery; and

(l) To comply with all applicable securities and other laws, rules and regulations in each jurisdiction in which the Directed Shares are offered in connection with the Directed Share Program.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a "free writing prospectus" as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule II(a) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or any Section 5(d) Writing prepared or authorized by it any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Section 5(d) Writing prepared or authorized by it would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Section 5(d) Writing or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty

shall not apply to any statements or omissions in an Issuer Free Writing Prospectus or Section 5(d) Writing prepared or authorized by it made in reliance upon and in conformity with the Underwriter Information;

(d) The Company represents and agrees that (i) it has not engaged in, or authorized any other person to engage in, any Section 5(d) Communications, other than Section 5(d) Communications with the prior consent of the Representatives with entities that are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a) under the Act; and (ii) it has not distributed, or authorized any other person to distribute, any Section 5(d) Writings, other than those distributed with the prior consent of the Representatives that are listed on Schedule III(d) hereto; and the Company reconfirms that the Underwriters have been authorized to act on its behalf in engaging in Section 5(d) Communications; and

(e) Each Underwriter represents and agrees that any Section 5(d) Communications undertaken by it were with entities that are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a) under the Act.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, any Preliminary Prospectus, any Section 5(d) Writing, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(b) hereof, including the fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey (iv) all fees and expenses in connection with listing the Shares on the Exchange; (v) the filing fees incident to, and the fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares; (vi) the cost of preparing stock certificates; (vii) the cost and charges of any transfer agent or registrar; (viii) all fees and disbursements of counsel incurred by the Underwriters in connection with the Directed Share Program and stamp duties, similar taxes or duties or other taxes, if any, incurred by the Underwriters in connection with the Directed Share Program and (ix) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section; provided, however, that the amounts payable by the Company pursuant to clauses (iii) and (iv) and for fees and disbursements of counsel to the Underwriters described in clauses (iii) and (v) shall not exceed $50,000 in the aggregate. It is understood, however, that, (x) except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may

make and all travel and lodging expenses of the Underwriters and their representatives and counsel; and (y) subject to the Company's and Representatives' prior written approval of each such expense, the Underwriters and the Company shall each pay 50% of the cost of chartering any aircraft to be used by the directors and officers of the Company and the employees of the Representatives in connection with the road show by the Company and the Underwriters.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; if the Company has elected to rely upon Rule 462(b) under the Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 P.M., Washington, D.C. time, on the date of this Agreement; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Latham & Watkins LLP, counsel for the Underwriters, shall have furnished to you such written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representatives, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Cooley LLP, counsel for the Company, shall have furnished to you their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representatives;

(d) On the date of the Prospectus at a time after the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Ernst & Young LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to the Representatives;

(e) (i) The Company shall not have sustained since the date of the latest audited financial statements included in the Pricing Prospectus any loss or interference with its

business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock (other than as a result of the exercise of stock options or the award of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus) or long-term debt of the Company or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company, taken as a whole, except as set forth or contemplated in the Pricing Prospectus and the Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(f) There are (and prior to the Time of Delivery, will be) no debt securities or preferred stock issued or guaranteed by the Company that are rated by a "nationally recognized statistical rating organization", as such term is defined under Section 3(a)(62) under the Exchange Act;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange or on the Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(h) The Shares to be sold at such Time of Delivery shall have been duly listed on the Exchange;

(i) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from substantially all officers, directors and stockholders of the Company, substantially to the effect set forth in Annex I hereof in form and substance satisfactory to you;

(j) The Company shall have complied with the provisions of Section 5(c) hereof with respect to the furnishing of prospectuses on the New York Business Day next

succeeding the date of this Agreement (or such other time as may be agreed to by the Representatives and the Company);

(k) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (e) of this Section and as to such other matters as you may reasonably request;

(l) At each Time of Delivery, the Representatives shall have received a certificate of the Secretary of the Company, as to such matters as the Representatives may reasonably request; and

(m) At each Time of Delivery, the Company shall have furnished to the Representatives such additional information, certificates, opinions or documents as the Representatives may reasonably request.

9. (a) The Company will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any "roadshow" as defined in Rule 433(h) under the Act (a "roadshow"), any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act, or any Section 5(d) Writing prepared or authorized by the Company, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; *provided*, *however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any Section 5(d) Writing, in reliance upon and in conformity with the Underwriter Information.

(b) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Section 5(d) Writing, or arise out of or are based upon the omission or alleged omission to state

therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Section 5(d) Writing, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, "Underwriter Information" shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the [fifth] paragraph under the caption "Underwriting", and the information contained in the [ninth, tenth and eleventh] paragraph under the caption "Underwriting".

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer or other affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may

otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) The Company agrees to indemnify and hold harmless the Directed Share Underwriter, its affiliates, directors and officers and each person, if any, who controls the Directed Share Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act (each a "Directed Share Underwriter Entity") from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal fees and other expenses incurred in connection with defending or investigating any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred) (i) caused by any untrue statement or alleged untrue statement of a material fact contained in any material prepared by or with the consent of the Company for distribution to Participants in connection with the Directed Share Program or caused by any omission or alleged omission to state therein a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; (ii) caused by the failure of any Participant to pay for and accept delivery of Directed Shares that the Participant agreed to purchase; or (iii) related to, arising out of, or in connection with the Directed Share Program, other than losses, claims, damages or liabilities (or expenses relating thereto) that are finally judicially determined to have resulted from the bad faith or gross negligence of the Directed Share Underwriter Entities.

(b) In case any proceeding (including any governmental investigation) shall be instituted involving any Directed Share Underwriter Entity in respect of which indemnity may be sought pursuant to Section 10(a), the Directed Share Underwriter Entity seeking indemnity shall promptly notify the Company in writing and the Company, upon request of the Directed Share Underwriter Entity, shall retain counsel reasonably satisfactory to the Directed Share Underwriter Entity to represent the Directed Share Underwriter Entity and any others the Company may designate in such proceeding and shall pay the reasonable fees and disbursements of such counsel related to such proceeding. In any such proceeding, any Directed Share Underwriter Entity shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Directed Share Underwriter Entity unless (i) the Company and such Directed Share Underwriter Entity shall have mutually agreed to the retention of such counsel, (ii) the Company has failed within a reasonable time to retain counsel reasonably satisfactory to such Directed Share Underwriter Entity, (iii) the Directed Share Underwriter Entity shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Company or (iv) the named parties to any such proceeding (including any impleaded parties) include both the Company and the Directed Share Underwriter Entity and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. The Company shall not, in respect of the legal expenses of the Directed Share Underwriter Entities in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Directed Share Underwriter Entities. The Company shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent, the Company agrees to indemnify the Directed Share Underwriter Entities from

and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time any Directed Share Underwriter Entity shall have requested the Company to reimburse such Directed Share Underwriter Entity for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the Company agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Company of the aforesaid request and (ii) the Company shall not have reimbursed such Directed Share Underwriter Entity in accordance with such request prior to the date of such settlement. The Company shall not, without the prior written consent of the Directed Share Underwriter, effect any settlement of any pending or threatened proceeding in respect of which any Directed Share Underwriter Entity is or could have been a party and indemnity could have been sought hereunder by such Directed Share Underwriter Entity, unless (x) such settlement includes an unconditional release of the Directed Share Underwriter Entities from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of the Directed Share Underwriter Entity.

(c) To the extent the indemnification provided for in Section 10(b) is unavailable to a Directed Share Underwriter Entity or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then the Company in lieu of indemnifying the Directed Share Underwriter Entity thereunder, shall contribute to the amount paid or payable by the Directed Share Underwriter Entity as a result of such losses, claims, damages or liabilities (1) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Directed Share Underwriter Entities on the other hand from the offering of the Directed Shares or (2) if the allocation provided by Section 10(c)(1) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in Section 10(c)(1) above but also the relative fault of the Company on the one hand and of the Directed Share Underwriter Entities on the other hand in connection with any statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Directed Share Underwriter Entities on the other hand in connection with the offering of the Directed Shares shall be deemed to be in the same respective proportions as the net proceeds from the offering of the Directed Shares (before deducting expenses) and the total underwriting discounts and commissions received by the Directed Share Underwriter Entities for the Directed Shares, bear to the aggregate public offering price of the Directed Shares. If the loss, claim, damage or liability is caused by an untrue or alleged untrue statement of material fact or the omission or alleged omission to state a material fact, the relative fault of the Company on the one hand and the Directed Share Underwriter Entities on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement or the omission or alleged omission relates to information supplied by the Company or by the Directed Share Underwriter Entities and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(d) The Company and the Directed Share Underwriter Entities agree that it would be not just or equitable if contribution pursuant to Section 10(c) were determined by pro rata allocation (even if the Directed Share Underwriter Entities were treated as one

entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in Section 10(c). The amount paid or payable by the Directed Share Underwriter Entities as a result of the losses, claims, damages and liabilities referred to in the immediately preceding paragraph shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by the Directed Share Underwriter Entities in connection with investigating or defending such any action or claim. Notwithstanding the provisions of Section 10(b), no Directed Share Underwriter Entity shall be required to contribute any amount in excess of the amount by which the total price at which the Directed Shares distributed to the public were offered to the public exceeds the amount of any damages that such Directed Share Underwriter Entity has otherwise been required to pay. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in Sections 10(a) through 10(d) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(e) The indemnity and contribution provisions contained in Sections 10(a) through 10(d) shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Directed Share Underwriter Entity or the Company, its officers or directors or any person controlling the Company and (iii) acceptance of and payment for any of the Directed Shares.

11. (a) If any Underwriter shall default in its obligation to purchase the Shares which it has agreed to purchase hereunder at a Time of Delivery, the Representatives may in the Representatives' discretion arrange for the Representatives or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter the Representatives do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to the Representatives to purchase such Shares on such terms. In the event that, within the respective prescribed periods, the Representatives notify the Company that the Representatives have so arranged for the purchase of such Shares, or the Company notifies the Representatives that it has so arranged for the purchase of such Shares, the Representatives or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by the Representatives and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company shall have the right to require

each non-defaulting Underwriter to purchase the number of shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Sections 9 and 10 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

12. The respective indemnities, rights of contribution, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

13. If this Agreement shall be terminated pursuant to Section 11 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason any Shares are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

14. In all dealings hereunder, you shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by you jointly or by the Representatives on behalf of the Underwriters.

All statements, requests, notices and agreements hereunder shall be in writing, and (A) if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representatives in care of Goldman Sachs & Co. LLC, 200 West Street,

New York, New York 10282-2198, Attention: Registration Department; in care of J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179, Attention: Equity Syndicate Desk; in care of Cowen and Company, LLC, 599 Lexington Avenue, New York, New York 10022; and in care of Jefferies LLC, 520 Madison Avenue, New York, NY 10022, Attention: General Counsel; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: General Counsel; provided, however, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request; provided, however, that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representatives at Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Control Room; in care of J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179; in care of Cowen and Company, LLC, 599 Lexington Avenue, New York, New York 10022; and in care of Jefferies LLC, 520 Madison Avenue, New York, NY 10022. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

15. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 12 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

16. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

17. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Underwriters, or

any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

18. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

19. This Agreement and any transaction contemplated by this Agreement shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would results in the application of any other law than the laws of the State of New York. The Company agrees that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.

20. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

21. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument.

22. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, “tax structure” is limited to any facts that may be relevant to that treatment.

[Signature Page Follows]

If the foregoing is in accordance with your understanding, please sign and return to us an executed facsimile or executed scanned copy of this Agreement and such delivery hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

Allogene Therapeutics, Inc.

By: _____
Name:
Title:

Accepted as of the date hereof:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

J.P. Morgan Securities LLC

By: _____
Name:
Title:

Cowen and Company, LLC

By: _____
Name:
Title:

Jefferies LLC

By: _____
Name:
Title:

On behalf of each of the Underwriters

SCHEDULE I

Underwriter	Total Number of Firm Shares to be Purchased	Number of Optional Shares to be Purchased if Maximum Option Exercised
Goldman Sachs & Co. LLC		
J.P. Morgan Securities LLC		
Cowen and Company, LLC		
Jefferies LLC		
Total		

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

[•]

(b) Additional Documents Incorporated by Reference:

[•]

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

The initial public offering price per share for the Shares is $[•].

The number of Shares purchased by the Underwriters is [•].

[Add any other pricing disclosure.]

(d) Section 5(d) Writings:

[•]

Execution Version

ANNEX I

Form of Lock-Up Agreement

Allogene Therapeutics, Inc.

Lock-Up Agreement

____, 2018

Goldman Sachs & Co. LLC
J.P. Morgan Securities LLC
Cowen and Company, LLC
Jefferies LLC

As representative of the several Underwriters
named in Schedule I of the
Underwriting Agreement

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

c/o Jefferies LLC
520 Madison Avenue
New York, NY 10022

Re: Allogene Therapeutics, Inc. - Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that you, as representatives (the "Representatives"), propose to enter into an Underwriting Agreement on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the "Underwriters"), with Allogene Therapeutics, Inc., a Delaware corporation (the "Company"), providing for a public offering (the "Public Offering") of shares (the "Shares") of Common

Stock of the Company (the ”Common Stock”) pursuant to a Registration Statement on Form S-1 to be filed with the Securities and Exchange Commission (the “SEC”).

In consideration of the agreement by the Underwriters to offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, during the period beginning from the date of this Lock-Up Agreement and continuing to and including the date 180 days after the date set forth on the final prospectus used to sell the Shares (the “Lock-Up Period”), the undersigned will not offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any shares of Common Stock, or any options or warrants to purchase any shares of Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, whether now owned or hereinafter acquired, owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the SEC (collectively the “Undersigned’s Shares”). The foregoing restriction is expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned’s Shares even if such Shares would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put or call option) with respect to any of the Undersigned’s Shares or with respect to any security that includes, relates to, or derives any significant part of its value from such Shares. If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed Shares the undersigned may purchase in the Public Offering.

If the undersigned is an officer or director of the Company, (i) the Representatives agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Common Stock, the Representatives will notify the Company of the impending release or waiver, and (ii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

Notwithstanding the foregoing, the undersigned may transfer or otherwise dispose of the Undersigned’s Shares:

i. as a *bona fide* gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions on transfer set forth herein;

ii. to any trust for the direct or indirect benefit of the undersigned or the immediate family (as defined below) of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions on transfer set forth herein; provided that any filing under Section 16 of the Securities Exchange Act of 1934 (the "Exchange Act") reporting a reduction in beneficial ownership shall indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

iii. in connection with the sale of the Undersigned's Shares acquired in the Public Offering if the undersigned is not an officer or director of the Company or in open market transactions after the Public Offering;

iv. if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933) of the undersigned or the immediate family of the undersigned, or to any investment fund or other entity controlled or managed by the undersigned or affiliates or immediate family of the undersigned, or (B) as part of a distribution, transfer or disposition without consideration by the undersigned to its stockholders, partners, members, beneficiaries or other equity holders; provided, however, that in the case of any transfer or disposition contemplated by clauses (A) or (B) above, it shall be a condition to the transfer or disposition that the transferee execute an agreement stating that the transferee is receiving and holding such securities subject to the restrictions on transfer set forth herein and there shall be no further transfer of such securities except in accordance with this Lock-Up Agreement

v. to the Company in connection with the exercise or settlement of options, warrants or other rights to acquire shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in accordance with their terms (including the vesting or settlement of restricted stock units and including, in each case, by way of net exercise and/or to cover withholding tax obligations in connection with such exercise, vesting or settlement) pursuant to an employee benefit plan, option, warrant or other right disclosed in the final prospectus for the Public Offering, provided that any such shares issued upon exercise of such option, warrant, restricted stock unit or other right shall be subject to the restrictions on transfer set forth herein; provided that any filing under Section 16 of the Exchange Act reporting a reduction in beneficial ownership shall indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

vi. by will or intestacy, provided that the legatee, heir or other transferee, as the case may be, agrees to be bound in writing by the restrictions on transfer set forth herein;

vii. to any immediate family member, provided that such family member agrees to be bound by the restrictions on transfer set forth herein;

viii. pursuant to a court order or a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union, provided that such transferee agrees to be bound by the restrictions on transfer set forth herein and provided further that any required filing under Section 16 of the Exchange Act shall indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and no other public announcement shall be required or shall be made voluntarily in connection with such transfer or disposition;

ix. to the Company pursuant to agreements under which the Company has (A) the option to repurchase such shares or (B) a right of first refusal with respect to transfers of such shares upon termination of service of the undersigned;

x. establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of the Undersigned's Shares, provided that such plan does not provide for any transfers of Common Stock during the Lock-Up Period and no filing under the Exchange Act nor any other public filing or disclosure of such trading plan shall be made during the Lock-Up Period; and

xi. with the prior written consent of the Representatives on behalf of the Underwriters.

Notwithstanding anything to the contrary, in the case of clauses (i), (iii), (iv) and (ix)(B) above, no filing under the Exchange Act or any other public filing or disclosure of such transfer by or on behalf of the undersigned reporting a reduction in beneficial ownership shall be required or voluntarily made during the Lock-up Period (other than a filing under Section 13 of the Exchange Act that is required to be filed during the Lock-Up Period), and in the case of clauses (ii), (vi) and (vii), any such transfer shall not involve a disposition for value.

Further, this Lock-Up Agreement shall not restrict any sale, disposal or transfer of the Undersigned's Shares to a *bona fide* third party pursuant to a tender offer for securities of the Company or any merger, consolidation or other business combination involving a Change of Control (as defined below) of the Company occurring after the settlement of the Public Offering, that, in each case, has been approved by the board of directors of the Company; provided that all of the Undersigned's Shares subject to this Lock-Up Agreement that are not so transferred, sold, tendered or otherwise disposed of remain subject to this Lock-Up Agreement; and provided, further, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the Undersigned's Shares subject to this Lock-Up Agreement shall remain subject to the restrictions on transfer set forth herein. For the purposes of this paragraph, "Change of Control" means the consummation of any *bona fide* third party tender offer, merger, consolidation or other similar transaction, the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the

Exchange Act) of at least 50% of the total voting power of the voting share capital of the Company.

For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

In the event that (i) the Representatives release, in full or in part, any officer, director or other stockholder of the Company who beneficially owns (as such term is defined in Rule 13d-3 under the Exchange Act) at least one percent (1%) of the outstanding shares of Common Stock (a "Triggering Stockholder") from the restrictions of any lock-up agreement similar to this agreement signed by such Triggering Stockholder for the benefit of any Underwriter in connection with the Public Offering and (ii) such release or series of releases cumulatively relates to more than 100,000 shares of Common Stock (as adjusted for any stock dividend, stock split, combination of shares, reclassification, recapitalization or other similar event) held by the Triggering Stockholder ((i) and (ii) together, a "Triggering Release"), then the undersigned shall be automatically released from this agreement to the same extent, with respect to the same percentage of Company securities of the undersigned as the percentage of Company securities being released in the Triggering Release represent with respect to the Company securities held by the Triggering Stockholder (calculated as a percentage of the total outstanding shares of Common Stock held by the Triggering Stockholder) at the time of the request of the Triggering Release. In the event of a Triggering Release, the Company shall use its reasonable best efforts to notify the undersigned within two (2) business days of the occurrence of such Triggering Release. Notwithstanding the foregoing, the provisions of this paragraph will not apply (i) if the release or waiver is effected solely to permit a transfer not involving a disposition for value and if the transferee agrees in writing to be bound by the same terms described in this Lock-Up Agreement to the extent and for the duration that such terms remain in effect at the time of transfer, or (iii) if the release or waiver is in connection with any primary and/or secondary underwritten public offering of Shares (an "Underwritten Sale"), provided that such waiver or release shall only apply with respect to the undersigned's participation in such Underwritten Sale.

The undersigned now has, and, except as contemplated above, for the duration of this Lock-Up Agreement will have, good and marketable title to the Undersigned's Shares, free and clear of all liens, encumbrances, and claims whatsoever. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions. The undersigned hereby waives any and all notice requirements and rights with respect to the registration of securities pursuant to any agreement, understanding or anything otherwise setting forth the terms of any security of the Company held by the undersigned, including any registration rights agreement or investors' rights agreement to which the undersigned and the Company may be party; provided, however, that such waiver shall apply only to the proposed Public Offering, and any other action taken by the Company in connection with the proposed Public Offering.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns. This Lock-Up Agreement may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com or www.echosign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

This Lock-Up Agreement (and for the avoidance of doubt, the Lock-Up Period described herein) and related restrictions shall automatically terminate upon the earliest to occur, if any, of (i) the Company advising the Representative in writing prior to the execution of the Underwriting Agreement that it has determined not to proceed with the Public Offering, (ii) the termination of the Underwriting Agreement before the sale of any Shares to the Underwriters, (iii) the registration statement filed with the SEC with respect to the Public Offering contemplated by the Underwriting Agreement is withdrawn or (iv) January 31, 2019, in the event the closing of the Public Offering shall not have occurred on or before such date.

[*Signature Page Follows*]

Very truly yours,

IF AN INDIVIDUAL:

By: _____
(duly authorized signature)

Name: _____
(please print full name)

IF AN ENTITY:

_____
(please print complete name of entity)

By: _____
(duly authorized signature)

Name: _____
(please print full name)

Title: _____
(please print full title)

ANNEX II

Form of Press Release

Allogene Therapeutics, Inc.
[Date]

Allogene Therapeutics, Inc. (the "Company") announced today that Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, Cowen and Company LLC and Jefferies LLC, the lead book-running managers in the Company's recent public sale of shares of common stock, is [waiving] [releasing] a lock-up restriction with respect to shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION OF
ALLOGENE THERAPEUTICS, INC.

ALLOGENE THERAPEUTICS, INC. (the "***Corporation***"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***DGCL***"), does hereby certify that:

ONE: The name of the Corporation is Allogene Therapeutics, Inc.

TWO: The date of filing the original Certificate of Incorporation of this corporation with the Secretary of State of the State of Delaware was November 30, 2017.

THREE: The Amended and Restated Certificate of Incorporation of the Corporation is hereby amended as follows:

The first paragraph of Article FOURTH of the Corporation's Amended and Restated Certificate of Incorporation is hereby amended and restated as follows:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 101,000,000 shares of Common Stock, $0.001 par value per share ("**Common Stock**") and (ii) 11,743,987 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**"). Effective at the time of filing of this Certificate of Amendment to Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware, every one share of Common Stock issued and outstanding shall, automatically and without any action on the part of the respective holders thereof, be converted into 5.25 shares of Common Stock without increasing or decreasing the par value of each share of Common Stock (the "**Forward Split**"); *provided*, *however*, that the Corporation shall issue no fractional shares of Common Stock as a result of the Forward Split, but shall instead pay to any stockholder who would be entitled to receive a fractional share as a result of the actions set forth herein a sum in cash equal to the fair market value of the shares constituting such fractional share as determined by the Board of Directors of the Corporation. The Forward Split shall occur whether or not the certificates representing such shares of Common Stock are surrendered to the Corporation or its transfer agent. The Forward Split shall be effected on a record holder-by-record holder basis, such that any fractional shares of Common Stock resulting from the Forward Split and held by a single record holder shall be aggregated."

FOUR: This Certificate of Amendment to Amended and Restated Certificate of Incorporation has been duly approved by the Board of Directors of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL.

FIVE: This Certificate of Amendment to Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of the Corporation in

accordance with Section 228 of the DGCL. This Certificate of Amendment to Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 228 and 242 of the DGCL by the stockholders of the Corporation.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, **ALLOGENE THERAPEUTICS, INC.** has caused this Certificate of Amendment to Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer this 1st day of October, 2018.

ALLOGENE THERAPEUTICS, INC.

/s/ David Chang, M.D., Ph.D.
David Chang, M.D., Ph.D.
President and Chief Executive Officer

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ALLOGENE THERAPEUTICS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Allogene Therapeutics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Allogene Therapeutics, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on November 30, 2017 under the name Allogene Therapeutics, Inc. (the "**Corporation**").

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Allogene Therapeutics, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is 251 Little Falls Drive, Wilmington, DE 19808, County of New Castle. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 20,000,000 shares of Common Stock, $0.001 par value per share ("**Common Stock**") and (ii) 11,743,987 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Amended and Restated Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

(i) 7,557,990 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated "**Series A Preferred Stock**" and (ii) 4,185,997 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated "**Series A-1 Preferred Stock**", each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth. The Series A Preferred Stock and Series A-1 Preferred Stock are collectively referred to herein as the "**Class A Preferred Stock**".

1. Dividends.

The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Amended and Restated Certificate of Incorporation) the holders of the Class A Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Class A Preferred Stock in an amount at least equal to: (i) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Class A Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock, and (B) the number of shares of Common Stock issuable upon conversion of a share of Class A Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend; or (ii) in the case of a

dividend on any class or series that is not convertible into Common Stock, at a rate per share of Class A Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Class A Original Issue Price (as defined below); provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Class A Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Class A Preferred Stock dividend. The "**Class A Original Issue Price**" shall mean, with respect to each series within the Class A Preferred Stock, $35.062233 per share, subject in each case to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such series of the Class A Preferred Stock.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Class A Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Class A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, and in the event of a Deemed Liquidation Event (as defined below), the holders of shares of Class A Preferred Stock then outstanding shall be entitled to be paid out of the consideration payable to stockholders in such Deemed Liquidation Event or out of the Available Proceeds (as defined below), as applicable, before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the greater of: (i) one times the applicable Class A Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of such series of Class A Preferred Stock been converted into Common Stock pursuant to Section 4 (including, if applicable, the issuance of the Make-Whole Shares with respect to the Series A-1 Preferred Stock) immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence is hereinafter referred to as the "**Class A Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Class A Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Class A Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of all Class A Liquidation Amounts required to be paid to the holders of shares of Class A Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Class A Preferred Stock pursuant to Section 2.1 or the remaining Available Proceeds, as the case may be, shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless the holders of at least 51% of the outstanding shares of both (i) Series A Preferred Stock and (ii) Series A-1 Preferred Stock (each voting separately, as a separate series and class) elect otherwise by written notice sent to the Corporation at least 20 days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) (1) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the business or assets of the Corporation and its subsidiaries taken as a whole or (2) the sale or disposition (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), the Corporation shall promptly distribute the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation (the "**Board**"))**,** with such distribution to be made in accordance with Subsections 2.1 and 2.2. The Board shall effect a dissolution and liquidation of the Corporation under the General Corporation Law as soon as practicable thereafter (any assets available for distribution to the stockholders of the Corporation, together with the consideration referred to in the immediately preceding sentence, the "**Available Proceeds**"), and distribute any assets available for distribution in accordance with Subsections 2.1 and 2.2 (taking into account any distribution already made pursuant to the immediately preceding sentence). Prior to the full distribution provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event.

2.3.3 Amount Deemed Paid or Distributed. In any Deemed Liquidation Event, if Available Proceeds are in a form of property other than in cash, the value of such distribution shall be deemed to be the fair market value of such property. The determination of fair market value of such property shall be made in good faith by the Board, provided that to the extent such property consists of securities, the fair market value of such securities shall be determined as follows:

(a) For securities not subject to investment letters or other similar restrictions on free marketability covered by Subsection 2.3.3(b) below,

(i) if traded on a national securities exchange or the Nasdaq Stock Market (or a similar national quotation system), the value shall be deemed to be the average of the closing prices of the securities on such exchange or system over the 30 trading day period ending three days prior to the closing of the Deemed Liquidation Event;

(ii) if actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the 30 trading day period ending three days prior to the closing of such transaction; or

(iii) if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board.

For the purposes of this Subsection 2.3.3, "**trading day**" shall mean any day which the exchange or system on which the securities to be distributed are traded is open and "**closing prices**" or

"**closing bid or sales prices**" shall be deemed to be: (A) for securities traded primarily on the New York Stock Exchange or Nasdaq Stock Market, the last reported trade price or sale price, as the case may be, at 4:00 p.m., New York time, on that day and (B) for securities listed or traded on other exchanges, markets and systems, the market price as of the end of the regular hours trading period that is generally accepted as such for such exchange, market or system. If, after the date hereof, the benchmark times generally accepted in the securities industry for determining the market price of a stock as of a given trading day shall change from those set forth above, the fair market value shall be determined as of such other generally accepted benchmark times.

(b) The method of valuation of securities subject to investment letters or other similar restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall take into account an appropriate discount (as determined in good faith by the Board from the market value as determined pursuant to Subsections 2.3.3(a)(i), (ii), or (iii) above so as to reflect the approximate fair market value thereof.

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration. The Class A Preferred Stock holders' entitlement to the preferential payment in accordance with Subsection 2.1 shall not be abrogated or diminished in the event part of the consideration is subject to escrow in connection with a Deemed Liquidation Event

3. Voting.

3.1 General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Class A Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis (including, if and when issued, the issuance of the Make-Whole Shares with respect to the Series A-1 Preferred Stock).

3.2 Election of Directors. The holders of record of the shares of Class A Preferred Stock, exclusively and as a separate class, shall be entitled to elect five directors of the Corporation (the "**Class A Directors**"). The holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect two directors of the Corporation (the "**Common Directors**"). Any Class A Director or Common Director may be removed without cause by, and only by, the affirmative vote of the holders of majority of the shares of the class or series of capital stock entitled to elect such director(s), either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Class A Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Class A Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Class A Preferred Stock voting on an as-converted to Common Stock basis (including, if and when issued, the issuance of the Make-Whole Shares with respect to the Series A-1 Preferred Stock)), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series (determined on an as-converted to Common Stock basis (including, if and when issued, the issuance of the Make-Whole Shares with respect to the Series A-1 Preferred Stock)) entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series.

3.3 Class A Preferred Stock Protective Provisions. At any time when shares of Class A Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the prior written consent or affirmative vote of at least 51% of the outstanding shares of Class A Preferred Stock (the "**Requisite Holders**") given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation or the governing documents of any subsidiary of the Corporation;

3.3.3 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Class A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase or decrease the authorized number of shares of any series of Class A Preferred Stock or increase or decrease the authorized number of shares of any additional class or series of capital stock of the Corporation;

3.3.4 (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Class A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Class A Preferred Stock in respect of any such right, preference, or privilege, or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Class A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Class A Preferred Stock in respect of any such right, preference or privilege;

3.3.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation prior to the Class A Preferred Stock other than repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at no greater than the original purchase price;

3.3.6 create, or authorize the creation of, or issue, or authorize the issuance of any debt security or create any lien or security interest (except for purchase money liens or statutory liens of landlords, mechanics, materialmen, workmen, warehousemen and other similar persons arising or incurred in the ordinary course of business) or incur other indebtedness for borrowed money, including but not limited to obligations and contingent obligations under guarantees, or permit any subsidiary to take any such action with respect to any debt security lien, security interest or other indebtedness for borrowed money, if the aggregate indebtedness of the Corporation and its subsidiaries for borrowed money following such action would exceed $1,000,000, other than equipment leases incurred in the ordinary course;

3.3.7 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary;

3.3.8 increase or decrease the authorized number of directors constituting the Board;

3.3.9 enter into or be a party to any related-party transaction with any director, officer, stockholder or employee of the Corporation or any of their respective affiliates, other than Board-approved employment arrangements;

3.3.10 change or alter the principal business of the Corporation, enter any new line of business, or exit any line of business; or

3.3.11 sell, assign, license, transfer, convey, pledge or encumber material technology or intellectual property (including, without limitation, patents, patent applications, trade secrets, know-how and data), other than non-exclusive licenses granted in the ordinary course of business.

3.4 Series A-1 Preferred Stock Protective Provisions. At any time when shares of Series A-1 Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the prior written consent or affirmative vote of at least 51% of the outstanding shares of Series A-1 Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.4.1 amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series A-1 Preferred Stock; provided that such amendment, alteration or repeal does not so affect all of the Class A Preferred Stock in the same manner;

3.4.2 effect any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock or the Series A-1 Preferred Stock that does not so affect all of the Class A Preferred Stock in the same manner;

3.4.3 effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing, prior to the first anniversary of the Original Issue Date for the Series A-1 Preferred Stock;

3.4.4 effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing, after the first anniversary of the Original Issue Date for the Series A-1 Preferred Stock and prior to the second anniversary of the Original Issue Date for the Series A-1 Preferred Stock, unless both (A) the aggregate value of the consideration payable under Subsections 2.1 and 2.2 is either less than $200,000,000 or greater than $1,500,000,000 and (B) such merger or consolidation or other Deemed Liquidation Event does not constitute a transaction between the Corporation (or any subsidiary of the Corporation), on the one hand, and a stockholder of the Corporation or any “associate” (as defined in Rule 12b-2 promulgated

under the Securities Exchange Act of 1934) of the Corporation or any stockholder of the Corporation, on the other hand (in which case, if the conditions reflected in both Clause (A) and Clause (B) above are satisfied, this Subsection 3.4.4 shall not apply);

3.4.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at no greater than the original purchase price;

3.4.6 other than with respect to bona fide joint ventures, create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, except to the Corporation or any other wholly-owned subsidiary of the Corporation; or

3.4.7 increase or decrease the authorized number of shares of Series A-1 Preferred Stock.

3.5 Series A Preferred Stock Protective Provisions. At any time when shares of Series A Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the prior written consent or affirmative vote of at least 51% of the outstanding shares of Series A Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.5.1 amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series A Preferred Stock; provided that such amendment, alteration or repeal does not so affect all of the Class A Preferred Stock;

3.5.2 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at no greater than the original purchase price;

3.5.3 other than with respect to bona fide joint ventures, create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to

create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, except to the Corporation or any other wholly-owned subsidiary of the Corporation; or

3.5.4 increase or decrease the authorized number of shares of Series A Preferred Stock.

4. Optional Conversion.

The holders of the Class A Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert; Conversion Ratio. Each share of Class A Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Class A Original Issue Price by the Class A Conversion Price (as defined below) in effect at the time of conversion. The "**Class A Conversion Price**" means the conversion price (as adjusted) applicable to a particular series of Preferred Stock, which shall be initially equal to the applicable Class A Original Issue Price. Such initial Class A Conversion Price, and the rate at which shares of Class A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Class A Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Class A Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Class A Preferred Stock to voluntarily convert shares of Class A Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Class A Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Class A Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Class A Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such

certificate), at the office of the transfer agent for the Class A Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Class A Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Class A Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Class A Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Class A Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Class A Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Class A Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Class A Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Class A Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the Class A Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Class A Conversion Price.

4.3.3 Effect of Conversion. All shares of Class A Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as

provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Class A Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Class A Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Class A Conversion Price shall be made for any declared but unpaid dividends on the Class A Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Class A Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Class A Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Class A Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean the date on which the first share of the applicable class or series of Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.2 below, deemed to be issued) by the Corporation after the Class A Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issuable upon conversion of any of the shares of Class A Preferred Stock, or as a dividend or distribution on the Class A Preferred Stock,

or in any subsequent closing under the equity commitment letters between the Corporation and certain equityholders dated April 2, 2018 or the date hereof (as applicable).

(ii) shares of Common Stock, Options or Convertible Securities issued upon the conversion of any debenture, Option, or other Convertible Security;

(iii) shares of Common Stock, Options or Convertible Securities issuable upon a stock split, stock dividend, split-up, or any subdivision of shares of Common Stock, or other distribution on shares of Common Stock that is covered by Subsection 4.5, 4.6, 4.7 or 4.8;

(iv) shares of Common Stock or Options issued or issuable to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board, including the affirmative vote or consent of a majority of the Class A Directors;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board, including the affirmative vote or consent of a majority of the Class A Directors; or

(vi) shares of Common Stock, Options or Convertible Securities issued in strategic transactions where the purpose of the issuance is other than to raise capital, including, without limitation, as consideration pursuant to the acquisition of another corporation or other entity by the Corporation by merger, purchase of substantially all of the assets or other reorganization, provided that such issuances

are approved by the Board, including the affirmative vote or consent of a majority of the Class A Directors.

4.4.2 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Class A Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Class A Conversion Price pursuant to the terms of Subsection 4.4.3, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Class A Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Class A Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Class A Conversion Price to an amount which exceeds the lower of (i) the Class A Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Class A Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Class A Conversion Price pursuant to the terms of Subsection 4.4.3 (either because the consideration per share (determined pursuant to Subsection 4.4.4) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Class A Conversion Price then in effect, or because such Option or Convertible

Security was issued before the Class A Original Issue Date), are revised after the Class A Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.2(a) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Class A Conversion Price pursuant to the terms of Subsection 4.4.3, the Class A Conversion Price shall be readjusted to such Class A Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Class A Conversion Price provided for in this Subsection 4.4.2 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.2). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Class A Conversion Price that would result under the terms of this Subsection 4.4.2 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Class A Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.3 Adjustment of Class A Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Class A Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.2), without consideration, or for a consideration per share less than the applicable Class A Conversion Price in effect immediately prior to such issuance or deemed issuance, then the Class A Conversion Price shall be adjusted on a series-by-series basis such that the Class A Conversion Price for a specific series of Class A Preferred Stock shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Class A Conversion Price for a given series of Class A Preferred Stock in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock

(b) "CP_1" shall mean the Class A Conversion Price for a given series of Class A Preferred Stock in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issuance or deemed issuance or upon conversion or exchange of Convertible Securities (including the Class A Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.4 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation

for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.2, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.5 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the applicable Class A Conversion Price pursuant to the terms of Subsections 4.4.3, then, upon the final such issuance, the applicable Class A Conversion Price(s) shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Class A Original Issue Date effect a subdivision of the outstanding Common Stock, the applicable Class A Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Class A Original Issue Date combine the outstanding shares of Common Stock, the applicable Class A Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Class A Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the applicable Class A Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Class A Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Class A Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Class A Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Class A Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Class A Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Class A Original Issue Date shall make or

issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Class A Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Class A Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Class A Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Class A Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Class A Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Class A Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Class A Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Class A Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of any Class A Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Class A Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Class A Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Class A Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the applicable Class A Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Class A Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Class A Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Class A Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Class A Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Class A Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

4.11 Series A-1 Make-Whole Shares. In addition to the shares of Common Stock issuable pursuant to Subsection 4.1, upon any conversion of the Series A-1 Preferred Stock, such holders shall also receive a number of shares of Common Stock (if any) equal to the following (the "**Make-Whole Shares**"):

$$(F - G) \times H$$

Where:

A	=	Aggregate number of shares of Common Stock issued and issuable under then-vested awards granted under the Corporation's equity compensation plans as of the date of conversion (limited to awards representing at the time of grant the right to receive up to a total of 1,860,443 shares of Common Stock in the aggregate (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to Common Stock)).
B	=	Weighted-average exercise price or purchase price (as applicable) for the awards included in variable "A"
C	=	The fair market value of one share of Common Stock as of the applicable conversion date, which value shall be calculated as follows (as applicable): (i) the initial offering price to the public of the Common Stock in the event of a conversion of the Series A-1 Preferred Stock in connection with either a Qualified Initial Public

		Offering or a Non-Qualified Initial Public Offering (an "**IPO**"); (ii) the aggregate consideration payable on a per-share basis for the Common Stock (including shares issuable underlying outstanding equity awards and shares issuable under Subsection 4.11) in a Deemed Liquidation Event in the event of a conversion in connection with a Deemed Liquidation Event, or (iii) in the event of a conversion not in connection with an IPO or a Deemed Liquidation Event, then the fair value of the Common Stock as of the date of conversion, as reasonably determined by the Board of Directors and based on the most recent valuation prepared in accordance with Section 409A of the Internal Revenue Code of 1986, as amended.
D	=	Total shares of Common Stock and Preferred Stock (calculated on an as-converted to Common Stock basis, but without giving effect to this Subsection 4.11) held by the holder of the Series A-1 Preferred Stock that is being converted.
E	=	Total shares of Common Stock and Preferred Stock (calculated on an as-converted to Common Stock basis, but without giving effect to this Subsection 4.11) issued and outstanding as of conversion.
F	=	D ÷ E
G	=	D ÷ (E + Option Shares)
H	=	(E + Option Shares) ÷ (1 – F)
Option Shares =		A – ((A x B) ÷ C); *provided, however,* that in no event shall Option Shares be less than 0

5. Mandatory Conversion.

5.1 Trigger Events. Upon any of the following: (a) the closing of the sale of shares of Common Stock in a firm-commitment underwritten public offering with a pre-money Corporation valuation of at least $600,000,000, made pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "**Securities Act**"), resulting in at least $100,000,000 of gross proceeds to the Corporation, and in connection with such offering the Common Stock is listed for trading on the Nasdaq Stock Market, the New York Stock Exchange or another exchange or marketplace approved by the Board (a "**Qualified Initial Public Offering**"), (b) the initial public offering of the Corporation's securities, other than a Qualified Initial Public Offering, in a firm commitment underwritten offering registered under the Securities Act that is approved by the Requisite Holders (a "**Non-Qualified Initial Public Offering**"), or (c) the date and time, or the occurrence of an event, specified by vote or written consent of a majority of each of: (i) the holders of a majority of Series A Preferred Stock, and (ii) the holders of a majority of the Series A-1 Preferred Stock (each voting separately, as a separate class and series) (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then: (x) all outstanding shares of Class A Preferred Stock shall automatically be converted into shares of

Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1 and with the additional shares (if any) issuable to the Series A-1 Preferred Stock as set forth in Subsection 4.11, and (y) such shares of Preferred Stock may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Class A Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Class A Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Class A Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Class A Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Class A Preferred Stock, the Corporation shall: (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Class A Preferred Stock converted. Such converted Class A Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Class A Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Class A Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Class A Preferred Stock following redemption.

7. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Class A Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not: (i) adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification, or (ii) increase the liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal or modification.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest

that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of: (i) any director of the Corporation who is not also an employee or officer of the Corporation or any of its subsidiaries, or (ii) any partner, member, director, manager, stockholder, employee, affiliate, successor, assign, associated investment fund or agent of TPG Global LLC, Pfizer Inc. or Gilead Sciences, Inc., or any partner, director, manager, stockholder, employee, affiliate, successor, assign, associated investment fund or agent of any of the foregoing, other than someone who is also an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation while such Covered Person is performing services in such capacity. Any repeal or modification of this Article Eleventh will only be prospective and will not affect the rights under this Article Eleventh in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Holders, will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring: (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

THIRTEENTH: For purposes of Section 500 of the California Corporations Code (to the extent applicable), in connection with any repurchase of shares of Common Stock permitted under this Amended and Restated Certificate of Incorporation from employees, officers, directors or consultants of the Corporation in connection with a termination of employment or services pursuant to agreements or arrangements approved by the Board (in addition to any other consent required under this Amended and Restated Certificate of Incorporation), such repurchase may be

made without regard to any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined in Section 500 of the California Corporations Code). Accordingly, for purposes of making any calculation under California Corporations Code Section 500 in connection with such repurchase, the amount of any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined therein) shall be deemed to be zero.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 5th day of April, 2018.

By: /s/ Joshua A. Kazam
Joshua A. Kazam, President

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION OF
ALLOGENE THERAPEUTICS, INC.

David Chang, M.D., Ph.D., hereby certifies that:

ONE: He is the duly elected and acting President and Chief Executive Officer of Allogene Therapeutics, Inc., a Delaware corporation.

TWO: The date of filing of said corporation's original certificate of incorporation with the Delaware Secretary of State was November 30, 2017.

THREE: The Amended and Restated Certificate of Incorporation of the corporation is hereby amended and restated to read in its entirety as follows:

I.

The name of this corporation is Allogene Therapeutics, Inc. (the "***Company***").

II.

The address of the registered office of the Company in the State of Delaware is 251 Little Falls Drive, Wilmington, DE 19808, County of New Castle and the name of its registered agent at such address is Corporation Service Company.

III.

The purpose of the Company is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("***DGCL***").

IV.

A. The Company is authorized to issue two classes of stock to be designated, respectively, "***Common Stock***" and "***Preferred Stock***." The total number of shares which the Company is authorized to issue is 210,000,000 shares. 200,000,000 shares shall be Common Stock, each having a par value of $0.001. 10,000,000 shares shall be Preferred Stock, each having a par value of $0.001.

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the "***Board of Directors***") is hereby expressly authorized to provide for the issue of any or all of the unissued and undesignated shares of the Preferred Stock in one or more series, and to fix the number of shares and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such shares and as may be permitted by the DGCL. The

Board of Directors is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the stock of the Company entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock.

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the Company for their vote; *provided*, *however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (this "***Certificate of Incorporation***") (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series of Preferred Stock are entitled, either separately or together as a class with the holders of one or more other such series of Preferred Stock, to vote thereon by law or pursuant to this Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

V.

For the management of the business and for the conduct of the affairs of the Company, and in further definition, limitation and regulation of the powers of the Company, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. The management of the business and the conduct of the affairs of the Company shall be vested in its Board of Directors. The number of directors that shall constitute the Board of Directors shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board of Directors.

B. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the initial classification of the Board of Directors, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following such initial classification, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following such initial classification, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. Subject to the rights of any series of Preferred Stock that may be designated from time to time to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause. Subject to any limitations imposed by applicable law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least 66 2/3% of the voting power of all then-outstanding shares of capital stock of the Company entitled to vote generally at an election of directors, voting together as a single class.

D. Subject to any limitations imposed by applicable law and subject to the rights of the holders of any series of Preferred Stock that may be designated from time to time, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders and except as otherwise provided by applicable law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified.

E. The Board of Directors is expressly empowered to adopt, amend or repeal the Amended and Restated Bylaws of the Company (the "***Bylaws***"). Any adoption, amendment or repeal of the Bylaws by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws; *provided, however,* that, in addition to any vote of the holders of any class or series of stock of the Company required by law or by this Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class.

F. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

G. No action shall be taken by the stockholders of the Company except at an annual or special meeting of stockholders called in accordance with the Bylaws. No action shall be taken by the stockholders of the Company by written consent or electronic transmission.

H. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Company shall be given in the manner provided in the Bylaws.

VI.

A. The liability of a director of the Company for monetary damages shall be eliminated to the fullest extent under applicable law.

B. To the fullest extent permitted by applicable law, the Company is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Company (and any other persons to which applicable law permits the Company to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise in excess of the indemnification and advancement otherwise permitted by such applicable law. If applicable law is amended after approval by the stockholders of this Article VI to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director to the Company shall be eliminated or limited to the fullest extent permitted by applicable law as so amended.

C. Any repeal or modification of this Article VI shall only be prospective and shall not affect the rights or protections or increase the liability of any director under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

A. Unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company; (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer or other employee of the Company to the Company or the Company's stockholders; (iii) any action or proceeding asserting a claim against the Company or any current or former director or officer or other employee of the Company arising out of or pursuant to any provision of the DGCL, the Company's Certificate of Incorporation or Bylaws (including any right, obligation, or remedy thereunder); (iv) any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (v) any action asserting a claim against the Company or any director or officer or other employee of the Company governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. This Section A of Article VII shall not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934 or any other claim for which the federal courts have exclusive jurisdiction.

B. Unless the Company consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933.

C. Any person or entity holding, owning or otherwise acquiring any interest in any security of the Company shall be deemed to have notice of and consented to the provisions of this Certificate of Incorporation.

VIII.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in Section B of this Article VIII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Company required by law or by this Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock that may be designated from time to time, subject to the rights of the holders of any series of Preferred Stock, the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI, VII or VIII of this Certificate of Incorporation.

* * * *

FOUR: This Certificate of Incorporation has been duly adopted and approved by the Board of Directors and by written consent of the stockholders in accordance with Sections 228, 242 and 245 of the DGCL and written notice of such action has been given as provided in section 228 of the DGCL.

[Signature page follows]

IN WITNESS WHEREOF, Allogene Therapeutics, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer this day of , 2018.

ALLOGENE THERAPEUTICS, INC.

DAVID CHANG, M.D., PH.D.
President and Chief Executive Officer

AMENDED AND RESTATED BYLAWS OF ALLOGENE THERAPEUTICS, INC.

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the corporation's Board of Directors (the "***Board of Directors***"), and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. The corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law (the "***DGCL***").

Section 5. Annual Meetings.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) of these Amended and Restated

Bylaws (the "***Bylaws***"), who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "***1934 Act***")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(i) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) of these Bylaws and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee; (2) the principal occupation or employment of such nominee; (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee; (4) the date or dates on which such shares were acquired and the investment intent of such acquisition; (5) with respect to each nominee for election or re-election to the Board of Directors, include a completed and signed questionnaire, representation and agreement required by Section 5(e) of these Bylaws; and (6) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(iv) of these Bylaws. The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(ii) Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14(a)-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) of these Bylaws, and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in

the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(iv) of these Bylaws.

(iii) To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) of these Bylaws must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's annual meeting; *provided*, *however*, that, subject to the last sentence of this Section 5(b)(iii), in the event that the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(iv) The written notice required by Section 5(b)(i) or 5(b)(ii) of these Bylaws shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "***Proponent***" and collectively, the "***Proponents***"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(i) of these Bylaws) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii) of these Bylaws); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(i) of these Bylaws) or to carry such proposal (with respect to a notice under Section 5(b)(ii) of these Bylaws); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous 12 month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6 of these Bylaws, a "***Derivative Transaction***" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation;

(x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation;

(y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes; or

(z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(i) or (ii) of these Bylaws shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five business days prior to the meeting and, in the event of any adjournment or postponement thereof, five business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) of these Bylaws to the contrary, in the event that the number of directors in an Expiring Class (as defined below) is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least 10 days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(iii) of these Bylaws, a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(i) of these Bylaws, other than the timing requirements in Section 5(b)(iii) of these Bylaws, shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the 10th day following the day on which such public announcement is first made by the corporation. For purposes of this Section 5, an "***Expiring Class***" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) To be eligible to be a nominee for election or re-election as a director of the corporation pursuant to a nomination under clause (iii) of Section 5(a) of these Bylaws, such proposed nominee or a person on such proposed nominee's behalf must deliver (in accordance with the time periods prescribed for delivery of notice under Section 5(b)(iii) or 5(d) of these Bylaws, as applicable) to the Secretary at the principal executive offices of the corporation a written questionnaire with respect to the background and qualification of such proposed nominee and the background of any other person or entity on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary upon written request) and a written representation and agreement (in the form provided by the Secretary upon written request) that such person (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the corporation, will act or vote on any issue or question (a "***Voting Commitment***") that has not been disclosed to the corporation in the questionnaire or (B) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the corporation, with such person's fiduciary duties under applicable law; (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director of the corporation that has not been disclosed therein; and (iii) in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in compliance, if elected as a director of the corporation, and will comply with, all applicable publicly disclosed corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the corporation.

(f) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a) of these Bylaws, or in accordance with clause (iii) of Section 5(a) of these Bylaws. Except as otherwise required by law, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(iv)(D) and 5(b)(iv)(E) of these Bylaws, to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(g) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii) of these Bylaws.

(h) For purposes of Sections 5 and 6 of these Bylaws,

(i) "***public announcement***" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

(ii) "***affiliates***" and "***associates***" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "***1933 Act***").

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(i) of these Bylaws. In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(i) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the 90th day prior to such meeting or the 10th day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c) of these Bylaws. In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references

in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

Section 7. Notice of Meetings. Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If sent via electronic transmission, notice is deemed given as of the sending time recorded at the time of transmission. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the corporation's Amended and Restated Certificate of Incorporation ("***Certificate of Incorporation***"), or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication,

if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 9. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three years from its date of creation unless the proxy provides for a longer period.

Section 11. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one votes, his act binds all; (b) if more than one votes, the act of the majority so voting binds all; or (c) if more than one votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of clause (c) of this Section 11 shall be a majority or even-split in interest.

Section 12. List of Stockholders. The Secretary shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such

information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 13. Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number and Term of Office. The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

Section 16. Powers. The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

Section 17. Classes of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the initial classification of the Board of Directors, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following such initial classification, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following such initial classification, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Section 17, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 18. Vacancies. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided*, *however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, it shall be deemed effective at the time of delivery to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen

shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his successor shall have been duly elected and qualified.

Section 20. Removal.

(a) Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least 66 2/3% of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the Chief Executive Officer or a majority of the authorized number of directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least 24 hours before the date and time of the meeting. If notice is sent by U.S. mail, it shall be sent by first class mail, charges prepaid, at least three days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall

be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 45 of these Bylaws for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however,* at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the

power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 26. Duties of Chairman of the Board of Directors. The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

Section 27. Lead Independent Director. The Chairman of the Board of Directors, or if the Chairman is not an independent director, one of the independent directors, may be designated by the Board of Directors as lead independent director ("***Lead Independent Director***") to serve until replaced by the Board of Directors. The Lead Independent Director will: with the Chairman of the Board of Directors, establish the agenda for regular Board meetings and serve as chairman of Board of Directors meetings in the absence of the Chairman of the Board of Directors; establish the agenda for meetings of the independent directors; coordinate with the committee chairs regarding meeting agendas and informational requirements; preside over meetings of the independent directors; preside over any portions of meetings of the Board of Directors at which the evaluation or compensation of the Chief Executive Officer is presented or discussed; preside over any portions of meetings of the Board of Directors at which the performance of the Board of Directors is presented or discussed; and perform such other duties as may be established or delegated by the Chairman of the Board of Directors.

Section 28. Organization. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Lead Independent Director, or if the Lead Independent Director is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary or other officer or director directed to do so by the Chairman, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 29. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

Section 30. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors or the Lead Independent Director has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the Chief Executive Officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors, the Lead Independent Director, or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the Chief Executive Officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties

commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

Section 31. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 32. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 33. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the

Chief Executive Officer or by other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 34. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 35. Voting of Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 36. Form and Execution of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock of the corporation, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors, the Chief Executive Officer, or the President or any Vice President and by the Chief Financial Officer, Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before

such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 37. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 38. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

Section 39. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than 60 nor less than 10 days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however,* that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record

date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 40. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 41. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 36 of these Bylaws), may be signed by the Chairman of the Board of Directors, the Chief Executive Officer, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided, however,* that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 42. Declaration of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 43. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 44. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 45. Indemnification of Directors, Officers, Employees and Other Agents.

(a) Directors and Officers. The corporation shall indemnify its directors and officers to the extent not prohibited by the DGCL or any other applicable law; *provided, however,* that the corporation may modify the extent of such indemnification by individual contracts with its directors and officers; and, *provided, further,* that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) Employees and Other Agents. The corporation shall have power to indemnify its employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person (except for officers) or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or officer, of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered

by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking (hereinafter an "***undertaking***"), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a "***final adjudication***") that such indemnitee is not entitled to be indemnified for such expenses under this Section 45 or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section 45, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and officers under this Section 45 shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or officer. Any right to indemnification or advances granted by this Section 45 to a director or officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within 90 days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because the director or officer has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of

proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Section 45 or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director or officer, or, if applicable, employee or other agent, and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Section 45.

(h) Amendments. Any repeal or modification of this Section 45 shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and officer to the full extent not prohibited by any applicable portion of this Section 45 that shall not have been invalidated, or by any other applicable law. If this Section 45 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and officer to the full extent under any other applicable law.

(j) Certain Definitions. For the purposes of this Bylaw, the following definitions shall apply:

(i) The term "***proceeding***" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(ii) The term "***expenses***" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(iii) The term the "***corporation***" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Section 45 with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(iv) References to a "***director***," "***officer***," "***employee***," or "***agent***" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(v) References to "***other enterprises***" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "***serving at the request of the corporation***" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "***not opposed to the best interests of the corporation***" as referred to in this Section 45.

ARTICLE XII

NOTICES

Section 46. Notices.

(a) Notice to Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 of these Bylaws. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice to Person With Whom Communication is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under the DGCL, any notice given under the provisions of the DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within 60 days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 47. Amendments. Subject to the limitations set forth in Section 45(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; *provided, however,* that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS OR EMPLOYEES

Section 48. Loans to Officers or Employees. Except as otherwise prohibited by applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

ARTICLE XV

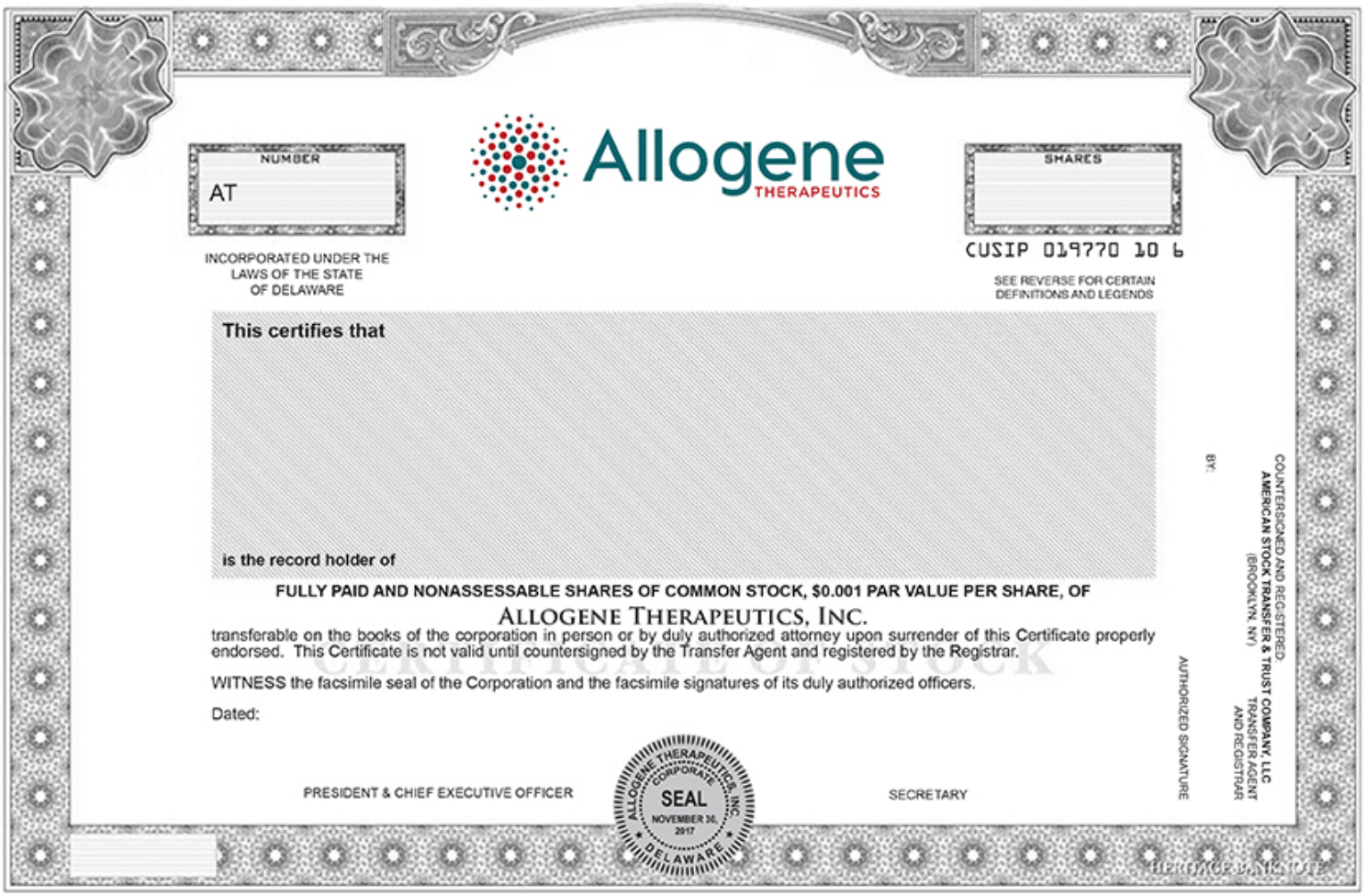
MISCELLANEOUS

Section 49. Forum.

(a) Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the corporation; (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer or other employee of the corporation to the corporation or the corporation's stockholders; (iii) any action or proceeding asserting a claim against the corporation or any current or former director or officer or other employee of the corporation arising out of or pursuant to any provision of the DGCL, the Certificate of Incorporation or the Bylaws (including any right, obligation, or remedy thereunder); and (iv) any action asserting a claim against the corporation or any director or officer or other employee of the corporation governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. The provisions set forth in this Section 49 shall not apply to actions or proceedings brought to enforce a duty or liability created by the 1934 Act or any other claim for which the federal courts have exclusive jurisdiction.

(b) Unless the corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the 1933 Act.

(c) Any person or entity holding, owning or otherwise acquiring any interest in any security of the corporation shall be deemed to have notice of and consented to the provisions of these Bylaws.



NUMBER

AT

Allogene THERAPEUTICS

SHARES

CUSIP 019770 10 6

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

SEE REVERSE FOR CERTAIN DEFINITIONS AND LEGENDS

This certifies that

is the record holder of

FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK, $0.001 PAR VALUE PER SHARE, OF

ALLOGENE THERAPEUTICS, INC.

transferable on the books of the corporation in person or by duly authorized attorney upon surrender of this Certificate properly endorsed. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.

Dated:

PRESIDENT & CHIEF EXECUTIVE OFFICER

ALLOGENE THERAPEUTICS, INC. CORPORATE SEAL NOVEMBER 30, 2017 DELAWARE

SECRETARY

COUNTERSIGNED AND REGISTERED:
AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC
(BROOKLYN, NY)
TRANSFER AGENT AND REGISTRAR

BY:

AUTHORIZED SIGNATURE

SPECIMEN STOCK CERTIFICATE

HERITAGE BANK NOTE

The Corporation shall furnish without charge to each stockholder who so requests a statement of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock of the Corporation or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Such requests shall be made to the Corporation's Secretary at the principal office of the Corporation.

KEEP THIS CERTIFICATE IN A SAFE PLACE. IF IT IS LOST, STOLEN,OR DESTROYED THE CORPORATION WILL REQUIRE A BOND INDEMNITY AS A CONDITION TO THE ISSUANCE OF A REPLACEMENT CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	–	as tenants in common
TEN ENT	–	as tenants by the entireties
JT TEN	–	as joint tenants with right of survivorship and not as tenants in common
COM PROP	–	as community property

UNIF GIFT MIN ACT – ..... Custodian .....
(Cust) (Minor)
under Uniform Gifts to Minors Act.....
(State)

UNIF TRF MIN ACT – ..... Custodian (until age .....)
(Cust)
..... under Uniform Transfers
(Minor)
to Minors Act.....
(State)

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, _____ hereby sell(s), assign(s) and transfer(s) unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____
(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____

_____

_____ shares of the capital stock represented by within Certificate, and do hereby irrevocably constitute and appoint

_____ attorney-in-fact to transfer the said stock on the books of the within named Corporation with full power of the substitution in the premises.

Dated _____

X _____

X _____

Signature(s) Guaranteed:

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER.

By _____

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION, (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO S.E.C. RULE 17Ad-15. GUARANTEES BY A NOTARY PUBLIC ARE NOT ACCEPTABLE. SIGNATURE GUARANTEES MUST NOT BE DATED.

Cooley

Charles J. Bair
+1 858 550 6142
cbair@cooley.com

October 2, 2018

Allogene Therapeutics, Inc.
210 East Grand Avenue
South San Francisco, CA 94080

Ladies and Gentlemen:

You have requested our opinion, as counsel to Allogene Therapeutics, Inc., a Delaware corporation (the "***Company***"), in connection with the filing by the Company of a Registration Statement (No. 333-227333) on Form S-1 (the "***Registration Statement***") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "***Prospectus***"), covering an underwritten public offering of up to 18,400,000 shares (the "***Shares***") of the Company's common stock, par value $0.0001, including up to 2,400,000 Shares that may be sold pursuant to the exercise of an option to purchase additional shares. All of the Shares are to be sold by the Company as described in the Registration Statement and the Prospectus.

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation and Bylaws, each as amended, as currently in effect, (c) the Company's Amended and Restated Certificate of Incorporation, filed as Exhibit 3.2 to the Registration Statement (the "Post-IPO Certificate"), and the Company's Amended and Restated Bylaws, filed as Exhibit 3.4 to the Registration Statement, each of which will be in effect immediately prior to the closing of the offering contemplated by the Registration Statement, and (d) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below and (ii) assumed that the Shares to be sold to the underwriters by the Company will be sold at a price and on terms established by the Board of Directors of the Company or a duly constituted pricing committee thereof in accordance with Section 153 of the Delaware General Corporation Law. We have undertaken no independent verification with respect to such matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies and the due execution and delivery of all documents (other than by the Company) where due execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

We have also assumed that, at the time of issuance and sale of the Shares, the Post-IPO Certificate has been filed with the Delaware Secretary of State and that a sufficient number of shares of Common Stock is authorized and reserved or available for issuance.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, and subject to and following the filing of the Post-IPO Certificate, we are of the opinion that the Shares, when sold and issued against payment therefor as

described in the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Charles J. Bair
Charles J. Bair

Exhibit 10.1

INDEMNITY AGREEMENT

THIS INDEMNITY AGREEMENT (this "***Agreement***") dated as of , 20 , is made by and between **ALLOGENE THERAPEUTICS, INC.,** a Delaware corporation (the "***Company***"), and ("***Indemnitee***").

RECITALS

A. The Company desires to attract and retain the services of highly qualified individuals as directors, officers, employees and agents.

B. The Company's Amended and Restated Bylaws (the "***Bylaws***") require that the Company indemnify its directors and officers, and empowers the Company to indemnify its employees and other agents, as authorized by the Delaware General Corporation Law, as amended (the "***Code***"), under which the Company is organized and such Bylaws expressly provide that the indemnification provided therein is not exclusive and contemplates that the Company may enter into separate agreements with its directors, officers and other persons to set forth specific indemnification provisions.

C. Indemnitee does not regard the protection currently provided by applicable law, the Bylaws, the Company's other governing documents, and available insurance as adequate under the present circumstances, and the Company has determined that Indemnitee and other directors, officers, employees and agents of the Company may not be willing to serve or continue to serve in such capacities without additional protection.

D. The Company desires and has requested Indemnitee to serve or continue to serve as a director, officer, employee or agent of the Company, as the case may be, and has proffered this Agreement to Indemnitee as an additional inducement to serve in such capacity.

E. Indemnitee is willing to serve, or to continue to serve, as a director, officer, employee or agent of the Company, as the case may be, if Indemnitee is furnished the indemnity provided for herein by the Company.

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions.

(a) Agent. For purposes of this Agreement, the term "***Agent***" of the Company means any person who: (i) is or was a director**,** officer, employee, agent, or other fiduciary of the Company or a subsidiary of the Company; or (ii) is or was serving at the request or for the convenience of, or representing the interests of, the Company or a subsidiary of the Company, as a director, officer, employee, agent, or other fiduciary of a foreign or domestic corporation, partnership, joint venture, trust or other enterprise.

(b) Change in Control. For purposes of this Agreement, a "***Change in Control***" shall be deemed to have occurred if (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 20% or more of the total voting power represented by the Company's then outstanding Voting Securities, (ii) individuals who on the date of this Agreement are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board (*provided, however,* that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member shall be considered as a member of the Incumbent Board), or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of transactions) all or substantially all of the Company's assets.

(c) Expenses. For purposes of this Agreement, the term "***Expenses***" shall be broadly construed and shall include, without limitation, all direct and indirect costs of any type or nature whatsoever, including, without limitation, all attorneys', witness, or other professional fees and related disbursements, and other out-of-pocket costs of whatever nature, actually and reasonably incurred by Indemnitee in connection with the investigation, defense or appeal of a proceeding or establishing or enforcing a right to indemnification under this Agreement, the Code or otherwise. The term "***Expenses***" shall also include reasonable compensation for time spent by Indemnitee for which he or she is not compensated by the Company or any subsidiary or third party: (i) for any period during which Indemnitee is not an Agent, in the employment of, or providing services for compensation to, the Company or any subsidiary; and (ii) if the rate of compensation and estimated time involved is approved by the directors of the Company who are not parties to any action with respect to which Expenses are incurred, for Indemnitee while an Agent of, employed by, or providing services for compensation to, the Company or any subsidiary.

(d) Independent Counsel. For purposes of this Agreement, the term "***Independent Counsel***" means a law firm, or a partner (or, if applicable, member) of such a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party, or (ii) any other party to the proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "***Independent Counsel***" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company will pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and

all expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(e) Liabilities. For purposes of this Agreement, the term "***Liabilities***" shall be broadly construed and shall include, without limitation, judgments, damages, deficiencies, liabilities, losses, penalties, excise taxes, fines, assessments and amounts paid in settlement, including any interest and any federal, state, local or foreign taxes imposed as a result of the actual or deemed receipt of any payment under this Agreement.

(f) Proceedings. For purposes of this Agreement, the term "***proceeding***" shall be broadly construed and shall include, without limitation, any threatened, pending, or completed action, suit, claim, counterclaim, cross claim, arbitration, mediation, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing, or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative or investigative nature, and whether formal or informal in any case, in which Indemnitee was, is or will be involved as a party, potential party, non-party witness, or otherwise by reason of: (i) the fact that Indemnitee is or was a director or officer of the Company; (ii) the fact that any action taken by Indemnitee (or a failure to take action by Indemnitee) or of any action (or failure to act) on Indemnitee's part while acting as an Agent; or (iii) the fact that Indemnitee is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise, and in any such case described above, whether or not serving in any such capacity at the time any liability or Expense is incurred for which indemnification, reimbursement, or advancement of Expenses may be provided under this Agreement. If the Indemnitee believes in good faith that a given situation may lead to or culminate in the institution of a proceeding, this shall be considered a proceeding under this paragraph.

(g) Subsidiary. For purposes of this Agreement, the term "***subsidiary***" means any corporation, limited liability company, or other entity, of which more than 50% of the outstanding voting securities or equity interests are owned, directly or indirectly, by the Company and one or more of its subsidiaries, and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving at the request of the Company as an Agent.

(h) Voting Securities. For purposes of this Agreement, "***Voting Securities***" shall mean any securities of the Company that vote generally in the election of directors.

2. Agreement to Serve. Indemnitee will serve, or continue to serve, as the case may be, as an Agent, faithfully and to the best of his or her ability, at the will of such entity designated by the Company and at the request of the Company (or under separate agreement, if such agreement exists), in the capacity Indemnitee currently serves such entity, so long as Indemnitee is duly appointed or elected and qualified in accordance with the applicable provisions of the governance documents of such entity, or until such time as Indemnitee tenders his or her resignation in writing; provided, however, that nothing contained in this Agreement is intended as an employment agreement between Indemnitee and the Company or any of its subsidiaries or to create any right to continued employment of Indemnitee with the Company or any of its subsidiaries in any capacity.

The Company acknowledges that it has entered into this Agreement and assumes the obligations imposed on it hereby, in addition to and separate from its obligations to Indemnitee under the Bylaws, to induce Indemnitee to serve, or continue to serve, as an Agent, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an Agent.

3. Indemnification.

(a) Indemnification in Third Party Proceedings. Subject to Section 10 below, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, to the fullest extent of the law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding, other than a proceeding by or in the right of the Company to procure a judgment in its favor, for any and all Expenses and Liabilities (including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses and Liabilities) incurred by Indemnitee in connection with the investigation, defense, settlement or appeal of such proceeding, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company and, in the case of a criminal proceeding had no reasonable cause to believe that Indemnitee's conduct was unlawful. The parties hereto intend that this Agreement shall provide to the fullest extent permitted by law for indemnification in excess of that expressly permitted by statute, including, without limitation, any indemnification provided by the Certificate of Incorporation of the Company, the Bylaws, vote of its stockholders or disinterested directors, or applicable law.

(b) Indemnification in Derivative Actions and Direct Actions by the Company. Subject to Section 10 below, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, fullest extent permitted by applicable law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding by or in the right of the Company to procure a judgment in its favor, against any and all Expenses actually and reasonably incurred by Indemnitee in connection with the investigation, defense, settlement, or appeal of such proceedings, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. No indemnification for Expenses shall be made under this Section 3(b) in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court competent jurisdiction to be liable to the Company, unless and only to the extent that the Chancery Court of the State of Delaware or any court in which the proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification.

4. Indemnification of Expenses of Successful Party. Notwithstanding any other provision of this Agreement, in circumstances where indemnification is not available under Section 3(a) or 3(b), as the case may be, to the fullest extent permitted by law and to the extent that Indemnitee is a party to (or a participant in) any proceeding and has been successful on the merits or otherwise in defense of any proceeding or in defense of any claim, issue or matter therein,

in whole or part, including the dismissal of any action without prejudice, the Company shall indemnify Indemnitee against all Expenses and Liabilities in connection with the investigation, defense or appeal of such proceeding. If Indemnitee is not wholly successful in such proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such proceeding, the Company shall indemnify Indemnitee against all Expenses and Liabilities incurred by Indemnitee or on Indemnitee's behalf in connection with or related to each successfully resolved claim, issue or matter to the fullest extent permitted by law.

5. Partial Indemnification; Witness Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Expenses and Liabilities incurred by Indemnitee in the investigation, defense, settlement or appeal of a proceeding, but is precluded by applicable law or the specific terms of this Agreement to indemnification for the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's acting as an Agent, a witness or otherwise asked to participate in any proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee or on Indemnitee's behalf in connection therewith.

6. Advancement of Expenses. To the extent not prohibited by law, the Company shall advance the Expenses incurred by Indemnitee in connection with any proceeding, and such advancement shall be made within twenty (20) days after the receipt by the Company of a statement or statements requesting such advances (which shall include invoices received by Indemnitee in connection with such Expenses but, in the case of invoices in connection with legal services, any references to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law shall not be included with the invoice) and upon request of the Company, an undertaking to repay the advancement of Expenses if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. Advances shall be unsecured, interest free and without regard to Indemnitee's ability to repay the Expenses. Advances shall include any and all Expenses incurred by Indemnitee pursuing an action to enforce Indemnitee's right to indemnification under this Agreement or otherwise and this right of advancement, including expenses incurred preparing and forwarding statements to the Company to support the advances claimed. Indemnitee acknowledges that the execution and delivery of this Agreement shall constitute an undertaking providing that Indemnitee shall, to the fullest extent required by law, repay the advance (without interest) if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. The right to advances under this Section shall continue until final disposition of any proceeding, including any appeal therein. This Section 6 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 10(b).

7. Notice and Other Indemnification Procedures.

(a) Notification of Proceeding. Indemnitee will notify the Company in writing promptly upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any proceeding or matter which may be subject to

indemnification or advancement of Expenses covered hereunder. The written notification to the Company shall include a description of the nature of the proceeding and the facts underlying the proceeding. The failure of Indemnitee to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise and any delay in so notifying the Company shall not constitute a waiver by Indemnitee of any rights under this Agreement.

(b) Request for Indemnification Payments. To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification under the terms of this Agreement, and shall request payment thereof by the Company.

(c) Determination of Right to Indemnification Payments. Upon written request by Indemnitee for indemnification pursuant to the Section 7(b) hereof, a determination with respect to Indemnitee's entitlement thereto shall be made in the specific case by one of the following four methods, which shall be at the election of the Board of Directors: (1) by a majority vote of the disinterested directors, even though less than a quorum, (2) by a committee of disinterested directors designated by a majority vote of the disinterested directors, even though less than a quorum, (3) if there are no disinterested directors or if the disinterested directors so direct, by Independent Counsel in a written opinion to the Board of Directors, a copy of which shall be delivered to the Indemnitee, or (4) if so directed by the Board of Directors, by the stockholders of the Company; *provided*, *however*, that if there has been a Change in Control, then such determination shall be made by Independent Counsel selected by Indemnitee and approved by the Company (which approval shall not be unreasonably withheld). For purposes hereof, disinterested directors are those members of the board of directors of the Company who are not parties to the action, suit or proceeding in respect of which indemnification is sought by Indemnitee. Indemnification payments requested by Indemnitee under Section 3 hereof shall be made by the Company no later than sixty (60) days after receipt of the written request of Indemnitee. Claims for advancement of Expenses shall be made under the provisions of Section 6 herein.

(d) Application for Enforcement. In the event the Company fails to make timely payments as set forth in Sections 6 or 7(b) above, Indemnitee shall have the right to apply to any court of competent jurisdiction for the purpose of enforcing Indemnitee's right to indemnification or advancement of Expenses pursuant to this Agreement. In such an enforcement hearing or proceeding, the burden of proof shall be on the Company to prove that indemnification or advancement of Expenses to Indemnitee is not required under this Agreement or permitted by applicable law. Any determination by the Company (including its Board of Directors, a committee thereof, Independent Counsel) or stockholders of the Company, that Indemnitee is not entitled to indemnification hereunder, shall not be a defense by the Company to the action nor create any presumption that Indemnitee is not entitled to indemnification or advancement of Expenses hereunder.

(e) Indemnification of Certain Expenses. The Company shall indemnify Indemnitee against all Expenses incurred in connection with any hearing or proceeding under this

Section 7 unless the Company prevails in such hearing or proceeding on the merits in all material respects.

8. Assumption of Defense. In the event the Company shall be requested by Indemnitee to pay the Expenses of any proceeding, the Company, if appropriate, shall be entitled to assume the defense of such proceeding, or to participate to the extent permissible in such proceeding, with counsel reasonably acceptable to Indemnitee. Upon assumption of the defense by the Company and the retention of such counsel by the Company, the Company shall not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same proceeding, provided that Indemnitee shall have the right to employ separate counsel in such proceeding at Indemnitee's sole cost and expense. Notwithstanding the foregoing, if Indemnitee's counsel delivers a written notice to the Company stating that such counsel has reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense or the Company shall not, in fact, have employed counsel or otherwise actively pursued the defense of such proceeding within a reasonable time, then in any such event the fees and Expenses of Indemnitee's counsel to defend such proceeding shall be subject to the indemnification and advancement of Expenses provisions of this Agreement.

9. Insurance. To the extent that the Company maintains an insurance policy or policies providing liability insurance for Agents (*"D&O Insurance"*), Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any such Agent under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has D&O Insurance in effect or otherwise potentially available, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies.

10. Exceptions.

(a) Certain Matters. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee on account of any proceeding with respect to: (i) remuneration paid to Indemnitee if it is determined by final judgment or other final adjudication that such remuneration was in violation of law (and, in this respect, both the Company and Indemnitee have been advised that the Securities and Exchange Commission believes that indemnification for liabilities arising under the federal securities laws is against public policy and is, therefore, unenforceable and that claims for indemnification should be submitted to appropriate courts for adjudication, as indicated in Section 10(d) below); (ii) a final judgment rendered against Indemnitee for an accounting, disgorgement or repayment of profits made from the purchase or sale by Indemnitee of securities of the Company against Indemnitee or in connection with a settlement by or on behalf of Indemnitee to the extent it is acknowledged by Indemnitee and the Company that such amount paid in settlement resulted from Indemnitee's conduct from which Indemnitee received monetary personal profit, pursuant to the provisions of Section 16(b) of the Exchange Act or other provisions of any federal, state or local statute or rules and regulations thereunder; (iii) a final judgment or other final adjudication

that Indemnitee's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct (but only to the extent of such specific determination); or (iv) on account of conduct that is established by a final judgment as constituting a breach of Indemnitee's duty of loyalty to the Company or resulting in any personal profit or advantage to which Indemnitee is not legally entitled. For purposes of the foregoing sentence, a final judgment or other adjudication may be reached in either the underlying proceeding or action in connection with which indemnification is sought or a separate proceeding or action to establish rights and liabilities under this Agreement.

(b) Claims Initiated by Indemnitee. Any provision herein to the contrary notwithstanding, the Company shall not be obligated to indemnify or advance Expenses to Indemnitee with respect to proceedings or claims initiated or brought by Indemnitee against the Company or its Agents and not by way of defense, except (i) with respect to proceedings brought to establish or enforce a right to indemnification or advancement under this Agreement or under any other agreement, provision in the Bylaws or the Certificate of Incorporation or applicable law, or (ii) with respect to any other proceeding initiated by Indemnitee that is either approved by the Board of Directors or Indemnitee's participation is required by applicable law. However, indemnification or advancement of Expenses may be provided by the Company in specific cases if the Board of Directors determines it to be appropriate.

(c) Unauthorized Settlements. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee under this Agreement for any amounts paid in settlement of a proceeding effected without the Company's written consent. Neither the Company nor Indemnitee shall unreasonably withhold consent to any proposed settlement; provided, however, that the Company may in any event decline to consent to (or to otherwise admit or agree to any liability for indemnification hereunder in respect of) any proposed settlement if the Company is also a party in such proceeding and determines in good faith that such settlement is not in the best interests of the Company and its stockholders.

(d) Securities Act Liabilities. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee or otherwise act in violation of any undertaking appearing in and required by the rules and regulations promulgated under the Securities Act of 1933, as amended (the "***Securities Act***"), or in any registration statement filed with the SEC under the Securities Act. Indemnitee acknowledges that paragraph (h) of Item 512 of Regulation S-K currently generally requires the Company to undertake in connection with any registration statement filed under the Securities Act to submit the issue of the enforceability of Indemnitee's rights under this Agreement in connection with any liability under the Securities Act on public policy grounds to a court of appropriate jurisdiction and to be governed by any final adjudication of such issue. Indemnitee specifically agrees that any such undertaking shall supersede the provisions of this Agreement and to be bound by any such undertaking.

(e) Prior Payments. Except as provided in Section 13, any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify or advance Expenses to Indemnitee under this Agreement for which payment has actually been made to or on behalf of Indemnitee under any insurance policy or other

indemnity provision, expect with respect to any excess beyond the amount paid under any insurance policy or indemnity policy.

11. Nonexclusivity and Survival of Rights. The provisions for indemnification and advancement of Expenses set forth in this Agreement shall not be deemed exclusive of any other rights which Indemnitee may at any time be entitled under any provision of applicable law, the Company's Certificate of Incorporation, the Bylaws or other agreements, both as to action in Indemnitee's official capacity and Indemnitee's action as an Agent, in any court in which a proceeding is brought, and Indemnitee's rights hereunder shall continue after Indemnitee has ceased acting as an Agent and shall inure to the benefit of the heirs, executors, administrators and assigns of Indemnitee. The obligations and duties of the Company to Indemnitee under this Agreement shall be binding on the Company and its successors and assigns until terminated in accordance with its terms. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her corporate status prior to such amendment, alteration or repeal. To the extent that a change in the Code, whether by statute or judicial decision, permits greater indemnification or advancement of Expenses than would be afforded currently under the Company's Certificate of Incorporation, the Bylaws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, by Indemnitee shall not prevent the concurrent assertion or employment of any other right or remedy by Indemnitee.

12. Term. This Agreement shall continue until and terminate upon the later of: (a) five (5) years after the date that Indemnitee shall have ceased to serve as an Agent; or (b) one (1) year after the final termination of any proceeding, including any appeal then pending, in respect to which Indemnitee was granted rights of indemnification or advancement of Expenses hereunder.

No legal action shall be brought and no cause of action shall be asserted by or in the right of the Company against an Indemnitee or an Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of five (5) years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such five-year period; provided, however, that if any shorter period of limitations is otherwise applicable to such cause of action, such shorter period shall govern.

13. Primacy of Indemnification. The Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance

provided by [Name of Fund/Sponsor] and certain of [its][their] affiliates (collectively, the "***Fund Indemnitors***"). The Company hereby agrees (i) that it is the indemnitor of first resort (i.e., its obligations to Indemnitee are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by Indemnitee are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by Indemnitee and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted and as required by the terms of this Agreement and the Certificate of Incorporation or Bylaws of the Company (or any other agreement between the Company and Indemnitee), without regard to any rights Indemnitee may have against the Fund Indemnitors, and (iii) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of Indemnitee against the Company. The Company and Indemnitee agree that the Fund Indemnitors are express third party beneficiaries of the terms of this Section 13.

14. Subrogation. Except as provided in Section 13, in the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who, at the request and expense of the Company, shall execute all papers required and shall do everything that may be reasonably necessary to secure such rights, including the execution of such documents necessary to enable the Company effectively to bring suit to enforce such rights.

15. Interpretation of Agreement. It is understood that the parties hereto intend this Agreement to be interpreted and enforced so as to provide indemnification and advancement of Expenses to Indemnitee to the fullest extent now or hereafter permitted by law.

16. Severability. If any provision of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever, (a) the validity, legality and enforceability of the remaining provisions of the Agreement (including without limitation, all portions of any paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Agreement (including, without limitation, all portions of any paragraph of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable and to give effect to Section 15 hereof.

17. Amendment and Waiver. No supplement, modification, amendment, or cancellation of this Agreement shall be binding unless executed in writing by the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver

of any other provision hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

18. Notice. Except as otherwise provided herein, any notice or demand which, by the provisions hereof, is required or which may be given to or served upon the parties hereto shall be in writing and, if by electronic transmission, shall be deemed to have been validly served, given or delivered when sent, if by overnight delivery, courier or personal delivery, shall be deemed to have been validly served, given or delivered upon actual delivery and, if mailed, shall be deemed to have been validly served, given or delivered three (3) business days after deposit in the United States mail, as registered or certified mail, with proper postage prepaid and addressed to the party or parties to be notified at the addresses set forth on the signature page of this Agreement (or such other address(es) as a party may designate for itself by like notice). If to the Company, notices and demands shall be delivered to the attention of the Secretary of the Company.

19. Governing Law. This Agreement shall be governed exclusively by and construed according to the laws of the State of Delaware, as applied to contracts between Delaware residents entered into and to be performed entirely within Delaware.

20. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute but one and the same Agreement. Only one such counterpart need be produced to evidence the existence of this Agreement.

21. Headings. The headings of the sections of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction hereof.

22. Entire Agreement. Subject to Section 11 hereof, this Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, understandings and negotiations, written and oral, between the parties with respect to the subject matter of this Agreement; provided, however, that this Agreement is a supplement to and in furtherance of the Company's Certificate of Incorporation, the Bylaws, the Code and any other applicable law, and shall not be deemed a substitute therefor, and does not diminish or abrogate any rights of Indemnitee thereunder.

23. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such proceeding; and/or (ii) the relative fault of the Company and Indemnitee in connection with such event(s) and/or transaction(s).

24. Consent to Jurisdiction. The Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "***Delaware Court***"), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) agree to appoint, to the extent such party is not otherwise subject to service of process in the State of Delaware, an agent in the State of Delaware as such party's agent for acceptance of legal process in connection with any such action or proceeding against such party with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

IN WITNESS WHEREOF, the parties hereto have entered into this Agreement effective as of the date first above written.

ALLOGENE THERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

INDEMNITEE

_____
Signature of Indemnitee

_____
Print or Type Name of Indemnitee

Exhibit 10.2

INDEMNIFICATION AGREEMENT

THIS INDEMNIFICATION AGREEMENT (the "**Agreement**") is made and entered into as of April 6, 2018 between Allogene Therapeutics, Inc., a Delaware corporation (the "**Company**"), and John DeYoung ("**Indemnitee**").

WITNESSETH THAT:

WHEREAS, highly competent persons have become more reluctant to serve corporations as directors and officers or in other capacities unless they are provided with adequate protection through insurance or adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Company (the "**Board**") has determined that, in order to attract and retain qualified individuals, the Company will attempt to maintain on an ongoing basis, at its sole expense, liability insurance to protect persons serving the Company and its subsidiaries from certain liabilities. Although the furnishing of such insurance has been a customary and widespread practice among United States-based corporations and other business enterprises, the Company believes that, given current market conditions and trends, such insurance may be available to it in the future only at higher premiums and with more exclusions. At the same time, directors, officers, and other persons in service to corporations or business enterprises are being increasingly subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Company or business enterprise itself. The Bylaws of the Company (the "**Bylaws**") and Amended and Restated Certificate of Incorporation of the Company (the "**Certificate of Incorporation**") require indemnification of the officers and directors of the Company. Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("**DGCL**"). The Bylaws, Certificate of Incorporation and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the Board, officers and other persons with respect to indemnification;

WHEREAS, the uncertainties relating to such insurance and to indemnification have increased the difficulty of attracting and retaining such persons;

WHEREAS, the Board has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Company's stockholders and that the Company should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, it is reasonable, prudent and necessary for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws and Certificate of Incorporation and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder; and

WHEREAS, Indemnitee does not regard the protection available under the Bylaws and Certificate of Incorporation and insurance as adequate in the present circumstances, and may not be willing to serve as an officer or director without adequate protection, and the Company desires Indemnitee to serve in such capacity. Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Company on the condition that he or she be so indemnified; and

WHEREAS, Indemnitee has certain rights to indemnification and/or insurance provided by Pfizer Inc. which Indemnitee and Pfizer Inc. intend to be secondary to the primary obligation of the Company to indemnify Indemnitee as provided herein, with the Company's acknowledgement and agreement to the foregoing being a material condition to Indemnitee's willingness to serve on the Board.

NOW, THEREFORE, in consideration of Indemnitee's agreement to serve as an officer and/or director from and after the date hereof, the parties hereto agree as follows:

1. Indemnity of Indemnitee. The Company hereby agrees to hold harmless and indemnify Indemnitee to the fullest extent permitted by law, as such may be amended from time to time. In furtherance of the foregoing indemnification, and without limiting the generality thereof:

(a) Proceedings Other Than Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section l(a) if, by reason of such person's Corporate Status (as hereinafter defined), the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding (as hereinafter defined) other than a Proceeding by or in the right of the Company. Pursuant to this Section 1(a), Indemnitee shall be indemnified against all Expenses (as hereinafter defined), judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by such person, or on such person's behalf, in connection with such Proceeding or any claim, issue or matter therein, if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful.

(b) Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section 1(b) if, by reason of such person's Corporate Status, the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding brought by or in the right of the Company. Pursuant to this Section 1(b), Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by the Indemnitee, or on the Indemnitee's behalf, in connection with such Proceeding if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in or not opposed to the best interests of the Company; provided, however, if applicable law so provides, no indemnification against such Expenses shall be made in respect of any claim, issue or matter in such Proceeding as to which Indemnitee shall have been adjudged to be liable to the Company unless and to the extent that the Court of Chancery of the State of Delaware shall determine that such indemnification may be made.

(c) Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of his or her Corporate Status, a party to and is successful, on the merits or otherwise,

in any Proceeding, Indemnitee shall be indemnified to the maximum extent permitted by law, as such may be amended from time to time, against all Expenses actually and reasonably incurred by such person or on his or her behalf in connection therewith. If Indemnitee is not wholly successful in such Proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by such person or on his or her behalf in connection with each successfully resolved claim, issue or matter. For purposes of this Section and without limitation, the termination of any claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

(d) Indemnification of Appointing Stockholder. If (i) Indemnitee is or was affiliated with Pfizer, Inc. or its affiliates (an "**Appointing Stockholder**"), (ii) the Appointing Stockholder is, or is threatened to be made, a party to or a participant in any Proceeding, and (iii) the Appointing Stockholder's involvement in the Proceeding results from any claim based on the Indemnitee's service to the Company as a director or other fiduciary of the Company, the Appointing Stockholder will be entitled to indemnification hereunder for Expenses to the same extent as Indemnitee, and the terms of this Agreement as they relate to procedures for indemnification of Indemnitee and advancement of Expenses shall apply to any such indemnification of Appointing Stockholder.

The rights provided to the Appointing Stockholder under this Section 2 shall terminate on an initial public offering of the Company's Common Stock; provided, however, that in the event of any such termination, the Appointing Stockholder's rights to indemnification will not be terminated with respect to any Proceeding based in whole or in part on facts and circumstances occurring at any time prior to such termination regardless of whether the Proceeding arises before or after such termination. The Company and Indemnitee agree that the Appointing Stockholder is an express third party beneficiary of the terms of this Section 1(d).

2. Additional Indemnity. In addition to, and without regard to any limitations on, the indemnification provided for in Section 1 of this Agreement, the Company shall and hereby does indemnify and hold harmless Indemnitee against all Expenses, judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by such person or on his or her behalf if, by reason of his or her Corporate Status, Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding (including a Proceeding by or in the right of the Company), including, without limitation, all liability arising out of the negligence or active or passive wrongdoing of Indemnitee. The only limitation that shall exist upon the Company's obligations pursuant to this Agreement shall be that the Company shall not be obligated to make any payment to Indemnitee that is finally determined (under the procedures, and subject to the presumptions, set forth in Sections 6 and 7 hereof) to be unlawful.

3. Contribution.

(a) Whether or not the indemnification provided in Sections 1 and 2 hereof is available, in respect of any threatened, pending or completed action, suit or proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), the Company shall pay, in the first instance, the entire amount of any judgment or settlement of such action, suit or proceeding without requiring Indemnitee to contribute to such payment and the Company hereby waives and relinquishes any right of contribution it may have against Indemnitee. The Company shall not enter into any settlement of any action, suit or

proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding) unless such settlement provides for a full and final release of all claims asserted against Indemnitee.

(b) Without diminishing or impairing the obligations of the Company set forth in the preceding subparagraph, if, for any reason, Indemnitee shall elect or be required to pay all or any portion of any judgment or settlement in any threatened, pending or completed action, suit or proceeding in which the Company is jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), the Company shall contribute to the amount of Expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by Indemnitee in proportion to the relative benefits received by the Company and all officers, directors or employees of the Company, other than Indemnitee, who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, from the transaction or events from which such action, suit or proceeding arose; provided, however, that the proportion determined on the basis of relative benefit may, to the extent necessary to conform to law, be further adjusted by reference to the relative fault of the Company and all officers, directors or employees of the Company other than Indemnitee who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, in connection with the transaction or events that resulted in such expenses, judgments, fines or settlement amounts, as well as any other equitable considerations which applicable law may require to be considered. The relative fault of the Company and all officers, directors or employees of the Company, other than Indemnitee, who are jointly liable with Indemnitee (or would be if joined in such action, suit or proceeding), on the one hand, and Indemnitee, on the other hand, shall be determined by reference to, among other things, the degree to which their actions were motivated by intent to gain personal profit or advantage, the degree to which their liability is primary or secondary and the degree to which their conduct is active or passive.

(c) The Company hereby agrees to fully indemnify and hold Indemnitee harmless from any claims of contribution which may be brought by officers, directors, or employees of the Company, other than Indemnitee, who may be jointly liable with Indemnitee.

(d) To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such Proceeding and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transaction(s).

4. Indemnification for Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of such person's Corporate Status, a witness, or is made (or asked) to respond to discovery requests, in any Proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by such person or on such person's behalf in connection therewith.

5. Advancement of Expenses. Notwithstanding any other provision of this Agreement, the Company shall advance all Expenses incurred by or on behalf of Indemnitee in connection with any Proceeding by reason of Indemnitee's Corporate Status within 30 days after the receipt by the Company of a statement or statements from Indemnitee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by Indemnitee and shall include or be preceded or accompanied by a written undertaking by or on behalf of Indemnitee to repay any Expenses advanced if it shall ultimately be determined that Indemnitee is not entitled to be indemnified against such Expenses. Any advances and undertakings to repay pursuant to this Section 5 shall be unsecured and interest free.

6. Procedures and Presumptions for Determination of Entitlement to Indemnification. It is the intent of this Agreement to secure for Indemnitee rights of indemnity that are as favorable as may be permitted under the DGCL and public policy of the State of Delaware. Accordingly, the parties agree that the following procedures and presumptions shall apply in the event of any question as to whether Indemnitee is entitled to indemnification under this Agreement:

(a) To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification. The Secretary of the Company shall, promptly upon receipt of such a request for indemnification, advise the Board in writing that Indemnitee has requested indemnification. Notwithstanding the foregoing, any failure of Indemnitee to provide such a request to the Company, or to provide such a request in a timely fashion, shall not relieve the Company of any liability that it may have to Indemnitee unless, and to the extent that, such failure actually and materially prejudices the interests of the Company.

(b) Upon written request by Indemnitee for indemnification pursuant to the first sentence of Section 6(a) hereof, a determination with respect to Indemnitee's entitlement thereto shall be made in the specific case by one of the following four methods, which shall be at the election of the Board (1) by a majority vote of the Disinterested Directors, even though less than a quorum, (2) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum, (3) if there are no Disinterested Directors or if the Disinterested Directors so direct, by independent legal counsel in a written opinion to the Board, a copy of which shall be delivered to the Indemnitee, or (4) if so directed by the Board, by the stockholders of the Company.

(c) If the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 6(b) hereof, the Independent Counsel shall be selected as provided in this Section 6(c). The Independent Counsel shall be selected by the Board. Indemnitee may, within 10 days after such written notice of selection shall have been given, deliver to the Company a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "**Independent Counsel**" as defined in Section 13 of this Agreement, and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person so selected shall act as Independent Counsel. If a written objection is made and substantiated, the Independent Counsel selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit. If, within 20 days after submission by Indemnitee of a written request for

indemnification pursuant to Section 6(a) hereof, no Independent Counsel shall have been selected and not objected to, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware or other court of competent jurisdiction for resolution of any objection which shall have been made by the Indemnitee to the Company's selection of Independent Counsel and/or for the appointment as Independent Counsel of a person selected by the court or by such other person as the court shall designate, and the person with respect to whom all objections are so resolved or the person so appointed shall act as Independent Counsel under Section 6(b) hereof. The Company shall pay any and all reasonable fees and expenses of Independent Counsel incurred by such Independent Counsel in connection with acting pursuant to Section 6(b) hereof, and the Company shall pay all reasonable fees and expenses incident to the procedures of this Section 6(c), regardless of the manner in which such Independent Counsel was selected or appointed.

(d) In making a determination with respect to entitlement to indemnification hereunder, the person or persons or entity making such determination shall presume that Indemnitee is entitled to indemnification under this Agreement. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence. Neither the failure of the Company (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Company (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(e) Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise (as hereinafter defined), including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Enterprise. In addition, the knowledge and/or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement. Whether or not the foregoing provisions of this Section 6(e) are satisfied, it shall in any event be presumed that Indemnitee has at all times acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

(f) If the person, persons or entity empowered or selected under Section 6 to determine whether Indemnitee is entitled to indemnification shall not have made a determination within 60 days after receipt by the Company of the request therefor, the requisite determination of entitlement to indemnification shall be deemed to have been made and Indemnitee shall be entitled to such indemnification absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification, or (ii) a prohibition of such indemnification under applicable law; provided, however, that such 60 day period may be extended for a reasonable time, not to exceed an additional 30 days, if the person, persons or entity making such determination with respect to entitlement to indemnification in good faith requires such additional time to obtain or evaluate documentation and/or information relating thereto; and provided further, that the

foregoing provisions of this Section 6(f) shall not apply if the determination of entitlement to indemnification is to be made by the stockholders pursuant to Section 6(b) of this Agreement and if (A) within 15 days after receipt by the Company of the request for such determination, the Board or the Disinterested Directors, if appropriate, resolve to submit such determination to the stockholders for their consideration at an annual meeting thereof to be held within 75 days after such receipt and such determination is made thereat, or (B) a special meeting of stockholders is called within 15 days after such receipt for the purpose of making such determination, such meeting is held for such purpose within 60 days after having been so called and such determination is made thereat.

(g) Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Independent Counsel, member of the Board or stockholder of the Company shall act reasonably and in good faith in making a determination regarding the Indemnitee's entitlement to indemnification under this Agreement. Any costs or expenses (including attorneys' fees and disbursements) incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Company (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Company hereby indemnifies and agrees to hold Indemnitee harmless therefrom.

(h) The Company acknowledges that a settlement or other disposition short of final judgment may be successful if it permits a party to avoid expense, delay, distraction, disruption and uncertainty. In the event that any action, claim or proceeding to which Indemnitee is a party is resolved in any manner other than by adverse judgment against Indemnitee (including, without limitation, settlement of such action, claim or proceeding with or without payment of money or other consideration) it shall be presumed that Indemnitee has been successful on the merits or otherwise in such action, suit or proceeding. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

(i) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which Indemnitee reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that his or her conduct was unlawful.

7. Remedies of Indemnitee.

(a) In the event that (i) a determination is made pursuant to Section 6 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement of Expenses is not timely made pursuant to Section 5 of this Agreement, (iii) no determination of entitlement to indemnification is made pursuant to Section 6(b) of this Agreement within 90 days after receipt by the Company of the request for indemnification, (iv) payment of indemnification is not made pursuant to this Agreement within 10 days after receipt by the

Company of a written request therefor, or (v) payment of indemnification is not made within 10 days after a determination has been made that Indemnitee is entitled to indemnification or such determination is deemed to have been made pursuant to Section 6 of this Agreement, Indemnitee shall be entitled to an adjudication in an appropriate court of the State of Delaware, or in any other court of competent jurisdiction, of Indemnitee's entitlement to such indemnification. Indemnitee shall commence such proceeding seeking an adjudication within 180 days following the date on which Indemnitee first has the right to commence such proceeding pursuant to this Section 7(a). The Company shall not oppose Indemnitee's right to seek any such adjudication.

(b) In the event that a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding commenced pursuant to this Section 7 shall be conducted in all respects as a de novo trial on the merits, and Indemnitee shall not be prejudiced by reason of the adverse determination under Section 6(b).

(c) If a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is entitled to indemnification, the Company shall be bound by such determination in any judicial proceeding commenced pursuant to this Section 7, absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's misstatement not materially misleading in connection with the application for indemnification, or (ii) a prohibition of such indemnification under applicable law.

(d) In the event that Indemnitee, pursuant to this Section 7, seeks a judicial adjudication of Indemnitee's rights under, or to recover damages for breach of, this Agreement, or to recover under any directors' and officers' liability insurance policies maintained by the Company, the Company shall pay on Indemnitee's behalf, in advance, any and all expenses (of the types described in the definition of Expenses in Section 13 of this Agreement) actually and reasonably incurred by him in such judicial adjudication, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement of expenses or insurance recovery.

(e) The Company shall be precluded from asserting in any judicial proceeding commenced pursuant to this Section 7 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court that the Company is bound by all the provisions of this Agreement. The Company shall indemnify Indemnitee against any and all Expenses and, if requested by Indemnitee, shall (within 10 days after receipt by the Company of a written request therefore) advance, to the extent not prohibited by law, such expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advance of Expenses from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement of Expenses or insurance recovery, as the case may be.

(f) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding.

8. Non-Exclusivity; Survival of Rights; Insurance; Primacy of Indemnification; Subrogation.

(a) The rights of indemnification as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the Certificate of Incorporation, the Bylaws, any agreement, a vote of stockholders, a resolution of directors of the Company, or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in the DGCL, whether by statute or judicial decision, permits greater indemnification than would be afforded currently under the Certificate of Incorporation, Bylaws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, officers, employees, or agents or fiduciaries of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person serves at the request of the Company, Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any director, officer, employee, agent or fiduciary under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has directors' and officers' liability insurance in effect, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies.

(c) The Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance provided by Pfizer Inc. and certain of its affiliates (collectively, the "**Fund Indemnitors**"). The Company hereby agrees (i) that it is the indemnitor of first resort (*i.e.*, its obligations to Indemnitee are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by Indemnitee are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by Indemnitee and shall be liable for the full amount of all Expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted and as required by the terms of this Agreement and the Certificate of Incorporation or Bylaws of the Company (or any other agreement between the Company and Indemnitee), without regard to any rights Indemnitee may have against the Fund Indemnitors, and (iii) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery

of Indemnitee against the Company. The Company and Indemnitee agree that the Fund Indemnitors are express third party beneficiaries of the terms of this Section 8(c).

(d) Except as provided in Section 8(c), in the event of any payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee (other than against the Fund Indemnitors), who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

(e) Except as provided in Section 8(c), the Company shall not be liable under this Agreement to make any payment of amounts otherwise indemnifiable hereunder if and to the extent that Indemnitee has otherwise actually received such payment under any insurance policy, contract, agreement or otherwise.

(f) Except as provided in Section 8(c), the Company's obligation to indemnify or advance Expenses hereunder to Indemnitee who is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount Indemnitee has actually received as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise.

9. Exception to Right of Indemnification. Notwithstanding any provision in this Agreement, the Company shall not be obligated under this Agreement to make any indemnity in connection with any claim made against Indemnitee:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy or other indemnity provision, except with respect to any excess beyond the amount paid under any insurance policy or other indemnity provision, provided, that the foregoing shall not affect the rights of Indemnitee or the Fund Indemnitors set forth in Section 8(c) above; or

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of state statutory law or common law; or

(c) in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Company or its directors, officers, employees or other indemnitees, unless (i) the Board authorized the Proceeding (or any part of any Proceeding) prior to its initiation, or (ii) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law.

10. Duration of Agreement. All agreements and obligations of the Company contained herein shall continue during the period Indemnitee is an officer or director of the Company (or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise) and shall continue thereafter so long as Indemnitee shall be subject to any Proceeding (or any proceeding commenced under Section 7 hereof) by reason of his or her Corporate Status, whether or not such person is acting or

serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business or assets of the Company), assigns, spouses, heirs, executors and personal and legal representatives.

11. Security. To the extent requested by Indemnitee and approved by the Board, the Company may at any time and from time to time provide security to Indemnitee for the Company's obligations hereunder through an irrevocable bank line of credit, funded trust or other collateral. Any such security, once provided to Indemnitee, may not be revoked or released without the prior written consent of the Indemnitee.

12. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumes the obligations imposed on it hereby in order to induce Indemnitee to serve as an officer or director of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an officer or director of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof.

(c) The Company shall not seek from a court, or agree to, a "bar order" which would have the effect of prohibiting or limiting the Indemnitee's rights to receive advancement of expenses under this Agreement.

13. Definitions. For purposes of this Agreement:

(a) "**Corporate Status**" describes the status of a person who is or was a director, officer, employee, agent or fiduciary of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person is or was serving at the express written request of the Company.

(b) "**Disinterested Director**" means a director of the Company who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

(c) "**Enterprise**" shall mean the Company and any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that Indemnitee is or was serving at the express written request of the Company as a director, officer, employee, agent or fiduciary.

(d) "**Expenses**" shall include all reasonable attorneys' fees, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, participating, or being or preparing to be a witness in a Proceeding, or responding to, or objecting to, a request to provide discovery in any Proceeding. Expenses also shall include Expenses incurred in connection with any appeal resulting from any

Proceeding and any federal, state, local or foreign taxes imposed on the Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, including without limitation the premium, security for, and other costs relating to any cost bond, supersede as bond, or other appeal bond or its equivalent. Expenses, however, shall not include amounts paid in settlement by Indemnitee or the amount of judgments or fines against Indemnitee.

(e) "**Independent Counsel**" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(f) "**Proceeding**" includes any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought by or in the right of the Company or otherwise and whether civil, criminal, administrative or investigative, in which Indemnitee was, is or will be involved as a party or otherwise, by reason of his or her Corporate Status, by reason of any action taken by Indemnitee or of any inaction on Indemnitee's part while acting in his or her Corporate Status; in each case whether or not such person is acting or serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement; including one pending on or before the date of this Agreement, but excluding one initiated by an Indemnitee pursuant to Section 7 of this Agreement to enforce Indemnitee's rights under this Agreement.

14. Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision. Further, the invalidity or unenforceability of any provision hereof as to either Indemitee or Appointing Stockholder shall in no way affect the validity or enforceability of any provision hereof as to the other. Without limiting the generality of the foregoing, this Agreement is intended to confer upon Indemnitee and Appointing Stockholder indemnification rights to the fullest extent permitted by applicable laws. In the event any provision hereof conflicts with any applicable law, such provision shall be deemed modified, consistent with the aforementioned intent, to the extent necessary to resolve such conflict.

15. Modification and Waiver. No supplement, modification, termination or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

16. Notice By Indemnitee. Indemnitee agrees promptly to notify the Company in writing upon being served with or otherwise receiving any summons, citation, subpoena,

complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification covered hereunder. The failure to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise unless and only to the extent that such failure or delay materially prejudices the Company.

17. Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient, and if not so confirmed, then on the next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent:

(a) To Indemnitee at the address set forth below Indemnitee signature hereto.

(b) To the Company at:

Allogene Therapeutics, Inc.
689 5th Avenue, 12th Floor
New York, NY 10022
Email: notices@allogene.com
Fax: (212) 871-7929

or to such other address as may have been furnished to Indemnitee by the Company or to the Company by Indemnitee, as the case may be.

18. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

19. Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

20. Governing Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. The Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "**Delaware Court**"), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) appoint, to the extent such party is not otherwise subject to service of process in the State of Delaware, irrevocably Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808 as its agent in the State of Delaware as such party's agent for

acceptance of legal process in connection with any such action or proceeding against such party with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the parties hereto have executed this Indemnification Agreement on and as of the day and year first above written.

COMPANY

By: /s/ David M. Tanen
Name: David M. Tanen
Title: Secretary

INDEMNITEE

/s/ John DeYoung
John DeYoung

ALLOGENE THERAPEUTICS, INC.

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: SEPTEMBER 26, 2018
APPROVED BY THE STOCKHOLDERS: OCTOBER 1, 2018
IPO DATE: , 2018

1. GENERAL.

(a) Successor to and Continuation of Prior Plan. The Plan is intended as the successor to and continuation of the Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan (the "***Prior Plan***"). From and after 12:01 a.m. Pacific Time on the IPO Date, no additional stock awards will be granted under the Prior Plan. All Awards granted on or after 12:01 a.m. Pacific Time on the IPO Date will be granted under this Plan. All stock awards granted under the Prior Plan will remain subject to the terms of the Prior Plan.

(i) Any shares that would otherwise remain available for future grants under the Prior Plan as of 12:01 a.m. Pacific Time on the IPO Date (the "***Prior Plan's Available Reserve***") will cease to be available under the Prior Plan at such time. Instead, that number of shares of Common Stock equal to the Prior Plan's Available Reserve will be added to the Share Reserve (as further described in Section 3(a) below) and will be immediately available for grants and issuance pursuant to Stock Awards hereunder, up to the maximum number set forth in Section 3(a) below.

(ii) In addition, from and after 12:01 a.m. Pacific Time on the IPO Date, any shares subject, at such time, to outstanding stock awards granted under the Prior Plan that (i) expire or terminate for any reason prior to exercise or settlement; (ii) are forfeited because of the failure to meet a contingency or condition required to vest such shares or otherwise return to the Company; or (iii) are reacquired, withheld (or not issued) to satisfy a tax withholding obligation in connection with an award or to satisfy the purchase price or exercise price of a stock award (such shares the "***Returning Shares***") will immediately be added to the Share Reserve (as further described in Section 3(a) below) as and when such shares become Returning Shares, up to the maximum number set forth in Section 3(a) below.

(b) Eligible Award Recipients. Employees, Directors and Consultants are eligible to receive Awards.

(c) Available Awards. The Plan provides for the grant of the following types of Awards: (i) Incentive Stock Options, (ii) Nonstatutory Stock Options, (iii) Stock Appreciation Rights (iv) Restricted Stock Awards, (v) Restricted Stock Unit Awards, (vi) Performance Stock Awards, (vii) Performance Cash Awards, and (viii) Other Stock Awards.

(d) Purpose. The Plan, through the granting of Awards, is intended to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and provide a means by which the eligible recipients may benefit from increases in value of the Common Stock.

2. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan. The Board may delegate administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine (A) who will be granted Awards; (B) when and how each Award will be granted; (C) what type of Award will be granted; (D) the provisions of each Award (which need not be identical), including when a person will be permitted to exercise or otherwise receive cash or Common Stock under the Award; (E) the number of shares of Common Stock subject to, or the cash value of, an Award; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for administration of the Plan and Awards. The Board, in the exercise of these powers, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement or in the written terms of a Performance Cash Award, in a manner and to the extent it will deem necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate, in whole or in part, the time at which an Award may be exercised or vest (or the time at which cash or shares of Common Stock may be issued in settlement thereof).

(v) To suspend or terminate the Plan at any time. Except as otherwise provided in the Plan or an Award Agreement, suspension or termination of the Plan will not materially impair a Participant's rights under the Participant's then-outstanding Award without the Participant's written consent except as provided in subsection (viii) below.

(vi) To amend the Plan in any respect the Board deems necessary or advisable, including, without limitation, by adopting amendments relating to Incentive Stock Options and certain nonqualified deferred compensation under Section 409A of the Code and/or bringing the Plan or Awards granted under the Plan into compliance with the requirements for Incentive Stock Options or ensuring that they are exempt from or compliant with the requirements for nonqualified deferred compensation under Section 409A of the Code, subject to the limitations, if any, of applicable law. If required by applicable law or listing requirements, and except as provided in Section 9(a) relating to Capitalization Adjustments, the Company will seek stockholder approval of any amendment of the Plan that (A) materially increases the number of shares of Common Stock available for issuance under the Plan, (B) materially expands the class of individuals eligible to receive Awards under the Plan, (C) materially increases the benefits accruing to Participants under the Plan, (D) materially reduces the price at which shares of Common Stock may be issued or purchased under the Plan, (E) materially extends the term of the Plan, or (F) materially expands the types of Awards available for issuance under the Plan. Except as otherwise provided in the Plan or an Award Agreement, no amendment of the Plan will materially impair a Participant's rights under an outstanding Award without the Participant's written consent.

(vii) To submit any amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of (A) Section 422 of the Code regarding incentive stock options or (B) Rule 16b-3.

(viii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided however,* that a Participant's rights under any Award will not be impaired by any such amendment unless (A) the Company requests the consent of the affected Participant, and (B) such Participant consents in writing. Notwithstanding the foregoing, (1) a

Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights, and (2) subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent (A) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (B) to change the terms of an Incentive Stock Option, if such change results in impairment of the Award solely because it impairs the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (C) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A of the Code; or (D) to comply with other applicable laws or listing requirements.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement that are required for compliance with the laws of the relevant foreign jurisdiction).

(xi) To effect, with the consent of any adversely affected Participant, (A) the reduction of the exercise, purchase or strike price of any outstanding Stock Award; (B) the cancellation of any outstanding Stock Award and the grant in substitution therefor of a new (1) Option or SAR, (2) Restricted Stock Award, (3) Restricted Stock Unit Award, (4) Other Stock Award, (5) cash and/or (6) other valuable consideration determined by the Board, in its sole discretion, with any such substituted award (x) covering the same or a different number of shares of Common Stock as the cancelled Stock Award and (y) granted under the Plan or another equity or compensatory plan of the Company; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee, as applicable). Any delegation of administrative powers will be reflected in resolutions, not inconsistent with the provisions of the Plan, adopted from time to time by the Board or Committee (as applicable). The Committee may, at any time, abolish the subcommittee and/or revest in the Committee any powers delegated to the subcommittee. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. The Committee may consist solely of two or more Non-Employee Directors, in accordance with Rule 16b-3.

(d) Delegation to an Officer. The Board may delegate to one or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by applicable law, other Stock Awards) and, to the extent permitted by applicable law, the terms of such Awards, and (ii) determine the number of shares of Common Stock to be subject to such Stock Awards granted to such Employees; *provided*, *however*, that the Board resolutions

regarding such delegation will specify the total number of shares of Common Stock that may be subject to the Stock Awards granted by such Officer and that such Officer may not grant a Stock Award to himself or herself. Any such Stock Awards will be granted on the form of Stock Award Agreement most recently approved for use by the Committee or the Board, unless otherwise provided in the resolutions approving the delegation authority. The Board may not delegate authority to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) to determine the Fair Market Value pursuant to Section 13(w)(iii) below.

(e) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to Section 9(a) relating to Capitalization Adjustments, and the following sentence regarding the annual increase, the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards will not exceed 20,432,250 shares (the "***Share Reserve***"), which number is the sum of (i) 8,223,097 new shares, *plus* (ii) the number of shares subject to the Prior Plan's Available Reserve *plus* (iii) the number of shares that are Returning Shares, as such shares become available from time to time. In addition, the Share Reserve will automatically increase on January 1st of each year, for a period of not more than ten years, commencing on January 1st of the year following the year in which the IPO Date occurs and ending on (and including) January 1, 2028, in an amount equal to 5% of the total number of shares of Capital Stock outstanding on December 31st of the preceding calendar year. Notwithstanding the foregoing, the Board may act prior to January 1st of a given year to provide that there will be no January 1st increase in the Share Reserve for such year or that the increase in the Share Reserve for such year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence.

For clarity, the Share Reserve in this Section 3(a) is a limitation on the number of shares of Common Stock that may be issued pursuant to the Plan. Accordingly, this Section 3(a) does not limit the granting of Stock Awards except as provided in Section 7(a). Shares may be issued in connection with a merger or acquisition as permitted by Nasdaq Listing Rule 5635(c) or, if applicable, NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(b) Reversion of Shares to the Share Reserve. If a Stock Award or any portion thereof (i) expires or otherwise terminates without all of the shares covered by such Stock Award having been issued or (ii) is settled in cash (*i.e.*, the Participant receives cash rather than stock), such expiration, termination or settlement will not reduce (or otherwise offset) the number of shares of Common Stock that may be available for issuance under the Plan. If any shares of Common Stock issued pursuant to a Stock Award are forfeited back to or repurchased or reacquired by the Company for any reason, including because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares that are forfeited or repurchased or reacquired will revert to and again become available for issuance under the Plan. Any shares reacquired by the Company in satisfaction of tax withholding obligations on a Stock Award or as consideration for the exercise or purchase price of a Stock Award will again become available for issuance under the Plan.

(c) Incentive Stock Option Limit. Subject to the Share Reserve and Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options will be 40,864,500 shares of Common Stock.

(d) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

4. ELIGIBILITY.

(a) Eligibility for Specific Stock Awards. Incentive Stock Options may be granted only to employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and 424(f) of the Code). Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants; provided, however, that Stock Awards may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company, as such term is defined in Rule 405 of the Securities Act, unless (i) the stock underlying such Stock Awards is treated as "service recipient stock" under Section 409A of the Code (for example, because the Stock Awards are granted pursuant to a corporate transaction such as a spin off transaction), (ii) the Company, in consultation with its legal counsel, has determined that such Stock Awards are otherwise exempt from Section 409A of the Code, or (iii) the Company, in consultation with its legal counsel, has determined that such Stock Awards comply with the distribution requirements of Section 409A of the Code.

(b) Ten Percent Stockholders. A Ten Percent Stockholder will not be granted an Incentive Stock Option unless the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant and the Option is not exercisable after the expiration of five years from the date of grant.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates will be issued for shares of Common Stock purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, or if an Option is designated as an Incentive Stock Option but some portion or all of the Option fails to qualify as an Incentive Stock Option under the applicable rules, then the Option (or portion thereof) will be a Nonstatutory Stock Option. The provisions of separate Options or SARs need not be identical; *provided, however*, that each Award Agreement will conform to (through incorporation of provisions hereof by reference in the applicable Award Agreement or otherwise) the substance of each of the following provisions:

(a) Term. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten (10) years from the date of its grant or such shorter period specified in the Award Agreement.

(b) Exercise Price. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will be not less than 100% of the Fair Market Value of the Common Stock subject to the Option or SAR on the date the Award is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value of the Common Stock subject to the Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a corporate transaction and in a manner consistent with the provisions of Section 409A of the Code and, if applicable, Section 424(a) of the Code. Each SAR will be denominated in shares of Common Stock equivalents.

(c) Purchase Price for Options. The purchase price of Common Stock acquired pursuant to the exercise of an Option may be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board will have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to use a particular method of payment. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) if an Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; *provided*, *however*, that the Company will accept a cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued. Shares of Common Stock will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) shares issuable upon exercise are used to pay the exercise price pursuant to the "net exercise," (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations; or

(v) in any other form of legal consideration that may be acceptable to the Board and specified in the applicable Award Agreement.

(d) Exercise and Payment of a SAR. To exercise any outstanding SAR, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Agreement evidencing such SAR. The appreciation distribution payable on the exercise of a SAR will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the SAR) of a number of shares of Common Stock equal to the number of Common Stock equivalents in which the Participant is vested under such SAR, and with respect to which the Participant is exercising the SAR on such date, over (B) the aggregate strike price of the number of Common Stock equivalents with respect to which the Participant is exercising the SAR on such date. The appreciation distribution may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Award Agreement evidencing such SAR.

(e) Transferability of Options and SARs. The Board may, in its sole discretion, impose such limitations on the transferability of Options and SARs as the Board will determine. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options and SARs will apply:

(i) Restrictions on Transfer. An Option or SAR will not be transferable except by will or by the laws of descent and distribution (or pursuant to subsections (ii) and (iii) below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of

the Option or SAR in a manner that is not prohibited by applicable tax and securities laws. Except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration.

(ii) Domestic Relations Orders. Subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation Section 1.421-1(b)(2). If an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Subject to the approval of the Board or a duly authorized Officer, a Participant may, by delivering written notice to the Company, in a form approved by the Company (or the designated broker), designate a third party who, on the death of the Participant, will thereafter be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, upon the death of the Participant, the executor or administrator of the Participant's estate will be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. However, the Company may prohibit designation of a beneficiary at any time, including due to any conclusion by the Company that such designation would be inconsistent with the provisions of applicable laws.

(f) Vesting Generally. The total number of shares of Common Stock subject to an Option or SAR may vest and become exercisable in periodic installments that may or may not be equal. The Option or SAR may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of Performance Goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options or SARs may vary. The provisions of this Section 5(f) are subject to any Option or SAR provisions governing the minimum number of shares of Common Stock as to which an Option or SAR may be exercised.

(g) Termination of Continuous Service. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date that is three (3) months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the applicable Award Agreement, which period will not be less than thirty (30) days if necessary to comply with applicable laws unless such termination is for Cause) and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR (as applicable) within the applicable time frame, the Option or SAR will terminate.

(h) Extension of Termination Date. Except as otherwise provided in the applicable Award Agreement or other written agreement between the Participant and the Company, if the exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option or SAR will terminate on the earlier of (i) the expiration of a total period of time (that need not be consecutive) equal to the applicable post termination exercise period after the termination of the Participant's Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement. In addition, unless otherwise provided in a Participant's Award Agreement, if the sale of any Common Stock received on exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading

policy, then the Option or SAR will terminate on the earlier of (i) the expiration of a period of months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option or SAR would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement.

(i) Disability of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Option or SAR as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date twelve (12) months following such termination of Continuous Service (or such longer or shorter period specified in the Award Agreement, which period will not be less than six (6) months if necessary to comply with applicable laws) and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR (as applicable) will terminate.

(j) Death of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in the Award Agreement for exercisability after the termination of the Participant's Continuous Service for a reason other than death, then the Option or SAR may be exercised (to the extent the Participant was entitled to exercise such Option or SAR as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Option or SAR by bequest or inheritance or by a person designated to exercise the Option or SAR upon the Participant's death, but only within the period ending on the earlier of (i) the date eighteen (18) months following the date of death (or such longer or shorter period specified in the Award Agreement, which period will not be less than six (6) months if necessary to comply with applicable laws) and (ii) the expiration of the term of such Option or SAR as set forth in the Award Agreement. If, after the Participant's death, the Option or SAR is not exercised within the applicable time frame, the Option or SAR (as applicable) will terminate.

(k) Termination for Cause. Except as explicitly provided otherwise in a Participant's Award Agreement or other individual written agreement between the Company or any Affiliate and the Participant, if a Participant's Continuous Service is terminated for Cause, the Option or SAR will terminate immediately upon such Participant's termination of Continuous Service, and the Participant will be prohibited from exercising his or her Option or SAR from and after the time of such termination of Continuous Service.

(l) Non-Exempt Employees. If an Option or SAR is granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, the Option or SAR will not be first exercisable for any shares of Common Stock until at least six (6) months following the date of grant of the Option or SAR (although the Award may vest prior to such date). Consistent with the provisions of the Worker Economic Opportunity Act, (i) if such non-exempt Employee dies or suffers a Disability, (ii) upon a Corporate Transaction in which such Option or SAR is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant's retirement (as such term may be defined in the Participant's Award Agreement, in another agreement between the Participant and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options and SARs may be exercised earlier than six (6) months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay. To the extent permitted and/or required for compliance with the Worker Economic Opportunity Act to ensure that any income derived by a non-exempt employee in connection

with the exercise, vesting or issuance of any shares under any other Stock Award will be exempt from the employee's regular rate of pay, the provisions of this Section 5(l) will apply to all Stock Awards and are hereby incorporated by reference into such Stock Award Agreements.

6. PROVISIONS OF STOCK AWARDS OTHER THAN OPTIONS AND SARS.

(a) Restricted Stock Awards. Each Restricted Stock Award Agreement will be in such form and will contain such terms and conditions as the Board deems appropriate. To the extent consistent with the Company's bylaws, at the Board's election, shares of Common Stock may be (i) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse; or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Award Agreements need not be identical. Each Restricted Stock Award Agreement will conform to (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company, (B) past or future services to the Company or an Affiliate, or (C) any other form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. Shares of Common Stock awarded under the Restricted Stock Award Agreement may be subject to forfeiture to the Company in accordance with a vesting schedule to be determined by the Board.

(iii) Termination of Participant's Continuous Service. If a Participant's Continuous Service terminates, the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Agreement.

(iv) Transferability. Rights to acquire shares of Common Stock under the Restricted Stock Award Agreement will be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board will determine in its sole discretion, so long as Common Stock awarded under the Restricted Stock Award Agreement remains subject to the terms of the Restricted Stock Award Agreement.

(v) Dividends. A Restricted Stock Award Agreement may provide that any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to the Restricted Stock Award to which they relate.

(b) Restricted Stock Unit Awards. Each Restricted Stock Unit Award Agreement will be in such form and will contain such terms and conditions as the Board deems appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical. Each Restricted Stock Unit Award Agreement will conform to (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the

Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions on or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) Payment. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Agreement.

(iv) Additional Restrictions. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) Dividend Equivalents. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Agreement. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement or other written agreement between a Participant and the Company or an Affiliate, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(c) Performance Awards.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award that is payable (including that may be granted, may vest or may be exercised) contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Stock Award may, but need not, require the Participant's completion of a specified period of Continuous Service. The length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Board or Committee, in its sole discretion. In addition, to the extent permitted by applicable law and the applicable Award Agreement, the Board or the Committee may determine that cash may be used in payment of Performance Stock Awards.

(ii) Performance Cash Awards. A Performance Cash Award is a cash award that is payable contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Cash Award may also require the completion of a specified period of Continuous Service. At the time of grant of a Performance Cash Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Board or Committee, in its sole discretion. The Board or Committee may specify the form of payment of Performance Cash Awards, which may be cash or other property, or may provide for a Participant to have the option for his or her

Performance Cash Award, or such portion thereof as the Board may specify, to be paid in whole or in part in cash or other property.

(iii) Board Discretion. The Board retains the discretion to adjust or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for a Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Stock Award Agreement or the written terms of a Performance Cash Award.

(d) Other Stock Awards. Other forms of Stock Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value of the Common Stock at the time of grant) may be granted either alone or in addition to Stock Awards provided for under Section 5 and the preceding provisions of this Section 6. Subject to the provisions of the Plan, the Board will have sole and complete authority to determine the persons to whom and the time or times at which such Other Stock Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Stock Awards and all other terms and conditions of such Other Stock Awards.

7. COVENANTS OF THE COMPANY.

(a) Availability of Shares. The Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy then-outstanding Stock Awards.

(b) Securities Law Compliance. The Company will seek to obtain from each regulatory commission or agency having jurisdiction over the Plan, as necessary, such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise or vesting of the Stock Awards; *provided*, *however*, that this undertaking will not require the Company to register under the Securities Act or other securities or applicable laws, the Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary or advisable for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise or vesting of such Stock Awards unless and until such authority is obtained. A Participant will not be eligible for the grant of an Award or the subsequent issuance of cash or Common Stock pursuant to the Award if such grant or issuance would be in violation of any applicable securities law.

(c) No Obligation to Notify or Minimize Taxes. The Company will have no duty or obligation to any Participant to advise such holder as to the tax treatment or time or manner of exercising such Stock Award. Furthermore, the Company will have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award.

8. MISCELLANEOUS.

(a) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Stock Awards will constitute general funds of the Company.

(b) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate

action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action approving the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the papering of the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(c) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to an Award unless and until (i) such Participant has satisfied all requirements for exercise of, or the issuance of shares of Common Stock under, the Award pursuant to its terms, and (ii) the issuance of the Common Stock subject to such Award has been entered into the books and records of the Company.

(d) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or will affect the right of the Company or an Affiliate to terminate (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state or foreign jurisdiction in which the Company or the Affiliate is domiciled or incorporated, as the case may be.

(e) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board has the right in its sole discretion to (x) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (y) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(f) Incentive Stock Option Limitations. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(g) Investment Assurances. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that such Participant is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Award; and (ii) to give

written assurances satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, will be inoperative if (A) the issuance of the shares upon the exercise or acquisition of Common Stock under the Stock Award has been registered under a then currently effective registration statement under the Securities Act, or (B) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(h) Withholding Obligations. Unless prohibited by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any federal, state or local tax withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Stock Award; *provided, however,* that no shares of Common Stock are withheld with a value exceeding the maximum amount of tax required to be withheld by law (or such lesser amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; or (v) by such other method as may be set forth in the Award Agreement.

(i) Electronic Delivery. Any reference herein to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access).

(j) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code. Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(k) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of an event constituting Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to voluntary terminate employment upon a "resignation for good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

(l) Compliance with Section 409A of the Code. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A of the Code, and, to the extent not so exempt, in compliance with Section 409A of the Code. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A of the Code, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A of the Code is a "specified employee" for purposes of Section 409A of the Code, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) will be issued or paid before the date that is six months following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A of the Code, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

9. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities by which the share reserve is to increase automatically each year pursuant to Section 3(a), (iii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c), and (iv) the class(es) and number of securities and price per share of stock subject to outstanding Stock Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) Dissolution. Except as otherwise provided in the Stock Award Agreement, in the event of a Dissolution of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such Dissolution, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service; *provided*, *however*, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the Dissolution is completed but contingent on its completion.

(c) Transaction. The following provisions will apply to Stock Awards in the event of a Transaction unless otherwise provided in the instrument evidencing the Stock Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of a Stock Award. In the event of a Transaction, then, notwithstanding any other provision of the Plan, the Board may take one or more of the following actions with respect to Stock Awards, contingent upon the closing or completion of the Transaction:

(i) arrange for the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the Stock Award or to substitute a similar

stock award for the Stock Award (including, but not limited to, an award to acquire the same consideration paid to the stockholders of the Company pursuant to the Transaction);

(ii) arrange for the assignment of any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to the Stock Award to the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company);

(iii) accelerate the vesting, in whole or in part, of the Stock Award (and, if applicable, the time at which the Stock Award may be exercised) to a date prior to the effective time of such Transaction as the Board determines (or, if the Board does not determine such a date, to the date that is five days prior to the effective date of the Transaction), with such Stock Award terminating if not exercised (if applicable) at or prior to the effective time of the Transaction; *provided*, *however*, that the Board may require Participants to complete and deliver to the Company a notice of exercise before the effective date of a Transaction, which exercise is contingent upon the effectiveness of such Transaction;

(iv) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by the Company with respect to the Stock Award;

(v) cancel or arrange for the cancellation of the Stock Award, to the extent not vested or not exercised prior to the effective time of the Transaction, in exchange for such cash consideration, if any, as the Board, in its sole discretion, may consider appropriate; and

(vi) make a payment, in such form as may be determined by the Board equal to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Stock Award immediately prior to the effective time of the Transaction, over (B) any exercise price payable by such holder in connection with such exercise. For clarity, this payment may be $0 if the value of the property is equal to or less than the exercise price. Payments under this provision may be delayed to the same extent that payment of consideration to the holders of the Company's Common Stock in connection with the Transaction is delayed as a result of escrows, earn outs, holdbacks or any other contingencies.

The Board need not take the same action or actions with respect to all Stock Awards or portions thereof or with respect to all Participants. The Board may take different actions with respect to the vested and unvested portions of a Stock Award.

(d) Change in Control. A Stock Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Stock Award Agreement for such Stock Award or as may be provided in any other written agreement between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration will automatically occur.

10. PLAN TERM; EARLIER TERMINATION OR SUSPENSION OF THE PLAN.

The Board may suspend or terminate the Plan at any time. No Incentive Stock Options may be granted after the tenth anniversary of the earlier of (i) the date the Plan is adopted by the Board (the "***Adoption Date***"), or (ii) the date the Plan is approved by the stockholders of the Company. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

11. EXISTENCE OF THE PLAN; TIMING OF FIRST GRANT OR EXERCISE.

The Plan will come into existence on the Adoption Date; *provided*, *however*, that no Stock Award may be granted prior to the IPO Date. In addition, no Stock Award will be exercised (or, in the case of a

Restricted Stock Award, Restricted Stock Unit Award, Performance Share Award, or Other Stock Award, no Stock Award will be granted) and no Performance Cash Award will be settled unless and until the Plan has been approved by the stockholders of the Company, which approval will be within 12 months after the date the Plan is adopted by the Board.

12. CHOICE OF LAW.

The laws of the State of Delaware will govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. DEFINITIONS. As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 of the Securities Act. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(b) "***Award***" means a Stock Award or a Performance Cash Award.

(c) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award.

(d) "***Board***" means the Board of Directors of the Company.

(e) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(f) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Stock Award after the Adoption Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(g) "***Cause***" shall have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company; (iii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or of any statutory duty owed to the Company; (iv) such Participant's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) such Participant's gross misconduct. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause shall be made by the Company, in its sole discretion. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant shall

have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(h) "***Change in Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, (C) on account of the acquisition of securities of the Company by any individual who is, on the IPO Date, either an executive officer or a Director (either, an "***IPO Investor***") and/or any entity in which an IPO Investor has a direct or indirect interest (whether in the form of voting rights or participation in profits or capital contributions) of more than 50% (collectively, the "***IPO Entities***") or on account of the IPO Entities continuing to hold shares that come to represent more than 50% of the combined voting power of the Company's then outstanding securities as a result of the conversion of any class of the Company's securities into another class of the Company's securities having a different number of votes per share pursuant to the conversion provisions set forth in the Company's Amended and Restated Certificate of Incorporation; or (D) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction; *provided*, *however*, that a merger, consolidation or similar transaction will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the surviving Entity or its parent are owned by the IPO Entities;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; *provided*, *however*, that a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries will not constitute a Change in Control

under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the acquiring Entity or its parent are owned by the IPO Entities;

(iv) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company will otherwise occur, except for a liquidation into a parent corporation; or

(v) individuals who, on the IPO Date, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; *provided, however,* that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing definition or any other provision of the Plan, (A) the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; *provided, however*, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition will apply.

(i) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(j) "***Committee***" means a committee of one or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(k) "***Common Stock***" means, as of the IPO Date, the common stock of the Company, having one vote per share.

(l) "***Company***" means Allogene Therapeutics, Inc., a Delaware corporation.

(m) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(n) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; *provided, however*, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, in its sole discretion, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be

considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law.

(o) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of more than 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(p) "***Director***" means a member of the Board.

(q) "***Disability***" means, with respect to a Participant, the inability of such Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Sections 22(e)(3) and 409A(a)(2)(c)(i) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(r) "***Dissolution***" means when the Company, after having executed a certificate of dissolution with the State of Delaware (or other applicable state), has completely wound up its affairs. Conversion of the Company into a Limited Liability Company (or any other pass-through entity) will not be considered a "Dissolution" for purposes of the Plan.

(s) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(t) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(u) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(v) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit

plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the IPO Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(w) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(x) "***Incentive Stock Option***" means an option granted pursuant to Section 5 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(y) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(z) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(aa) "***Nonstatutory Stock Option***" means any Option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(bb) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(cc) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(dd) "***Option Agreement***" means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an Option grant. Each Option Agreement will be subject to the terms and conditions of the Plan.

(ee) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(ff) "***Other Stock Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 6(d).

(gg) "***Other Stock Award Agreement***" means a written agreement between the Company and a holder of an Other Stock Award evidencing the terms and conditions of an Other Stock Award grant. Each Other Stock Award Agreement will be subject to the terms and conditions of the Plan.

(hh) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(ii) "***Participant***" means a person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.

(jj) "***Performance Cash Award***" means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

(kk) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or combination of, the following as determined by the Board: (i) sales; (ii) revenues; (iii) assets; (iv) expenses; (v) market penetration or expansion; (vi) earnings from operations; (vii) earnings before or after deduction for all or any portion of interest, taxes, depreciation, amortization, incentives, service fees or extraordinary or special items, whether or not on a continuing operations or an aggregate or per share basis; (viii) net income or net income per common share (basic or diluted); (ix) return on equity, investment, capital or assets; (x) one or more operating ratios; (xi) borrowing levels, leverage ratios or credit rating; (xii) market share; (xiii) capital expenditures; (xiv) cash flow, free cash flow, cash flow return on investment, or net cash provided by operations; (xv) stock price, dividends or total stockholder return; (xvi) development of new technologies or products; (xvii) sales of particular products or services; (xviii) economic value created or added; (xix) operating margin or profit margin; (xx) customer acquisition or retention; (xxi) raising or refinancing of capital; (xxii) successful hiring of key individuals; (xxiii) resolution of significant litigation; (xxiv) acquisitions and divestitures (in whole or in part); (xxv) joint ventures and strategic alliances; (xxvi) spin-offs, split-ups and the like; (xxvii) reorganizations; (xxviii) recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; (xxix) or strategic business criteria, consisting of one or more objectives based on the following goals: achievement of timely development, design management or enrollment, meeting specified market penetration or value added, payor acceptance, patient adherence, peer reviewed publications, issuance of new patents, establishment of or securing of licenses to intellectual property, product development or introduction (including, without limitation, any clinical trial accomplishments, regulatory or other filings, approvals or milestones, discovery of novel products, maintenance of multiple products in pipeline, product launch or other product development milestones), geographic business expansion, cost targets, cost reductions or savings, customer satisfaction, operating efficiency, acquisition or retention, employee satisfaction, information technology, corporate development

(including, without limitation, licenses, innovation, research or establishment of third party collaborations), manufacturing or process development, legal compliance or risk reduction, patent application or issuance goals, or goals relating to acquisitions, divestitures or other business combinations (in whole or in part), joint ventures or strategic alliances; and (xxx) other measures of performance selected by the Board.

(ll) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. The Board is authorized at any time in its sole discretion, to adjust or modify the calculation of a Performance Goal for such Performance Period in order to prevent the dilution or enlargement of the rights of Participants, (a) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event or development; (b) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting the Company, or the financial statements of the Company in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions; or (c) in view of the Board's assessment of the business strategy of the Company, performance of comparable organizations, economic and business conditions, and any other circumstances deemed relevant. Specifically, the Board is authorized to make adjustment in the method of calculating attainment of Performance Goals and objectives for a Performance Period as follows: (i) to exclude the dilutive effects of acquisitions or joint ventures; (ii) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; and (iii) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends. In addition, the Board is authorized to make adjustment in the method of calculating attainment of Performance Goals and objectives for a Performance Period as follows: (i) to exclude restructuring and/or other nonrecurring charges; (ii) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated net sales and operating earnings; (iii) to exclude the effects of changes to generally accepted accounting standards required by the Financial Accounting Standards Board; (iv) to exclude the effects of any items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (v) to exclude the effects to any statutory adjustments to corporate tax rates; and (vi) to make other appropriate adjustments selected by the Board.

(mm) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to and the payment of a Stock Award or a Performance Cash Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(nn) "***Performance Stock Award***" means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(oo) "***Plan***" means this Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan.

(pp) "***Restricted Stock Award***" means an award of shares of Common Stock, which is granted pursuant to the terms and conditions of Section 6(a).

(qq) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(rr) "***Restricted Stock Unit Award***" means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(ss) "***Restricted Stock Unit Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Unit Award evidencing the terms and conditions of a Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Agreement will be subject to the terms and conditions of the Plan.

(tt) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(uu) "***Securities Act***" means the Securities Act of 1933, as amended.

(vv) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 5.

(ww) "***Stock Appreciation Right Agreement***" means a written agreement between the Company and a holder of a Stock Appreciation Right evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Agreement will be subject to the terms and conditions of the Plan.

(xx) "***Stock Award***" means any right to receive Common Stock granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, a Performance Stock Award or any Other Stock Award.

(yy) "***Stock Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement will be subject to the terms and conditions of the Plan.

(zz) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(aaa) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

(bbb) "***Transaction***" means a Corporate Transaction or a Change in Control.

ALLOGENE THERAPEUTICS, INC.

STOCK OPTION GRANT NOTICE
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)

Allogene Therapeutics, Inc. (the "***Company***"), pursuant to its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this Stock Option Grant Notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this Stock Option Grant Notice and the Plan, the terms of the Plan will control.

Optionholder:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Shares Subject to Option:	_____
Exercise Price (Per Share):	_____
Total Exercise Price:	_____
Expiration Date:	_____

Type of Grant: ☐ Incentive Stock Option[1] ☐ Nonstatutory Stock Option

Exercise Schedule: Same as Vesting Schedule

Vesting Schedule: **[**], subject to Optionholder's Continuous Service as of each such date.

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company
☒ Pursuant to a Regulation T Program if the shares are publicly traded
☐ By delivery of already-owned shares if the shares are publicly traded
☐ If and only to the extent this option is a Nonstatutory Stock Option, and subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

[1] If this is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calendar year. Any excess over $100,000 is a Nonstatutory Stock Option.

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of, if applicable, (i) equity awards previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement or other written agreement entered into between the Company and Optionholder specifying the terms that should govern this option upon the terms and conditions set forth therein.

By accepting this option, Optionholder acknowledges having received and read the Stock Option Grant Notice, the Option Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Optionholder consents to receive Plan and related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

ALLOGENE THERAPEUTICS, INC.	**OPTIONHOLDER:**
By: _____	_____
Signature	Signature
Title: _____	Date: _____
Date: _____	

ATTACHMENTS: Option Agreement, Amended and Restated 2018 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

ALLOGENE THERAPEUTICS, INC.

OPTION AGREEMENT
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)
(INCENTIVE STOCK OPTION OR NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Allogene Therapeutics, Inc. (the "***Company***") has granted you an option under its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

(a) Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

(b) Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

(c) If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

5. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

6. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

7. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

(a) immediately upon the termination of your Continuous Service for Cause;

(b) three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 7(d) below); *provided, however,* that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above regarding "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy. Notwithstanding the foregoing, if (i) you are a Non-Exempt Employee, (ii) your Continuous Service terminates within six (6) months after the Date of Grant, and (iii) you have vested in a portion of your option at the time of your termination of Continuous Service, your option will not expire until the earlier of (x) the later of (A) the

date that is seven (7) months after the Date of Grant, and (B) the date that is three (3) months after the termination of your Continuous Service, and (y) the Expiration Date;

(c) twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 7(d) below);

(d) eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

(e) the Expiration Date indicated in your Grant Notice; or

(f) the day before the tenth (10th) anniversary of the Date of Grant.

If your option is an Incentive Stock Option, note that to obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the Date of Grant and ending on the day three (3) months before the date of your option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

8. EXERCISE.

(a) You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

(b) By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

(c) If your option is an Incentive Stock Option, by exercising your option you agree that you will notify the Company in writing within fifteen (15) days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your option that occurs within two (2) years after the Date of Grant or within one (1) year after such shares of Common Stock are transferred upon exercise of your option.

(d) By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor

or similar rules or regulation (the "***Lock-Up Period***"); *provided*, *however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 8(d). The underwriters of the Company's stock are intended third party beneficiaries of this Section 8(d) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

9. TRANSFERABILITY. Except as otherwise provided in this Section 9, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

(a) Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

(b) Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement. If this option is an Incentive Stock Option, this option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(c) Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

10. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

11. WITHHOLDING OBLIGATIONS.

(a) At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day

sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

(b) If this option is a Nonstatutory Stock Option, then upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the maximum amount of tax permitted to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes).

(c) You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

12. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

13. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

14. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

15. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

16. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

17. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

18. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

19. MISCELLANEOUS.

(a) The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

(c) You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

(d) This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

ALLOGENE THERAPEUTICS, INC.
210 East Grand Avenue
South San Francisco, California 94080

Date of Exercise:_____

This constitutes notice to Allogene Therapeutics, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option (check one):	Incentive ☐	Nonstatutory ☐
Stock option dated:	_____	_____
Number of Shares as to which option is exercised:	_____	_____
Certificates to be issued in name of:	_____	_____
Total exercise price:	$_____	$_____
Cash payment delivered herewith:	$_____	$_____
[Value of _____ Shares delivered herewith[1]:	$_____	$_____]
[Value of _____ Shares pursuant to net exercise[2]:	$_____	$_____]
[Regulation T Program (cashless exercise[3]):	$_____	$_____]

1 Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.

2 The option must be a Nonstatutory Stock Option, and the Company must have established net exercise procedures at the time of exercise, in order to utilize this payment method.

3 Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan, (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option, and (iii) if this exercise relates to an incentive stock option, to notify you in writing within fifteen (15) days after the date of any disposition of any of the Shares issued upon exercise of this option that occurs within two (2) years after the date of grant of this option or within one (1) year after such Shares are issued upon exercise of this option.

I further agree that, if required by the Company (or a representative of the underwriters) in connection with the first underwritten registration of the offering of any securities of the Company under the Securities Act, I will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act (or such longer period as the underwriters or the Company shall request to facilitate compliance with FINRA Rule 2241 or any successor or similar rule or regulation) (the "***Lock-Up Period***"). I further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such period.

Very truly yours,

_____

ALLOGENE THERAPEUTICS, INC.

RESTRICTED STOCK UNIT GRANT NOTICE
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)

Allogene Therapeutics, Inc. (the "***Company***"), pursuant to its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant a Restricted Stock Unit Award for the number of shares of the Company's Common Stock ("***Restricted Stock Units***") set forth below (the "***Award***"). The Award is subject to all of the terms and conditions as set forth in this notice of grant (this "***Restricted Stock Unit Grant Notice***"), and in the Plan and the Restricted Stock Unit Award Agreement (the "***Award Agreement***"), both of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein shall have the meanings set forth in the Plan or the Award Agreement. In the event of any conflict between the terms in this Restricted Stock Unit Grant Notice or the Award Agreement and the Plan, the terms of the Plan shall control.

Participant:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Restricted Stock Units:	_____

Vesting Schedule: [_____], subject to Participant's Continuous Service through each such vesting date.

Issuance Schedule: Subject to any Capitalization Adjustment, one share of Common Stock (or its cash equivalent, at the discretion of the Company) will be issued for each Restricted Stock Unit that vests at the time set forth in Section 6 of the Award Agreement.

Mandatory Sale To Cover Withholding Taxes: As a condition to acceptance of this Award, to the fullest extent permitted under the Plan and applicable law, withholding taxes and other tax related items will be satisfied through the sale of a number of the shares subject to the Award as determined in accordance with Section 11 of the Award Agreement and the remittance of the cash proceeds to the Company. Under the Award Agreement, the Company is authorized and directed by Participant to make payment from the cash proceeds of this sale directly to the appropriate taxing authorities in an amount equal to the taxes required to be withheld. The mandatory sale of shares to cover withholding taxes and tax related items is imposed by the Company on Participant in connection with the receipt of this Award, and it is intended to comply with the requirements of Rule 10b5-1(c)(1)(i)(B) under the Exchange Act and be interpreted to meet the requirements of Rule 10b5-1(c).

Additional Terms/Acknowledgements: Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. Participant acknowledges and agrees that this Restricted Stock Unit Grant Notice and the Award Agreement may not be modified, amended, or revised except as provided in the Plan. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of the Common Stock

pursuant to the Award specified above and supersede all prior oral and written agreements on the terms of this Award, with the exception, if applicable, of (i) equity awards previously granted and delivered to Participant, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement or other written agreement entered into between the Company and Participant specifying the terms that should govern this Award upon the terms and conditions set forth therein.

By accepting this Award, Participant acknowledges having received and read the Restricted Stock Unit Grant Notice, the Award Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Participant consents to receive Plan and related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

ALLOGENE THERAPEUTICS, INC.

By: _____
Signature

Title: _____

Date: _____

PARTICIPANT

_____
Signature

Date: _____

ATTACHMENTS: Award Agreement and Amended and Restated 2018 Equity Incentive Plan

ATTACHMENT I

ALLOGENE THERAPEUTICS, INC.

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Grant Notice (the "***Grant Notice***") and this Restricted Stock Unit Award Agreement (the "***Agreement***"), Allogene Therapeutics, Inc. (the "***Company***") has awarded you ("***Participant***") a Restricted Stock Unit Award (the "***Award***") pursuant to the Company's Amended and Restated 2018 Equity Incentive Plan (the "***Plan***") for the number of Restricted Stock Units/shares indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement or the Grant Notice shall have the same meanings given to them in the Plan. The terms of your Award, in addition to those set forth in the Grant Notice, are as follows.

1. GRANT OF THE AWARD. This Award represents the right to be issued on a future date one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 below) as indicated in the Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "***Account***") the number of Restricted Stock Units/shares of Common Stock subject to the Award. Notwithstanding the foregoing, the Company reserves the right to issue you the cash equivalent of Common Stock, in part or in full satisfaction of the delivery of Common Stock in connection with the vesting of the Restricted Stock Units, and, to the extent applicable, references in this Agreement and the Grant Notice to Common Stock issuable in connection with your Restricted Stock Units will include the potential issuance of its cash equivalent pursuant to such right. This Award was granted in consideration of your services to the Company.

2. VESTING. Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice. Vesting will cease upon the termination of your Continuous Service and the Restricted Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in or to such Award or the shares of Common Stock to be issued in respect of such portion of the Award.

3. NUMBER OF SHARES. The number of Restricted Stock Units subject to your Award may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Any additional Restricted Stock Units, shares, cash or other property that becomes subject to the Award pursuant to this Section 3, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Restricted Stock Units and shares covered by your Award. Notwithstanding the provisions of this Section 3, no fractional shares or rights for fractional shares of Common Stock shall be created pursuant to this Section 3. Any fraction of a share will be rounded down to the nearest whole share.

4. SECURITIES LAW COMPLIANCE. You may not be issued any Common Stock under your Award unless the shares of Common Stock underlying the Restricted Stock Units are either (i) then registered under the Securities Act, or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award must also comply with other applicable laws and regulations governing the Award, and you shall not receive such Common Stock if the Company determines that such receipt would not be in material compliance with such laws and regulations.

5. TRANSFER RESTRICTIONS. Prior to the time that shares of Common Stock have been delivered to you, you may not transfer, pledge, sell or otherwise dispose of this Award or the shares issuable in respect of your Award, except as expressly provided in this Section 5. For example, you may not use shares that may be issued in respect of your Restricted Stock Units as security for a loan. The restrictions on transfer set forth herein will lapse upon delivery to you of shares in respect of your vested Restricted Stock Units.

(a) Death. Your Award is transferable by will and by the laws of descent and distribution. At your death, vesting of your Award will cease and your executor or administrator of your estate shall be entitled to receive, on behalf of your estate, any Common Stock or other consideration that vested but was not issued before your death.

(b) Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your right to receive the distribution of Common Stock or other consideration hereunder, pursuant to a domestic relations order, marital settlement agreement or other divorce or separation instrument as permitted by applicable law that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this Award with the Company General Counsel prior to finalizing the domestic relations order or marital settlement agreement to verify that you may make such transfer, and if so, to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

6. DATE OF ISSUANCE.

(a) The issuance of shares in respect of the Restricted Stock Units is intended to comply with Treasury Regulations Section 1.409A-1(b)(4) and will be construed and administered in such a manner. Subject to the satisfaction of the withholding obligations set forth in this Agreement, in the event one or more Restricted Stock Units vests, the Company shall issue to you one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 above). Each issuance date determined by this paragraph is referred to as an "***Original Issuance Date***".

(b) If the Original Issuance Date falls on a date that is not a business day, delivery shall instead occur on the next following business day. In addition, if:

(i) the Original Issuance Date does not occur (1) during an "open window period" applicable to you, as determined by the Company in accordance with the Company's then-effective policy on trading in Company securities, or (2) on a date when you are otherwise permitted to sell shares of Common Stock on an established stock exchange or stock market, *and*

(ii) either (1) a Withholding Taxes does not apply, or (2) the Company decides, prior to the Original Issuance Date, (A) not to satisfy the Withholding Taxes by withholding shares of Common Stock from the shares otherwise due, on the Original Issuance Date, to you under this Award, and (B) not to permit you to pay your Withholding Taxes in cash,

then the shares that would otherwise be issued to you on the Original Issuance Date will not be delivered on such Original Issuance Date and will instead be delivered on the first business day when you are not prohibited from selling shares of the Company's Common Stock in the open public market, but in no event later than December 31 of the calendar year in which the Original Issuance Date occurs (that is, the last day of your taxable year in which the Original Issuance Date occurs), or, if and only if permitted in

a manner that complies with Treasury Regulations Section 1.409A-1(b)(4), no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the shares of Common Stock under this Award are no longer subject to a "substantial risk of forfeiture" within the meaning of Treasury Regulations Section 1.409A-1(d).

(c) The form of delivery (*e.g.*, a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

7. DIVIDENDS. You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment; provided, however, that this sentence will not apply with respect to any shares of Common Stock that are delivered to you in connection with your Award after such shares have been delivered to you.

8. RESTRICTIVE LEGENDS. The shares of Common Stock issued in respect of your Award shall be endorsed with appropriate legends as determined by the Company.

9. EXECUTION OF DOCUMENTS. You hereby acknowledge and agree that the manner selected by the Company by which you indicate your consent to your Grant Notice is also deemed to be your execution of your Grant Notice and of this Agreement. You further agree that such manner of indicating consent may be relied upon as your signature for establishing your execution of any documents to be executed in the future in connection with your Award.

10. AWARD NOT A SERVICE CONTRACT.

(a) Nothing in this Agreement (including, but not limited to, the vesting of your Award or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ or service of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

(b) By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice may not be earned unless (in addition to any other conditions described in the Grant Notice and this Agreement) you continue as an employee, director or consultant at the will of the Company and affiliate, as applicable (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "***reorganization***"). You acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with the Company's right to terminate your Continuous Service at any time, with or without your cause or notice, or to conduct a reorganization.

11. WITHHOLDING OBLIGATIONS.

(a) (a) On each vesting date, and on or before the time you receive a distribution of the shares underlying your Restricted Stock Units, and at any other time as reasonably requested by the Company in accordance with applicable tax laws, you hereby authorize any required withholding from the Common Stock issuable to you and/or otherwise agree to make adequate provision, including in cash, for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate that arise in connection with your Award (the "***Withholding Taxes***"). Specifically, pursuant to Section 11(d), you hereby agree to a "same day sale" commitment with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a "***FINRA Dealer***") whereby you hereby irrevocably agree to sell a portion of the shares to be delivered in connection with your Restricted Stock Units to satisfy the Withholding Taxes and whereby the FINRA Dealer commits to forward the proceeds necessary to satisfy the Withholding Taxes directly to the Company and/or its Affiliates. If, for any reason, such "same day sale" commitment pursuant to Section 11(d) does not result in sufficient proceeds to satisfy the Withholding Taxes or would be prohibited by applicable law at the applicable time, you hereby authorize the Company and/or the relevant Affiliate, or their respective agents, at their discretion, to satisfy the obligations with regard to all Withholding Taxes by one or a combination of the following: (i) withholding from any compensation otherwise payable to you by the Company or any Affiliate; (ii) causing you to tender a cash payment (which may be in the form of a check, electronic wire transfer or other method permitted by the Company); or (iii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award with a fair market value (measured as of the date shares of Common Stock are issued to you pursuant to Section 6) equal to the amount of such Withholding Taxes; *provided, however*, that the number of such shares of Common Stock so withheld will not exceed the amount necessary to satisfy the Company's required tax withholding obligations using the minimum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income; and, *provided*, further, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Company's Compensation Committee.

(b) Unless the tax withholding obligations of the Company and/or any Affiliate are satisfied, the Company shall have no obligation to deliver to you any Common Stock.

(c) In the event the Company's obligation to withhold arises prior to the delivery to you of Common Stock or it is determined after the delivery of Common Stock to you that the amount of the Company's withholding obligation was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

(d) You hereby acknowledge and agree to the following:

(i) I hereby appoint such FINRA Dealer appointed by the Company for purposes of this Section 11(d) as my agent (the "***Agent***"), and authorize the Agent:

(1) To sell on the open market at the then prevailing market price(s), on my behalf, as soon as practicable on or after each date on which shares of Common Stock vest, the number (rounded up to the next whole number) of the shares of Common Stock to be delivered to me in connection with the vesting of those shares sufficient to generate proceeds to cover (A) the Withholding Taxes that I am required to pay pursuant to the Plan and this Agreement as a result of the Award vesting (or shares of Common Stock in respect of your Restricted Stock Units being issued, as applicable) and (B) all applicable fees and commissions due to, or required to be collected by, the Agent with respect thereto; and

(2) To remit any remaining funds to me.

(ii) I hereby authorize the Company and the Agent to cooperate and communicate with one another to determine the number of shares of Common Stock that must be sold pursuant to this Section 11(d).

(iii) I understand that the Agent may effect sales as provided in this Section 11(d) in one or more sales and that the average price for executions resulting from bunched orders will be assigned to my account. In addition, I acknowledge that it may not be possible to sell shares of Common Stock as provided by in this Section 11(d) due to (A) a legal or contractual restriction applicable to me or the Agent, (B) a market disruption, or (C) rules governing order execution priority on the national exchange where the Common Stock may be traded. In the event of the Agent's inability to sell shares of Common Stock, I will continue to be responsible for the timely payment to the Company of all Withholding Taxes and any other federal, state, local and foreign taxes that are required by applicable laws and regulations to be withheld, including but not limited to those amounts specified in this Section 11(d).

(iv) I acknowledge that regardless of any other term or condition of this Section 11(d), the Agent will not be liable to me for (A) special, indirect, punitive, exemplary, or consequential damages, or incidental losses or damages of any kind, or (B) any failure to perform or for any delay in performance that results from a cause or circumstance that is beyond its reasonable control.

(v) I hereby agree to execute and deliver to the Agent any other agreements or documents as the Agent reasonably deems necessary or appropriate to carry out the purposes and intent of this Section 11(d). The Agent is a third-party beneficiary of this Section 11(d).

(vi) This Section 11(d) shall terminate not later than the date on which all Withholding Taxes arising in connection with the vesting of the Award have been satisfied.

12. TAX CONSEQUENCES. The Company has no duty or obligation to minimize the tax consequences to you of this Award and shall not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so. You understand that you (and not the Company) shall be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

13. LOCK-UP PERIOD. By accepting your Award, you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 13. The underwriters of the Company's stock are intended third party beneficiaries of this Section 13 and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

14. UNSECURED OBLIGATION. Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company's obligation, if any, to issue shares or other property pursuant to this Agreement. You shall not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 6 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

15. NOTICES. Any notice or request required or permitted hereunder shall be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

16. HEADINGS. The headings of the Sections in this Agreement are inserted for convenience only and shall not be deemed to constitute a part of this Agreement or to affect the meaning of this Agreement.

17. MISCELLANEOUS.

(a) The rights and obligations of the Company under your Award shall be transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by, the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

(c) You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

(d) This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Agreement shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

18. GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law. No recovery of compensation under such a clawback policy will be an event giving rise to a right to voluntarily terminate employment upon a resignation for "good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

19. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of the Award subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating benefits under any employee benefit plan (other than the Plan) sponsored by the Company or any Affiliate except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any or all of the employee benefit plans of the Company or any Affiliate.

20. SEVERABILITY. If all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

21. OTHER DOCUMENTS. You hereby acknowledge receipt or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

22. AMENDMENT. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that, except as otherwise expressly provided in the Plan, no such amendment materially adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the Award as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided

that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

23. COMPLIANCE WITH SECTION 409A OF THE CODE. This Award is intended to be exempt from the application of Section 409A of the Code, including but not limited to by reason of complying with the "short-term deferral" rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and any ambiguities herein shall be interpreted accordingly. Notwithstanding the foregoing, if it is determined that the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and determined to be deferred compensation subject to Section 409A of the Code, this Award shall comply with Section 409A to the extent necessary to avoid adverse personal tax consequences and any ambiguities herein shall be interpreted accordingly. If it is determined that the Award is deferred compensation subject to Section 409A and you are a "Specified Employee" (within the meaning set forth in Section 409A(a)(2)(B)(i) of the Code) as of the date of your "Separation from Service" (as defined in Section 409A), then the issuance of any shares that would otherwise be made upon the date of your Separation from Service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the Separation from Service, with the balance of the shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the shares is necessary to avoid the imposition of adverse taxation on you in respect of the shares under Section 409A of the Code. Each installment of shares that vests is intended to constitute a "separate payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2).

* * * * *

This Restricted Stock Unit Award Agreement shall be deemed to be signed by the Company and the Participant upon the signing by the Participant of the Restricted Stock Unit Grant Notice to which it is attached.

ATTACHMENT II

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN

ALLOGENE THERAPEUTICS, INC.

STOCK OPTION GRANT NOTICE
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)

Allogene Therapeutics, Inc. (the "***Company***"), pursuant to its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this Stock Option Grant Notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this Stock Option Grant Notice and the Plan, the terms of the Plan will control.

Optionholder:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Shares Subject to Option:	_____
Exercise Price (Per Share):	_____
Total Exercise Price:	_____
Expiration Date:	_____

Type of Grant: Nonstatutory Stock Option

Exercise Schedule: Same as Vesting Schedule

Vesting Schedule: [***Initial Grant***: The shares subject to the option shall vest in a series of 36 successive equal monthly installments over the three-year period measured from the Date of Grant][***Annual Grant***: The shares subject to the option shall vest in a series of 12 successive equal monthly installments over the one-year period measured from the Date of Grant], subject to Optionholder's Continuous Service as of each such date and the potential vesting acceleration described in Section 1 of the Option Agreement.

Payment: By one or a combination of the following items (described in the Option Agreement):

☒ By cash, check, bank draft or money order payable to the Company
☒ Pursuant to a Regulation T Program if the shares are publicly traded
☐ By delivery of already-owned shares if the shares are publicly traded
☐ Subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception of, if applicable, (i) equity awards previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement or other written agreement entered into between the Company and Optionholder specifying the terms that should govern this option upon the terms and conditions set forth therein.

By accepting this option, Optionholder acknowledges having received and read the Stock Option Grant Notice, the Option Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Optionholder consents to receive Plan and related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

ALLOGENE THERAPEUTICS, INC.	**OPTIONHOLDER:**
By: _____	_____
Signature	Signature
Title: _____	Date: _____
Date: _____	

ATTACHMENTS: Option Agreement, Amended and Restated 2018 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

ALLOGENE THERAPEUTICS, INC.

OPTION AGREEMENT
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)
(NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Allogene Therapeutics, Inc. (the "***Company***") has granted you an option under its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING.

(a) Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service. Notwithstanding the foregoing, if a Change in Control occurs and your Continuous Service has not terminated as of immediately prior to such Change in Control, the vesting and exercisability of your option will be accelerated in full.

(b) If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to

the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 1(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 1(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 1(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner ***permitted by your Grant Notice,*** which may include one or more of the following:

(a) Provided that at the time of exercise the Common Stock is publicly traded, pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

(b) Provided that at the time of exercise the Common Stock is publicly traded, by delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise

your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

(c) Subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

4. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

5. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

6. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

(a) immediately upon the termination of your Continuous Service for Cause;

(b) three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 6(d) below); *provided, however,* that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above regarding "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy;

(c) twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 6(d) below);

(d) eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

(e) the Expiration Date indicated in your Grant Notice; or

(f) the day before the tenth (10th) anniversary of the Date of Grant.

7. EXERCISE.

(a) You may exercise the vested portion of your option (and the unvested portion of your option if your Grant Notice so permits) during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

(b) By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

(c) By accepting your option you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 7(c). The underwriters of the Company's stock are intended third party beneficiaries of this Section 7(c) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

8. TRANSFERABILITY. Except as otherwise provided in this Section 8, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

(a) Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

(b) Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

(c) Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

9. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

10. WITHHOLDING OBLIGATIONS.

(a) At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "same day sale" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

(b) Upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the maximum amount of tax permitted to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes).

(c) You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

11. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

12. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole

discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

13. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

14. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

15. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

16. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

17. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

18. MISCELLANEOUS.

(a) The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

(c) You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

(d) This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Stock Option Grant Notice to which it is attached.

ATTACHMENT II

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

ALLOGENE THERAPEUTICS, INC.
210 East Grand Avenue
South San Francisco, California 94080

Date of Exercise: _____

This constitutes notice to Allogene Therapeutics, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option:	Nonstatutory
Stock option dated:	_____
Number of Shares as to which option is exercised:	_____
Certificates to be issued in name of:	_____
Total exercise price:	$_____
Cash payment delivered herewith:	$_____
[Value of _____ Shares delivered herewith[1]:	$_____]
[Value of _____ Shares pursuant to net exercise[2]:	$_____]
[Regulation T Program (cashless exercise[3]):	$_____]

1 Shares must meet the public trading requirements set forth in the option. Shares must be valued in accordance with the terms of the option being exercised, and must be owned free and clear of any liens, claims, encumbrances or security interests. Certificates must be endorsed or accompanied by an executed assignment separate from certificate.

2 The Company must have established net exercise procedures at the time of exercise, in order to utilize this payment method.

3 Shares must meet the public trading requirements set forth in the option.

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Allogene Therapeutics, Inc. Amended and Restated 2018 Equity Incentive Plan and (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option.

I further agree that, if required by the Company (or a representative of the underwriters) in connection with the first underwritten registration of the offering of any securities of the Company under the Securities Act, I will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act (or such longer period as the underwriters or the Company shall request to facilitate compliance with FINRA Rule 2241 or any successor or similar rule or regulation) (the "***Lock-Up Period***"). I further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such period.

Very truly yours,

_____

ALLOGENE THERAPEUTICS, INC.

RESTRICTED STOCK UNIT GRANT NOTICE
(AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN)

Allogene Therapeutics, Inc. (the "***Company***"), pursuant to its Amended and Restated 2018 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant a Restricted Stock Unit Award for the number of shares of the Company's Common Stock ("***Restricted Stock Units***") set forth below (the "***Award***"). The Award is subject to all of the terms and conditions as set forth in this notice of grant (this "***Restricted Stock Unit Grant Notice***"), and in the Plan and the Restricted Stock Unit Award Agreement (the "***Award Agreement***"), both of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein shall have the meanings set forth in the Plan or the Award Agreement. In the event of any conflict between the terms in this Restricted Stock Unit Grant Notice or the Award Agreement and the Plan, the terms of the Plan shall control.

Participant:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Restricted Stock Units:	_____

Vesting Schedule: **[*Initial Grant*:** The Restricted Stock Units subject to this Award shall vest in a series of three successive equal annual installments over the three-year period measured from the Date of Grant][***Annual Grant***: The Restricted Stock Units subject to this Award shall vest on the one-year anniversary of the Date of Grant], subject to Participant's Continuous Service through each such vesting date and the potential vesting acceleration described in Section 2 of the Award Agreement.

Issuance Schedule: Subject to any Capitalization Adjustment, one share of Common Stock (or its cash equivalent, at the discretion of the Company) will be issued for each Restricted Stock Unit that vests at the time set forth in Section 6 of the Award Agreement.

Additional Terms/Acknowledgements: Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. Participant acknowledges and agrees that this Restricted Stock Unit Grant Notice and the Award Agreement may not be modified, amended, or revised except as provided in the Plan. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of the Common Stock pursuant to the Award specified above and supersede all prior oral and written agreements on the terms of this Award, with the exception, if applicable, of (i) equity awards previously granted and delivered to Participant, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement or other written agreement entered into between the Company and Participant specifying the terms that should govern this Award upon the terms and conditions set forth therein.

By accepting this Award, Participant acknowledges having received and read the Restricted Stock Unit Grant Notice, the Award Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Participant consents to receive Plan and related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

ALLOGENE THERAPEUTICS, INC.	**PARTICIPANT**
By: _____	_____
Signature	Signature
Title: _____	Date: _____
Date: _____	

ATTACHMENTS: Award Agreement and Amended and Restated 2018 Equity Incentive Plan

ATTACHMENT I

ALLOGENE THERAPEUTICS, INC.

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Grant Notice (the "***Grant Notice***") and this Restricted Stock Unit Award Agreement (the "***Agreement***"), Allogene Therapeutics, Inc. (the "***Company***") has awarded you ("***Participant***") a Restricted Stock Unit Award (the "***Award***") pursuant to the Company's Amended and Restated 2018 Equity Incentive Plan (the "***Plan***") for the number of Restricted Stock Units/shares indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement or the Grant Notice shall have the same meanings given to them in the Plan. The terms of your Award, in addition to those set forth in the Grant Notice, are as follows.

1. GRANT OF THE AWARD. This Award represents the right to be issued on a future date one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 below) as indicated in the Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "***Account***") the number of Restricted Stock Units/shares of Common Stock subject to the Award. Notwithstanding the foregoing, the Company reserves the right to issue you the cash equivalent of Common Stock, in part or in full satisfaction of the delivery of Common Stock in connection with the vesting of the Restricted Stock Units, and, to the extent applicable, references in this Agreement and the Grant Notice to Common Stock issuable in connection with your Restricted Stock Units will include the potential issuance of its cash equivalent pursuant to such right. This Award was granted in consideration of your services to the Company.

2. VESTING.

(a) Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice. Vesting will cease upon the termination of your Continuous Service and the Restricted Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in or to such Award or the shares of Common Stock to be issued in respect of such portion of the Award. Notwithstanding the foregoing, if a Change in Control occurs and your Continuous Service has not terminated as of immediately prior to such Change in Control, the vesting of your Award will be accelerated in full.

(b) If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction***

Method") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 2(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 2(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 2(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

3. NUMBER OF SHARES. The number of Restricted Stock Units subject to your Award may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Any additional Restricted Stock Units, shares, cash or other property that becomes subject to the Award pursuant to this Section 3, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Restricted Stock Units and shares covered by your Award. Notwithstanding the provisions of this Section 3, no fractional shares or rights for fractional shares of Common Stock shall be created pursuant to this Section 3. Any fraction of a share will be rounded down to the nearest whole share.

4. SECURITIES LAW COMPLIANCE. You may not be issued any Common Stock under your Award unless the shares of Common Stock underlying the Restricted Stock Units are either (i) then registered under the Securities Act, or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award must also comply with other

applicable laws and regulations governing the Award, and you shall not receive such Common Stock if the Company determines that such receipt would not be in material compliance with such laws and regulations.

5. TRANSFER RESTRICTIONS. Prior to the time that shares of Common Stock have been delivered to you, you may not transfer, pledge, sell or otherwise dispose of this Award or the shares issuable in respect of your Award, except as expressly provided in this Section 5. For example, you may not use shares that may be issued in respect of your Restricted Stock Units as security for a loan. The restrictions on transfer set forth herein will lapse upon delivery to you of shares in respect of your vested Restricted Stock Units.

(a) Death. Your Award is transferable by will and by the laws of descent and distribution. At your death, vesting of your Award will cease and your executor or administrator of your estate shall be entitled to receive, on behalf of your estate, any Common Stock or other consideration that vested but was not issued before your death.

(b) Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your right to receive the distribution of Common Stock or other consideration hereunder, pursuant to a domestic relations order, marital settlement agreement or other divorce or separation instrument as permitted by applicable law that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this Award with the Company General Counsel prior to finalizing the domestic relations order or marital settlement agreement to verify that you may make such transfer, and if so, to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

6. DATE OF ISSUANCE.

(a) The issuance of shares in respect of the Restricted Stock Units is intended to comply with Treasury Regulations Section 1.409A-1(b)(4) and will be construed and administered in such a manner. Subject to the satisfaction of the Withholding Obligation set forth in Section 11 of this Agreement, in the event one or more Restricted Stock Units vests, the Company shall issue to you one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 above). Each issuance date determined by this paragraph is referred to as an "***Original Issuance Date***".

(b) If the Original Issuance Date falls on a date that is not a business day, delivery shall instead occur on the next following business day. In addition, if:

(i) the Original Issuance Date does not occur (1) during an "open window period" applicable to you, as determined by the Company in accordance with the Company's then-effective policy on trading in Company securities, or (2) on a date when you are otherwise permitted to sell shares of Common Stock on an established stock exchange or stock market (including but not limited to under a previously established written trading plan that meets the requirements of Rule 10b5-1 under the Exchange Act and was entered into in compliance with the Company's policies (a "***10b5-1 Arrangement***")), *and*

(ii) either (1) a Withholding Obligation does not apply, or (2) the Company decides, prior to the Original Issuance Date, (A) not to satisfy the Withholding Obligation by withholding shares of Common Stock from the shares otherwise due, on the Original Issuance Date, to you under this Award, and (B) not to permit you to enter into a "same day sale" commitment with a broker-dealer pursuant

to Section 11 of this Agreement (including but not limited to a commitment under a 10b5-1 Arrangement) and (C) not to permit you to pay your Withholding Obligation in cash,

then the shares that would otherwise be issued to you on the Original Issuance Date will not be delivered on such Original Issuance Date and will instead be delivered on the first business day when you are not prohibited from selling shares of the Company's Common Stock in the open public market, but in no event later than December 31 of the calendar year in which the Original Issuance Date occurs (that is, the last day of your taxable year in which the Original Issuance Date occurs), or, if and only if permitted in a manner that complies with Treasury Regulations Section 1.409A-1(b)(4), no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the shares of Common Stock under this Award are no longer subject to a "substantial risk of forfeiture" within the meaning of Treasury Regulations Section 1.409A-1(d).

(c) The form of delivery (*e.g.*, a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

7. DIVIDENDS. You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment; provided, however, that this sentence will not apply with respect to any shares of Common Stock that are delivered to you in connection with your Award after such shares have been delivered to you.

8. RESTRICTIVE LEGENDS. The shares of Common Stock issued in respect of your Award shall be endorsed with appropriate legends as determined by the Company.

9. EXECUTION OF DOCUMENTS. You hereby acknowledge and agree that the manner selected by the Company by which you indicate your consent to your Grant Notice is also deemed to be your execution of your Grant Notice and of this Agreement. You further agree that such manner of indicating consent may be relied upon as your signature for establishing your execution of any documents to be executed in the future in connection with your Award.

10. AWARD NOT A SERVICE CONTRACT.

(a) Nothing in this Agreement (including, but not limited to, the vesting of your Award or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ or service of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

(b) By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice may not be earned unless (in addition to any other conditions described in the Grant Notice and this Agreement) you continue as an employee, director or consultant at the will of the Company and affiliate, as applicable (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "***reorganization***"). You acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including

but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with the Company's right to terminate your Continuous Service at any time, with or without your cause or notice, or to conduct a reorganization.

11. WITHHOLDING OBLIGATION.

(a) On each vesting date, and on or before the time you receive a distribution of the shares of Common Stock in respect of your Restricted Stock Units, and at any other time as reasonably requested by the Company in accordance with applicable tax laws, you hereby authorize any required withholding from the Common Stock issuable to you and/or otherwise agree to make adequate provision, including in cash, for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate that arise in connection with your Award (the "***Withholding Obligation***").

(b) By accepting this Award, you acknowledge and agree that the Company or any Affiliate may, in its sole discretion, satisfy all or any portion of the Withholding Obligation relating to your Restricted Stock Units by any of the following means or by a combination of such means: (i) causing you to pay any portion of the Withholding Obligation in cash; (ii) withholding from any compensation otherwise payable to you by the Company; (iii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to you in connection with the Award with a Fair Market Value (measured as of the date shares of Common Stock are issued pursuant to Section 6) equal to the amount of such Withholding Obligation; provided, however, that the number of such shares of Common Stock so withheld will not exceed the amount necessary to satisfy the Withholding Obligation using the maximum statutory withholding rates for federal, state, local and foreign tax purposes, including payroll taxes, that are applicable to supplemental taxable income; and *provided*, further, that to the extent necessary to qualify for an exemption from application of Section 16(b) of the Exchange Act, if applicable, such share withholding procedure will be subject to the express prior approval of the Board or the Company's Compensation Committee; and/or (iv) permitting or requiring you to enter into a "same day sale" commitment, if applicable, with a broker-dealer that is a member of the Financial Industry Regulatory Authority (a "***FINRA Dealer***"), pursuant to this authorization and without further consent, whereby you irrevocably elect to sell a portion of the shares to be delivered in connection with your Restricted Stock Units to satisfy the Withholding Obligation and whereby the FINRA Dealer irrevocably commits to forward the proceeds necessary to satisfy the Withholding Obligation directly to the Company and/or its Affiliates. Unless the Withholding Obligation is satisfied, the Company shall have no obligation to deliver to you any Common Stock or any other consideration pursuant to this Award.

(c) In the event the Withholding Obligation arises prior to the delivery to you of Common Stock or it is determined after the delivery of Common Stock to you that the amount of the Withholding Obligation was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

12. TAX CONSEQUENCES. The Company has no duty or obligation to minimize the tax consequences to you of this Award and shall not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so. You

understand that you (and not the Company) shall be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

13. LOCK-UP PERIOD. By accepting your Award, you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 13. The underwriters of the Company's stock are intended third party beneficiaries of this Section 13 and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

14. UNSECURED OBLIGATION. Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company's obligation, if any, to issue shares or other property pursuant to this Agreement. You shall not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 6 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

15. NOTICES. Any notice or request required or permitted hereunder shall be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

16. HEADINGS. The headings of the Sections in this Agreement are inserted for convenience only and shall not be deemed to constitute a part of this Agreement or to affect the meaning of this Agreement.

17. MISCELLANEOUS.

(a) The rights and obligations of the Company under your Award shall be transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by, the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

(c) You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

(d) This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Agreement shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

18. GOVERNING PLAN DOCUMENT. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law. No recovery of compensation under such a clawback policy will be an event giving rise to a right to voluntarily terminate employment upon a resignation for "good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

19. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of the Award subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating benefits under any employee benefit plan (other than the Plan) sponsored by the Company or any Affiliate except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any or all of the employee benefit plans of the Company or any Affiliate.

20. SEVERABILITY. If all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

21. OTHER DOCUMENTS. You hereby acknowledge receipt or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

22. AMENDMENT. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that, except as otherwise expressly provided in the Plan, no such amendment materially adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the Award as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided

that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

23. COMPLIANCE WITH SECTION 409A OF THE CODE. This Award is intended to be exempt from the application of Section 409A of the Code, including but not limited to by reason of complying with the "short-term deferral" rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and any ambiguities herein shall be interpreted accordingly. Notwithstanding the foregoing, if it is determined that the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and determined to be deferred compensation subject to Section 409A of the Code, this Award shall comply with Section 409A to the extent necessary to avoid adverse personal tax consequences and any ambiguities herein shall be interpreted accordingly. If it is determined that the Award is deferred compensation subject to Section 409A and you are a "Specified Employee" (within the meaning set forth in Section 409A(a)(2)(B)(i) of the Code) as of the date of your "Separation from Service" (as defined in Section 409A), then the issuance of any shares that would otherwise be made upon the date of your Separation from Service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the Separation from Service, with the balance of the shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the shares is necessary to avoid the imposition of adverse taxation on you in respect of the shares under Section 409A of the Code. Each installment of shares that vests is intended to constitute a "separate payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2).

* * * * *

This Restricted Stock Unit Award Agreement shall be deemed to be signed by the Company and the Participant upon the signing by the Participant of the Restricted Stock Unit Grant Notice to which it is attached.

ATTACHMENT II

AMENDED AND RESTATED 2018 EQUITY INCENTIVE PLAN

ALLOGENE THERAPEUTICS, INC.

2018 EMPLOYEE STOCK PURCHASE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: SEPTEMBER 26, 2018
APPROVED BY THE STOCKHOLDERS: OCTOBER 1, 2018

1. GENERAL; PURPOSE.

(a) The Plan provides a means by which Eligible Employees of the Company and certain designated Related Corporations may be given an opportunity to purchase shares of Common Stock. The Plan permits the Company to grant a series of Purchase Rights to Eligible Employees under an Employee Stock Purchase Plan.

(b) The Company, by means of the Plan, seeks to retain the services of such Employees, to secure and retain the services of new Employees and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Related Corporations.

2. ADMINISTRATION.

(a) The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine how and when Purchase Rights will be granted and the provisions of each Offering (which need not be identical).

(ii) To designate from time to time which Related Corporations of the Company will be eligible to participate in the Plan.

(iii) To construe and interpret the Plan and Purchase Rights, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it deems necessary or expedient to make the Plan fully effective.

(iv) To settle all controversies regarding the Plan and Purchase Rights granted under the Plan.

(v) To suspend or terminate the Plan at any time as provided in Section 12.

(vi) To amend the Plan at any time as provided in Section 12.

(vii) Generally, to exercise such powers and to perform such acts as it deems necessary or expedient to promote the best interests of the Company and its Related Corporations and to carry out the intent that the Plan be treated as an Employee Stock Purchase Plan.

(viii) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees who are foreign nationals or employed outside the United States.

(c) The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references to the Board in this Plan and in any applicable Offering Document will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated. Whether or not the Board has delegated administration of the Plan to a Committee, the Board will have the final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

(d) All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES OF COMMON STOCK SUBJECT TO THE PLAN.

(a) Subject to the provisions of Section 11(a) relating to Capitalization Adjustments, the maximum number of shares of Common Stock that may be issued under the Plan will not exceed 1,160,000 shares of Common Stock, plus the number of shares of Common Stock that are automatically added on January 1st of each year for a period of up to ten years, commencing on the first January 1 following the IPO Date and ending on (and including) January 1, 2028, in an amount equal to the lesser of (i) 1% of the total number of shares of Capital Stock outstanding on December 31st of the preceding calendar year, and (ii) 2,320,000 shares of Common Stock. Notwithstanding the foregoing, the Board may act prior to the first day of any calendar year to provide that there will be no January 1st increase in the share reserve for such calendar year or that the increase in the share reserve for such calendar year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence.

(b) If any Purchase Right granted under the Plan terminates without having been exercised in full, the shares of Common Stock not purchased under such Purchase Right will again become available for issuance under the Plan.

(c) The stock purchasable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market.

4. GRANT OF PURCHASE RIGHTS; OFFERING.

(a) The Board may from time to time grant or provide for the grant of Purchase Rights to Eligible Employees under an Offering (consisting of one or more Purchase Periods) on an Offering Date or Offering Dates selected by the Board. Each Offering will be in such form and will contain such terms and conditions as the Board will deem appropriate, and will comply with the requirement of Section 423(b)(5) of the Code that all Employees granted Purchase Rights will have the same rights and privileges. The terms and conditions of an Offering shall be incorporated by reference into the Plan and treated as part of the Plan. The provisions of separate Offerings need not be identical, but each Offering will include (through incorporation of the provisions of this Plan by reference in the document comprising the Offering or otherwise) the period during which the Offering will be effective, which period will not exceed 27 months beginning with the Offering Date, and the substance of the provisions contained in Sections 5 through 8, inclusive.

(b) If a Participant has more than one Purchase Right outstanding under the Plan, unless he or she otherwise indicates in forms delivered to the Company: (i) each form will apply to all of his or her

Purchase Rights under the Plan, and (ii) a Purchase Right with a lower exercise price (or an earlier-granted Purchase Right, if different Purchase Rights have identical exercise prices) will be exercised to the fullest possible extent before a Purchase Right with a higher exercise price (or a later-granted Purchase Right if different Purchase Rights have identical exercise prices) will be exercised.

(c) The Board will have the discretion to structure an Offering so that if the Fair Market Value of a share of Common Stock on the first Trading Day of a new Purchase Period within that Offering is less than or equal to the Fair Market Value of a share of Common Stock on the Offering Date for that Offering, then (i) that Offering will terminate immediately as of that first Trading Day, and (ii) the Participants in such terminated Offering will be automatically enrolled in a new Offering beginning on the first Trading Day of such new Purchase Period.

5. Eligibility.

(a) Purchase Rights may be granted only to Employees of the Company or, as the Board may designate in accordance with Section 2(b), to Employees of a Related Corporation. Except as provided in Section 5(b), an Employee will not be eligible to be granted Purchase Rights unless, on the Offering Date, the Employee has been in the employ of the Company or the Related Corporation, as the case may be, for such continuous period preceding such Offering Date as the Board may require, but in no event will the required period of continuous employment be equal to or greater than two years. In addition, the Board may provide that no Employee will be eligible to be granted Purchase Rights under the Plan unless, on the Offering Date, such Employee's customary employment with the Company or the Related Corporation is more than 20 hours per week and more than five months per calendar year or such other criteria as the Board may determine consistent with Section 423 of the Code.

(b) The Board may provide that each person who, during the course of an Offering, first becomes an Eligible Employee will, on a date or dates specified in the Offering which coincides with the day on which such person becomes an Eligible Employee or which occurs thereafter, receive a Purchase Right under that Offering, which Purchase Right will thereafter be deemed to be a part of that Offering. Such Purchase Right will have the same characteristics as any Purchase Rights originally granted under that Offering, as described herein, except that:

(i) the date on which such Purchase Right is granted will be the "Offering Date" of such Purchase Right for all purposes, including determination of the exercise price of such Purchase Right;

(ii) the period of the Offering with respect to such Purchase Right will begin on its Offering Date and end coincident with the end of such Offering; and

(iii) the Board may provide that if such person first becomes an Eligible Employee within a specified period of time before the end of the Offering, he or she will not receive any Purchase Right under that Offering.

(c) No Employee will be eligible for the grant of any Purchase Rights if, immediately after any such Purchase Rights are granted, such Employee owns stock possessing five percent or more of the total combined voting power or value of all classes of stock of the Company or of any Related Corporation. For purposes of this Section 5(c), the rules of Section 424(d) of the Code will apply in determining the stock ownership of any Employee, and stock which such Employee may purchase under all outstanding Purchase Rights and options will be treated as stock owned by such Employee.

(d) As specified by Section 423(b)(8) of the Code, an Eligible Employee may be granted Purchase Rights only if such Purchase Rights, together with any other rights granted under all Employee

Stock Purchase Plans of the Company and any Related Corporations, do not permit such Eligible Employee's rights to purchase stock of the Company or any Related Corporation to accrue at a rate which exceeds $25,000 of Fair Market Value of such stock (determined at the time such rights are granted, and which, with respect to the Plan, will be determined as of their respective Offering Dates) for each calendar year in which such rights are outstanding at any time.

(e) Officers of the Company and any designated Related Corporation, if they are otherwise Eligible Employees, will be eligible to participate in Offerings under the Plan. Notwithstanding the foregoing, the Board may provide in an Offering that Employees who are highly compensated Employees within the meaning of Section 423(b)(4)(D) of the Code will not be eligible to participate.

6. PURCHASE RIGHTS; PURCHASE PRICE.

(a) On each Offering Date, each Eligible Employee, pursuant to an Offering made under the Plan, will be granted a Purchase Right to purchase up to that number of shares of Common Stock purchasable either with a percentage or with a maximum dollar amount, as designated by the Board, but in either case not exceeding 15% of such Employee's earnings (as defined by the Board in each Offering) during the period that begins on the Offering Date (or such later date as the Board determines for a particular Offering) and ends on the date stated in the Offering, which date will be no later than the end of the Offering.

(b) The Board will establish one or more Purchase Dates during an Offering on which Purchase Rights granted for that Offering will be exercised and shares of Common Stock will be purchased in accordance with such Offering.

(c) In connection with each Offering made under the Plan, the Board may specify (i) a maximum number of shares of Common Stock that may be purchased by any Participant on any Purchase Date during such Offering, (ii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants pursuant to such Offering and/or (iii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants on any Purchase Date under the Offering. If the aggregate purchase of shares of Common Stock issuable upon exercise of Purchase Rights granted under the Offering would exceed any such maximum aggregate number, then, in the absence of any Board action otherwise, a pro rata (based on each Participant's accumulated Contributions) allocation of the shares of Common Stock available will be made in as nearly a uniform manner as will be practicable and equitable.

(d) The purchase price of shares of Common Stock acquired pursuant to Purchase Rights will be not less than the lesser of:

(i) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the Offering Date; or

(ii) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the applicable Purchase Date.

7. PARTICIPATION; WITHDRAWAL; TERMINATION.

(a) An Eligible Employee may elect to authorize payroll deductions as the means of making Contributions by completing and delivering to the Company, within the time specified in the Offering, an enrollment form provided by the Company. The enrollment form will specify the amount of Contributions not to exceed the maximum amount specified by the Board. Each Participant's Contributions will be credited to a bookkeeping account for such Participant under the Plan and will be deposited with the general funds of the Company except where applicable law requires that Contributions be deposited with a third

party. If permitted in the Offering, a Participant may begin such Contributions with the first payroll occurring on or after the Offering Date (or, in the case of a payroll date that occurs after the end of the prior Offering but before the Offering Date of the next new Offering, Contributions from such payroll will be included in the new Offering). If permitted in the Offering, a Participant may thereafter reduce (including to zero) or increase his or her Contributions. If specifically provided in the Offering, in addition to making Contributions by payroll deductions, a Participant may make Contributions through the payment by cash or check prior to a Purchase Date.

(b) During an Offering, a Participant may cease making Contributions and withdraw from the Offering by delivering to the Company a withdrawal form provided by the Company. The Company may impose a deadline before a Purchase Date for withdrawing. Upon such withdrawal, such Participant's Purchase Right in that Offering will immediately terminate and the Company will distribute to such Participant all of his or her accumulated but unused Contributions and such Participant's Purchase Right in that Offering shall thereupon terminate. A Participant's withdrawal from that Offering will have no effect upon his or her eligibility to participate in any other Offerings under the Plan, but such Participant will be required to deliver a new enrollment form to participate in subsequent Offerings.

(c) Purchase Rights granted pursuant to any Offering under the Plan will terminate immediately if the Participant either (i) is no longer an Employee for any reason or for no reason (subject to any post-employment participation period required by law) or (ii) is otherwise no longer eligible to participate. The Company will distribute to such individual all of his or her accumulated but unused Contributions.

(d) During a Participant's lifetime, Purchase Rights will be exercisable only by such Participant. Purchase Rights are not transferable by a Participant, except by will, by the laws of descent and distribution, or, if permitted by the Company, by a beneficiary designation as described in Section 10.

(e) Unless otherwise specified in the Offering, the Company will have no obligation to pay interest on Contributions.

8. EXERCISE OF PURCHASE RIGHTS.

(a) On each Purchase Date, each Participant's accumulated Contributions will be applied to the purchase of shares of Common Stock, up to the maximum number of shares of Common Stock permitted by the Plan and the applicable Offering, at the purchase price specified in the Offering. No fractional shares will be issued unless specifically provided for in the Offering.

(b) Unless otherwise provided in the Offering, if any amount of accumulated Contributions remains in a Participant's account after the purchase of shares of Common Stock and such remaining amount is less than the amount required to purchase one share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will be held in such Participant's account for the purchase of shares of Common Stock under the next Offering under the Plan, unless such Participant withdraws from or is not eligible to participate in such next Offering, in which case such amount will be distributed to such Participant after the final Purchase Date without interest. If the amount of Contributions remaining in a Participant's account after the purchase of shares of Common Stock is at least equal to the amount required to purchase one (1) whole share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will be distributed in full to such Participant after the final Purchase Date of such Offering without interest.

(c) No Purchase Rights may be exercised to any extent unless the shares of Common Stock to be issued upon such exercise under the Plan are covered by an effective registration statement pursuant to

the Securities Act and the Plan is in material compliance with all applicable federal, state, foreign and other securities and other laws applicable to the Plan. If on a Purchase Date the shares of Common Stock are not so registered or the Plan is not in such compliance, no Purchase Rights will be exercised on such Purchase Date, and the Purchase Date will be delayed until the shares of Common Stock are subject to such an effective registration statement and the Plan is in material compliance, except that the Purchase Date will in no event be more than 6 months from the Offering Date. If, on the Purchase Date, as delayed to the maximum extent permissible, the shares of Common Stock are not registered and the Plan is not in material compliance with all applicable laws, no Purchase Rights will be exercised and all accumulated but unused Contributions will be distributed to the Participants without interest.

9. COVENANTS OF THE COMPANY.

The Company will seek to obtain from each federal, state, foreign or other regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Purchase Rights and issue and sell shares of Common Stock thereunder. If, after commercially reasonable efforts, the Company is unable to obtain the authority that counsel for the Company deems necessary for the grant of Purchase Rights or the lawful issuance and sale of Common Stock under the Plan, and at a commercially reasonable cost, the Company will be relieved from any liability for failure to grant Purchase Rights and/or to issue and sell Common Stock upon exercise of such Purchase Rights.

10. DESIGNATION OF BENEFICIARY.

(a) The Company may, but is not obligated to, permit a Participant to submit a form designating a beneficiary who will receive any shares of Common Stock and/or Contributions from the Participant's account under the Plan if the Participant dies before such shares and/or Contributions are delivered to the Participant. The Company may, but is not obligated to, permit the Participant to change such designation of beneficiary. Any such designation and/or change must be on a form approved by the Company.

(b) If a Participant dies, and in the absence of a valid beneficiary designation, the Company will deliver any shares of Common Stock and/or Contributions to the executor or administrator of the estate of the Participant. If no executor or administrator has been appointed (to the knowledge of the Company), the Company, in its sole discretion, may deliver such shares of Common Stock and/or Contributions to the Participant's spouse, dependents or relatives, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

11. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; CORPORATE TRANSACTIONS.

(a) In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities by which the share reserve is to increase automatically each year pursuant to Section 3(a), (iii) the class(es) and number of securities subject to, and the purchase price applicable to outstanding Offerings and Purchase Rights, and (iv) the class(es) and number of securities that are the subject of the purchase limits under each ongoing Offering. The Board will make these adjustments, and its determination will be final, binding and conclusive.

(b) In the event of a Corporate Transaction, then: (i) any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue outstanding Purchase Rights or may substitute similar rights (including a right to acquire the same consideration paid to the stockholders in the Corporate Transaction) for outstanding Purchase Rights, or (ii) if any surviving or acquiring corporation (or its parent company) does not assume or continue such

Purchase Rights or does not substitute similar rights for such Purchase Rights, then the Participants' accumulated Contributions will be used to purchase shares of Common Stock within ten business days prior to the Corporate Transaction under the outstanding Purchase Rights, and the Purchase Rights will terminate immediately after such purchase.

12. AMENDMENT, TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may amend the Plan at any time in any respect the Board deems necessary or advisable. However, except as provided in Section 11(a) relating to Capitalization Adjustments, stockholder approval will be required for any amendment of the Plan for which stockholder approval is required by applicable law or listing requirements.

(b) The Board may suspend or terminate the Plan at any time. No Purchase Rights may be granted under the Plan while the Plan is suspended or after it is terminated.

(c) Any benefits, privileges, entitlements and obligations under any outstanding Purchase Rights granted before an amendment, suspension or termination of the Plan will not be materially impaired by any such amendment, suspension or termination except (i) with the consent of the person to whom such Purchase Rights were granted, (ii) as necessary to comply with any laws, listing requirements, or governmental regulations (including, without limitation, the provisions of Section 423 of the Code and the regulations and other interpretive guidance issued thereunder relating to Employee Stock Purchase Plans) including without limitation any such regulations or other guidance that may be issued or amended after the date the Plan is adopted by the Board, or (iii) as necessary to obtain or maintain favorable tax, listing, or regulatory treatment. To be clear, the Board may amend outstanding Purchase Rights without a Participant's consent if such amendment is necessary to ensure that the Purchase Right and/or the Plan complies with the requirements of Section 423 of the Code.

Notwithstanding anything in the Plan or any Offering Document to the contrary, the Board will be entitled to: (i) establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars; (ii) permit Contributions in excess of the amount designated by a Participant in order to adjust for mistakes in the Company's processing of properly completed Contribution elections; (iii) establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with amounts withheld from the Participant's Contributions; (iv) amend any outstanding Purchase Rights or clarify any ambiguities regarding the terms of any Offering to enable the Purchase Rights to qualify under and/or comply with Section 423 of the Code; and (v) establish other limitations or procedures as the Board determines in its sole discretion advisable that are consistent with the Plan. The actions of the Board pursuant to this paragraph will not be considered to alter or impair any Purchase Rights granted under an Offering as they are part of the initial terms of each Offering and the Purchase Rights granted under each Offering.

13. EFFECTIVE DATE OF PLAN.

The Plan will become effective immediately prior to and contingent upon the IPO Date. No Purchase Rights will be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval must be within 12 months before or after the date the Plan is adopted (or if required under Section 12(a) above, materially amended) by the Board.

14. MISCELLANEOUS PROVISIONS.

(a) Proceeds from the sale of shares of Common Stock pursuant to Purchase Rights will constitute general funds of the Company.

(b) A Participant will not be deemed to be the holder of, or to have any of the rights of a holder with respect to, shares of Common Stock subject to Purchase Rights unless and until the Participant's shares of Common Stock acquired upon exercise of Purchase Rights are recorded in the books of the Company (or its transfer agent).

(c) The Plan and Offering do not constitute an employment contract. Nothing in the Plan or in the Offering will in any way alter the at will nature of a Participant's employment or be deemed to create in any way whatsoever any obligation on the part of any Participant to continue in the employ of the Company or a Related Corporation, or on the part of the Company or a Related Corporation to continue the employment of a Participant.

(d) The provisions of the Plan will be governed by the laws of the State of Delaware without resort to that state's conflicts of laws rules.

15. DEFINITIONS.

As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Board***" means the Board of Directors of the Company.

(b) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(c) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Purchase Right after the date the Plan is adopted by the Board without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(d) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(e) "***Committee***" means a committee of one or more members of the Board to whom authority has been delegated by the Board in accordance with Section 2(c).

(f) "***Common Stock***" means, as of the IPO Date, the common stock of the Company.

(g) "***Company***" means Allogene Therapeutics, Inc., a Delaware corporation.

(h) **"*Contributions***" means the payroll deductions and other additional payments specifically provided for in the Offering that a Participant contributes to fund the exercise of a Purchase Right. A Participant may make additional payments into his or her account if specifically provided for in the

Offering, and then only if the Participant has not already had the maximum permitted amount withheld during the Offering through payroll deductions.

(i) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board in its sole discretion, of the consolidated assets of the Company and its subsidiaries;

(ii) a sale or other disposition of more than 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(j) "***Director***" means a member of the Board.

(k) "***Eligible Employee***" means an Employee who meets the requirements set forth in the document(s) governing the Offering for eligibility to participate in the Offering, provided that such Employee also meets the requirements for eligibility to participate set forth in the Plan.

(l) "***Employee***" means any person, including an Officer or Director, who is "employed" for purposes of Section 423(b)(4) of the Code by the Company or a Related Corporation. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(m) "***Employee Stock Purchase Plan***" means a plan that grants Purchase Rights intended to be options issued under an "employee stock purchase plan," as that term is defined in Section 423(b) of the Code.

(n) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended and the rules and regulations promulgated thereunder.

(o) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the **closing sales price** for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) **on the date of determination**, as reported in such source as the Board deems reliable. Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(ii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith in compliance with applicable laws and in a manner that complies with Sections 409A of the Code.

(iii) Notwithstanding the foregoing, for any Offering that commences on the IPO Date, the Fair Market Value of the shares of Common Stock on the Offering Date will be the price per share at which the shares are first sold to the public in the Company's initial public offering as specified in the final prospectus for that initial public offering.

(p) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(q) "***Offering***" means the grant to Eligible Employees of Purchase Rights, with the exercise of those Purchase Rights automatically occurring at the end of one or more Purchase Periods. The terms and conditions of an Offering will generally be set forth in the "***Offering Document***" approved by the Board for that Offering.

(r) "***Offering Date***" means a date selected by the Board for an Offering to commence.

(s) "***Officer***" means a person who is an officer of the Company or a Related Corporation within the meaning of Section 16 of the Exchange Act.

(t) "***Participant***" means an Eligible Employee who holds an outstanding Purchase Right.

(u) "***Plan***" means this Allogene Therapeutics, Inc. 2018 Employee Stock Purchase Plan.

(v) "***Purchase Date***" means one or more dates during an Offering selected by the Board on which Purchase Rights will be exercised and on which purchases of shares of Common Stock will be carried out in accordance with such Offering.

(w) "***Purchase Period***" means a period of time specified within an Offering, generally beginning on the Offering Date or on the first Trading Day following a Purchase Date, and ending on a Purchase Date. An Offering may consist of one or more Purchase Periods.

(x) "***Purchase Right***" means an option to purchase shares of Common Stock granted pursuant to the Plan.

(y) "***Related Corporation***" means any "parent corporation" or "subsidiary corporation" of the Company whether now or subsequently established, as those terms are defined in Sections 424(e) and (f), respectively, of the Code.

(z) "***Securities Act***" means the Securities Act of 1933, as amended.

(aa) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than fifty percent (50%) of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than fifty percent (50%). For purposes

of the foregoing clause (i), the Company will be deemed to "Own" or have "Owned" such securities if the Company, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(bb) "***Trading Day***" means any day on which the exchange(s) or market(s) on which shares of Common Stock are listed, including but not limited to the NYSE, Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or any successors thereto, is open for trading.

ALLOGENE THERAPEUTICS, INC.

CHANGE IN CONTROL AND SEVERANCE BENEFIT PLAN

APPROVED BY THE BOARD OF DIRECTORS: JUNE 25, 2018

Section 1. INTRODUCTION.

The Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the "***Plan***") is hereby established effective June 25, 2018 (the "***Effective Date***"). The purpose of the Plan is to provide for the payment of severance benefits to eligible employees of Allogene Therapeutics, Inc. (the "***Company***") in the event that such employees become subject to involuntary or constructive employment terminations. Except as otherwise provided in an individual Participation Agreement, this Plan shall supersede any severance benefit plan, policy or practice previously maintained by the Company, including any severance benefits set forth in any individually negotiated employment contract or agreement between the Company and an employee, unless such employment contract or agreement provides for benefits that are in substance more favorable to you. This Plan document also is the Summary Plan Description for the Plan.

For purposes of the Plan, the following terms are defined as follows:

(a) "***Affiliate***" means any corporation (other than the Company) in an "unbroken chain of corporations" beginning with the Company, if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

(b) "***Base Salary***" means base pay (excluding incentive pay, premium pay, commissions, overtime, bonuses and other forms of variable compensation) as in effect immediately prior to a Covered Termination and prior to any reduction that would give rise to an employee's right to resign for Good Reason.

(c) "***Board***" means the Board of Directors of the Company; provided, however, that if the Board has delegated authority to administer the Plan to the Compensation Committee of the Board, then "***Board***" shall also mean the Compensation Committee.

(d) "***Cause***" means, with respect to a particular employee, the meaning ascribed to such term in any written agreement between such employee and the Company defining such term, and, in the absence of such agreement, means with respect to such employee, the occurrence of any of the following events: (i) the employee's commission of any crime involving fraud, dishonesty or moral turpitude; (ii) the employee's attempted commission of or participation in a fraud or act of dishonesty against the Company that results in (or might have reasonably resulted in) material harm to the business of the Company; (iii) the employee's intentional, material violation of any contract or agreement between the employee and the Company or any statutory duty that the employee owes to the Company; or (iv) the employee's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or might have reasonably resulted in) material harm to the business of the Company; provided, however, that the action or conduct described in clauses (iii) and (iv) above will constitute "Cause" only if such action or conduct continues after the Company has provided the employee with written notice thereof and thirty (30) days to cure the same. The determination whether a termination is for Cause shall be made by the Plan Administrator in its sole and exclusive judgment and discretion.

(e) "***Change in Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events that also qualifies as a change in the ownership of the Company, a change in the effective control of the Company, or a change in the ownership of all or substantially all of the assets of the Company (as these events are defined in Treasury Regulations Section § 1.409A-3(i)(5), or as these definitions may later be modified by other regulatory pronouncements):

(1) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) as a result of the acquisition of securities of the Company directly from the Company, (B) as a result of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, (C) as a result of the acquisition of securities of the Company by any individual who is, on the Effective Date, either an executive employee or a Director (either, an "***Effective Date Investor***") and/or any entity in which an Effective Date Investor has a direct or indirect interest (whether in the form of voting rights or participation in profits or capital contributions) of more than 50% (collectively, the "***Effective Date Entities***") or as a result of the Effective Date Entities continuing to hold shares that come to represent more than 50% of the combined voting power of the Company's then outstanding securities as a result of the conversion of any class of the Company's securities into another class of the Company's securities having a different number of votes per share pursuant to the conversion provisions set forth in the Company's Amended and Restated Certificate of Incorporation; or (D) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(2) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction; *provided, however*, that a merger, consolidation or similar transaction will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the surviving Entity or its parent are owned by the Effective Date Entities;

(3) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their

Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; *provided, however*, that a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than fifty percent (50%) of the combined voting power of the acquiring Entity or its parent are owned by the Effective Date Entities; or

(4) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company will otherwise occur, except for a liquidation into a parent corporation.

Notwithstanding the foregoing or any other provision of this Plan, the term Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company. Once a Change in Control has occurred, no future events shall constitute a Change in Control for purposes of the Plan.

(f) "***Change in Control Period***" means the period commencing three (3) months prior to the Closing of a Change in Control and ending twelve (12) months following the Closing of a Change in Control.

(g) "***Change in Control Termination***" means an Involuntary Termination that occurs within the Change in Control Period. For such purposes, if the events giving rise to an employee's right to resign for Good Reason arise within the Change in Control Period, and the employee's resignation occurs not later than thirty (30) days after the expiration of the Cure Period (as defined below), such termination shall be a Change in Control Termination.

(h) *"Closing"* means the initial closing of the Change in Control as defined in the definitive agreement executed in connection with the Change in Control. In the case of a series of transactions constituting a Change in Control, "Closing" means the first closing that satisfies the threshold of the definition for a Change in Control.

(i) "***COBRA***" means the Consolidated Omnibus Budget Reconciliation Act of 1985.

(j) "***Code***" means the Internal Revenue Code of 1986, as amended.

(k) "***Company***" means Allogene Therapeutics, Inc. or, following a Change in Control, the surviving entity resulting from such event.

(l) "***Covered Termination***" means a Regular Termination or a Change in Control Termination.

(m) *"Director"* means a member of the Board.

(n) "***Eligible Employee***" means an Officer or Non-Officer employee of the Company who meets the requirements to be eligible to receive Plan benefits as set forth in Section 2.

(o) *"Entity"* means a corporation, partnership, limited liability company or other entity.

(p) *"Exchange Act"* means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(q) ***"Exchange Act Person"*** means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(r) "***Good Reason***" for an employee's resignation means the occurrence of any of the following events, conditions or actions taken by the Company without Cause and without such employee's consent: (i) a material reduction of such employee's annual base salary, which is a reduction of at least 10% of such employee's base salary (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); (ii) a material reduction in such employee's authority, duties or responsibilities; (iii) a relocation of such employee's principal place of employment with the Company (or successor to the Company, if applicable) to a place that increases such employee's one-way commute by more than fifty (50) miles as compared to such employee's then-current principal place of employment immediately prior to such relocation (excluding regular travel in the ordinary course of business); provided that if such employee's principal place of employment is his or her personal residence, this clause (iii) shall not apply; *provided, however*, that in each case above, in order for the employee's resignation to be deemed to have been for Good Reason, the employee must first give the Company written notice of the action or omission giving rise to "Good Reason" within thirty (30) days after the first occurrence thereof; the Company must fail to reasonably cure such action or omission within thirty (30) days after receipt of such notice (the "***Cure Period***"), and the employee's resignation must be effective not later than thirty (30) days after the expiration of such Cure Period.

(s) "***Involuntary Termination***" means a termination of employment that is due to: (1) a termination by the Company without Cause or (2) an employee's resignation for Good Reason.

(t) "***Non-Officer***" means an employee of the Company whose title with the Company is below the level of Vice-President.

(u) "***Officer***" means an employee of the Company whose title with the Company is Vice-President or higher.

(v) "***Own,***" "***Owned,***" "***Owner***," "***Ownership***" means a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(w) "***Participation Agreement***" means, with respect to an Officer, an agreement between an employee and the Company in substantially the form of Appendix A attached hereto, and with respect to a Non-Officer, an agreement between and employee and the Company in substantially the form of Appendix B attached hereto, and in each case which may include such other terms as the Board deems necessary or advisable in the administration of the Plan.

(x) "***Plan Administrator***" means the Board, or a duly authorized committee thereof, prior to the Closing and the Representative upon and following the Closing.

(y) ***"Representative"*** means one or more members of the Board or other persons or entities designated by the Board prior to or in connection with a Change in Control that will have authority to administer and interpret the Plan upon and following the Closing as provided in Section 7(a).

(z) "***Regular Termination***" means an Involuntary Termination that is not a Change in Control Termination.

(aa) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(bb) "***Target Bonus***" means with respect to an Eligible Employee, if there is a cash bonus plan applicable to such Eligible Employee for the year in which such Change in Control Termination occurs ("***Cash Bonus Plan***"), the cash bonus payable to such Eligible Employee under such Cash Bonus Plan as if all the applicable performance goals for such year were attained at a level of 100%. If no Cash Bonus Plan is in effect for the year in which such Change in Control Termination occurs, the Target Bonus Amount will be the target bonus, if any, in such Eligible Employee's then-effective employment agreement or offer letter with the Company, as if all of the applicable performance goals for such year were attained at a level of 100%.

Section 2. ELIGIBILITY FOR BENEFITS.

(a) Eligible Employee. An employee of the Company is eligible to participate in the Plan if (i) the Plan Administrator has designated such employee as eligible to participate in the Plan by providing such person with a Participation Agreement; (ii) such employee has signed and returned such Participation Agreement to the Company within the period specified therein; (iii) an Officer's employment with the Company terminates due to a Covered Termination; (iv) a Non-Officer's employment with the Company terminates due to a Change in Control Termination; and (v) such employee meets the other Plan eligibility requirements set forth in this Section 2. The determination of whether an employee is an Eligible Employee shall be made by the Plan Administrator, in its sole discretion, and such determination shall be binding and conclusive on all persons. The Plan provides for uniform treatment of employees with the equivalent title (e.g., all Executive Vice Presidents are treated the same). If an employee is promoted to a position with a higher tier of benefits, then the benefits to be received by such employee will automatically adjust without the employee needing to sign a new Participation Agreement.

(b) Release Requirement. In order to be eligible to receive benefits under the Plan, the employee also must execute a general waiver and release in substantially the form attached hereto as Exhibit A, Exhibit B or Exhibit C, as appropriate (the "***Release***"), within the applicable time period set forth therein, but in no event more than fifty (50) days following the date of the applicable Covered Termination, and such Release must become effective in accordance with its terms. The Company, in its sole discretion, may modify the form of the Release to comply with applicable law and the specific terms of the Covered Termination, which may be incorporated into a termination agreement or other agreement with the employee.

(c) Plan Benefits Provided in Lieu of Individual Agreement Severance Benefits. Unless otherwise determined by the Plan Administrator in its discretion, if an employee is an Eligible Employee and eligible to receive severance benefits under this Plan and otherwise eligible to receive severance benefits under the terms of an individually negotiated employment contract or agreement with the Company or any other severance arrangement with the Company, including the Severance Plan, that are of the same category and would otherwise duplicate the severance benefits available under this Plan ("***Duplicative Benefits***") such Eligible Employee will receive severance benefits under this Plan in lieu of, and not additional to, such Duplicative Benefits. If an Eligible Employee is eligible to receive Plan benefits, such Eligible Employee will receive severance benefits under any individually negotiated employment contract or agreement only to the extent that such benefits have not been waived or terminated and are not Duplicative Benefits.

(d) Exceptions to Benefit Entitlement. An employee who otherwise is an Eligible Employee will not receive benefits under the Plan in the following circumstances, as determined by the Plan Administrator in its sole discretion:

(1) The employee voluntarily terminates employment with the Company without Good Reason, or terminates employment due to the employee's death or disability. Voluntary terminations include, but are not limited to, resignation, retirement or failure to return from a leave of absence on the scheduled date.

(2) The employee voluntarily terminates employment with the Company in order to accept employment with another entity that is wholly or partly owned (directly or indirectly) by the Company or an Affiliate.

(3) The employee is offered an identical or substantially equivalent or comparable position with the Company or an Affiliate. For purposes of the foregoing, a "substantially equivalent or comparable position" is one that provides the employee substantially the same level of responsibility and compensation and would not give rise to the employee's right to resign for Good Reason.

(4) The employee is offered immediate reemployment by a successor to the Company or an Affiliate or by a purchaser of the Company's assets, as the case may be, following a Change in Control and the terms of such reemployment would not give rise to the employee's right to resign for Good Reason. For purposes of the foregoing, "immediate reemployment" means that the employee's employment with the successor to the Company or an Affiliate or the purchaser of its assets, as the case may be, results in uninterrupted employment such that the employee does not incur a lapse in pay or benefits as a result of the change in ownership of the Company or the sale of its assets.

(5) The employee is rehired by the Company or an Affiliate and recommences employment prior to the date benefits under the Plan are scheduled to commence.

(6) A Non-Officer employee upon a Regular Termination.

Section 3. AMOUNT OF BENEFIT.

(a) Severance Benefit. Benefits under the Plan shall be provided to an Eligible Employee, as set forth in the Participation Agreement, except that a Non-Officer employee will only receive severance benefits upon a Change in Control Termination.

(b) Additional Benefits. Notwithstanding the foregoing, the Company may, in its sole discretion, provide benefits to employees or consultants who are not Eligible Employees

("***Non-Eligible Employees***") chosen by the Plan Administrator, in its sole discretion, and the provision of any such benefits to a Non-Eligible Employee shall in no way obligate the Company to provide such benefits to any other Non-Eligible Employee, even if similarly situated. If benefits under the Plan are provided to a Non-Eligible Employee, references in the Plan to "Eligible Employee" (and similar references) shall be deemed to refer to such Non-Eligible Employee.

(c) Certain Reductions. The Company, in its sole discretion, shall have the authority to reduce an Eligible Employee's severance benefits, in whole or in part, by any other severance benefits, pay and benefits provided during a period following written notice of a plant closing or mass layoff, pay and benefits in lieu of such notice, or other similar benefits payable to the Eligible Employee by the Company or an Affiliate that become payable in connection with the Eligible Employee's termination of employment pursuant to (i) any applicable legal requirement, including, without limitation, the Worker Adjustment and Retraining Notification Act or any other similar state law, (ii) any individually negotiated employment contract or agreement or any other written employment or severance agreement with the Company, or (iii) any Company policy or practice providing for the Eligible Employee to remain on the payroll for a limited period of time after being given notice of the termination of the Eligible Employee's employment, and the Plan Administrator shall so construe and implement the terms of the Plan. Any such reductions that the Company determines to make pursuant to this Section 3(c) shall be made such that any benefit under the Plan shall be reduced solely by any similar type of benefit under such legal requirement, agreement, policy or practice (*i.e.*, any cash severance benefits under the Plan shall be reduced solely by any cash payments or severance benefits under such legal requirement, agreement, policy or practice, and any continued insurance benefits under the Plan shall be reduced solely by any continued insurance benefits under such legal requirement, agreement, policy or practice). The Company's decision to apply such reductions to the severance benefits of one Eligible Employee and the amount of such reductions shall in no way obligate the Company to apply the same reductions in the same amounts to the severance benefits of any other Eligible Employee, even if similarly situated. In the Company's sole discretion, such reductions may be applied on a retroactive basis, with severance benefits previously paid being re-characterized as payments pursuant to the Company's statutory obligation.

(d) Parachute Payments.

(1) Any provision of the Plan to the contrary notwithstanding, if any payment or benefit an Eligible Employee would receive from the Company pursuant to the Plan or otherwise ("Payment") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then such Payment will be equal to the Reduced Amount (defined below). The "Reduced Amount" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount, after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in the Eligible Employee's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in payments or benefits constituting "parachute payments" is necessary so that the Payment equals the Reduced Amount, reduction shall occur in the manner that results in the greatest economic benefit for the Eligible Employee. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata.

(2) In the event it is subsequently determined by the Internal Revenue Service that some portion of the Reduced Amount as determined pursuant to clause (x) in the preceding paragraph is subject to the Excise Tax, the Eligible Employee agrees to promptly return to the Company a sufficient amount of the Payment so that no portion of the Reduced Amount is subject to the Excise Tax.

For the avoidance of doubt, if the Reduced Amount is determined pursuant to clause (y) in the preceding paragraph, the Eligible Employee will have no obligation to return any portion of the Payment pursuant to the preceding sentence.

(3) Unless the Eligible Employee and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the a change in ownership or control shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change in ownership or control, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder.

Section 4. RETURN OF COMPANY PROPERTY.

An Eligible Employee will not be entitled to any severance benefit under the Plan unless and until the Eligible Employee returns all Company Property. For this purpose, "Company Property" means all Company documents (and all copies thereof) and other Company property which the Eligible Employee had in his or her possession at any time, including, but not limited to, Company files, notes, drawings, records, plans, forecasts, reports, studies, analyses, proposals, agreements, financial information, research and development information, sales and marketing information, operational and personnel information, specifications, code, software, databases, computer-recorded information, tangible property and equipment (including, but not limited to, computers, facsimile machines, mobile telephones, servers), credit cards, entry cards, identification badges and keys; and any materials of any kind which contain or embody any proprietary or confidential information of the Company (and all reproductions thereof in whole or in part).

Section 5. TIME OF PAYMENT AND FORM OF BENEFIT.

The Company reserves the right in the Participation Agreement to specify whether severance payments under the Plan will be paid in a single sum, in installments, or in any other form and to determine the timing of such payments. All such payments under the Plan will be subject to applicable withholding for federal, state and local taxes. If an Eligible Employee is indebted to the Company on his or her termination date, the Company reserves the right to offset any severance payments under the Plan by the amount of such indebtedness. All severance benefits provided under the Plan are intended to satisfy the requirements for an exemption from application of Section 409A of the Code to the maximum extent that an exemption is available and any ambiguities herein shall be interpreted accordingly; provided, however, that to the extent such an exemption is not available, the severance benefits provided under the Plan are intended to comply with the requirements of Section 409A to the extent necessary to avoid adverse personal tax consequences and any ambiguities herein shall be interpreted accordingly.

Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under the Plan that constitute "deferred compensation" within the meaning of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively "***Section 409A***") shall not commence in connection with an Eligible Employee's termination of employment unless and until the Eligible Employee has also incurred a "separation from service," as such term is defined in Treasury Regulations Section 1.409A-1(h) ("***Separation from Service***"), unless the Company reasonably determines that such amounts may be provided to the Eligible Employee without causing the Eligible Employee to incur the adverse personal tax consequences under Section 409A.

It is intended that (i) each installment of any benefits payable under the Plan to an Eligible Employee be regarded as a separate "payment" for purposes of Treasury Regulations Section 1.409A-2(b)(2)(i), (ii) all payments of any such benefits under the Plan satisfy, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(9)(iii), and (iii) any such benefits consisting of COBRA premiums also satisfy, to the greatest extent possible, the exemption from the application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(9)(v). However, if the Company determines that any such benefits payable under the Plan constitute "deferred compensation" under Section 409A and the Eligible Employee is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i), then, solely to the extent necessary to avoid the imposition of the adverse personal tax consequences under Section 409A, (A) the timing of such benefit payments shall be delayed until the earlier of (1) the date that is six (6) months and one (1) day after the Eligible Employee's Separation from Service and (2) the date of the Eligible Employee's death (such applicable date, the "***Delayed Initial Payment Date***"), and (B) the Company shall (1) pay the Eligible Employee a lump sum amount equal to the sum of the benefit payments that the Eligible Employee would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the benefits had not been delayed pursuant to this paragraph and (2) commence paying the balance, if any, of the benefits in accordance with the applicable payment schedule.

In no event shall payment of any benefits under the Plan be made prior to an Eligible Employee's termination date or prior to the effective date of the Release. If the Company determines that any payments or benefits provided under the Plan constitute "deferred compensation" under Section 409A, and the Eligible Employee's Separation from Service occurs at a time during the calendar year when the Release could become effective in the calendar year following the calendar year in which the Eligible Employee's Separation from Service occurs, then regardless of when the Release is returned to the Company and becomes effective, the Release will not be deemed effective any earlier than the latest permitted effective date (the "***Release Deadline***"). If the Company determines that any payments or benefits provided under the Plan constitute "deferred compensation" under Section 409A, then except to the extent that payments may be delayed until the Delayed Initial Payment Date pursuant to the preceding paragraph, on the first regular payroll date following the effective date of an Eligible Employee's Release, the Company shall (1) pay the Eligible Employee a lump sum amount equal to the sum of the benefit payments that the Eligible Employee would otherwise have received through such payroll date but for the delay in payment related to the effectiveness of the Release and (2) commence paying the balance, if any, of the benefits in accordance with the applicable payment schedule.

All severance payments under the Plan shall be subject to applicable withholding for federal, state and local taxes. If an Eligible Employee is indebted to the Company at his or her termination date, the Company reserves the right to offset any severance payments under the Plan by the amount of such indebtedness.

Section 6. REEMPLOYMENT.

In the event of an Eligible Employee's reemployment by the Company during the period of time in respect of which severance benefits pursuant to the Plan have been paid, the Company, in its sole and absolute discretion, may require such Eligible Employee to repay to the Company all or a portion of such severance benefits as a condition of reemployment.

Section 7. RIGHT TO INTERPRET AND ADMINISTER PLAN; AMENDMENT AND TERMINATION.

(a) Interpretation and Administration. Prior to the Closing, the Board, or a duly authorized committee thereof, shall be the Plan Administrator and shall have the exclusive discretion and authority to establish rules, forms, and procedures for the administration of the Plan and to construe and

interpret the Plan and to decide any and all questions of fact, interpretation, definition, computation or administration arising in connection with the operation of the Plan, including, but not limited to, the eligibility to participate in the Plan and amount of benefits paid under the Plan. The rules, interpretations, computations and other actions of the Board shall be binding and conclusive on all persons. Upon and after the Closing, the Plan will be interpreted and administered in good faith by the Representative who shall be the Plan Administrator during such period. All actions taken by the Representative in interpreting the terms of the Plan and administering the Plan upon and after the Closing will be final and binding on all Eligible Employees. Any references in this Plan to the "Board" or "Plan Administrator" with respect to periods following the Closing shall mean the Representative.

(b) Amendment. The Plan Administrator reserves the right to amend this Plan at any time; *provided, however,* that any amendment of the Plan will not be effective as to a particular employee who is or may be adversely impacted by such amendment or termination and has an effective Participation Agreement without the written consent of such employee. Any action amending the Plan shall be in writing and executed by the Company's Chairman of the Board (prior to the Closing) or the Representative (following the Closing).

(c) Termination. The Board may amend or terminate the Plan at any time in its sole discretion; *provided, however,* that no such amendment or termination may materially impair the rights of an Eligible Employee whose Covered Termination occurred prior to such amendment or termination, without the written consent of such Eligible Employee.

Section 8. NO IMPLIED EMPLOYMENT CONTRACT.

The Plan shall not be deemed (i) to give any employee or other person any right to be retained in the employ of the Company or (ii) to interfere with the right of the Company to discharge any employee or other person at any time, with or without cause, which right is hereby reserved.

Section 9. LEGAL CONSTRUCTION.

This Plan is intended to be governed by and shall be construed in accordance with the Employee Retirement Income Security Act of 1974 ("***ERISA***") and, to the extent not preempted by ERISA, the laws of the State of California.

Section 10. CLAIMS, INQUIRIES AND APPEALS.

(a) Applications for Benefits and Inquiries. Any application for benefits, inquiries about the Plan or inquiries about present or future rights under the Plan must be submitted to the Plan Administrator in writing by an applicant (or his or her authorized representative). The Plan Administrator is:

Allogene Therapeutics, Inc.
Board of Directors or Representative
270 Littlefield Avenue
South San Francisco, CA 94080

(b) Denial of Claims. In the event that any application for benefits is denied in whole or in part, the Plan Administrator must provide the applicant with written or electronic notice of the denial of the application, and of the applicant's right to review the denial. Any electronic notice will comply with the regulations of the U.S. Department of Labor. The notice of denial will be set forth in a manner designed to be understood by the applicant and will include the following:

(1) the specific reason or reasons for the denial;

(2) references to the specific Plan provisions upon which the denial is based;

(3) a description of any additional information or material that the Plan Administrator needs to complete the review and an explanation of why such information or material is necessary; and

(4) an explanation of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the applicant's right to bring a civil action under Section 502(a) of ERISA following a denial on review of the claim, as described in Section 10(d) below.

This notice of denial will be given to the applicant within ninety (90) days after the Plan Administrator receives the application, unless special circumstances require an extension of time, in which case, the Plan Administrator has up to an additional ninety (90) days for processing the application. If an extension of time for processing is required, written notice of the extension will be furnished to the applicant before the end of the initial ninety (90) day period.

This notice of extension will describe the special circumstances necessitating the additional time and the date by which the Plan Administrator is to render its decision on the application.

(c) Request for a Review. Any person (or that person's authorized representative) for whom an application for benefits is denied, in whole or in part, may appeal the denial by submitting a request for a review to the Plan Administrator within sixty (60) days after the application is denied. A request for a review shall be in writing and shall be addressed to:

Allogene Therapeutics, Inc.
Board of Directors or Representative
270 Littlefield Avenue
South San Francisco, CA 94080

A request for review must set forth all of the grounds on which it is based, all facts in support of the request and any other matters that the applicant feels are pertinent. The applicant (or his or her representative) shall have the opportunity to submit (or the Plan Administrator may require the applicant to submit) written comments, documents, records, and other information relating to his or her claim. The applicant (or his or her representative) shall be provided, upon request and free of charge, reasonable access to, and copies of, all documents, records and other information relevant to his or her claim. The review shall take into account all comments, documents, records and other information submitted by the applicant (or his or her representative) relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.

(d) Decision on Review. The Plan Administrator will act on each request for review within sixty (60) days after receipt of the request, unless special circumstances require an extension of time (not to exceed an additional sixty (60) days), for processing the request for a review. If an extension for review is required, written notice of the extension will be furnished to the applicant within the initial sixty (60) day period. This notice of extension will describe the special circumstances necessitating the additional time and the date by which the Plan Administrator is to render its decision on the review. The Plan Administrator will give prompt, written or electronic notice of its decision to the applicant. Any electronic notice will comply with the regulations of the U.S. Department of Labor. In the event that the Plan Administrator confirms the denial of the application for benefits in whole or in part, the notice will set forth, in a manner calculated to be understood by the applicant, the following:

(1) the specific reason or reasons for the denial;

(2) references to the specific Plan provisions upon which the denial is based;

(3) a statement that the applicant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records and other information relevant to his or her claim; and

(4) a statement of the applicant's right to bring a civil action under Section 502(a) of ERISA.

(e) Rules and Procedures. The Plan Administrator will establish rules and procedures, consistent with the Plan and with ERISA, as necessary and appropriate in carrying out its responsibilities in reviewing benefit claims. The Plan Administrator may require an applicant who wishes to submit additional information in connection with an appeal from the denial of benefits to do so at the applicant's own expense.

(f) Exhaustion of Remedies. No legal action for benefits under the Plan may be brought until the applicant (i) has submitted a written application for benefits in accordance with the procedures described by Section 10(a) above, (ii) has been notified by the Plan Administrator that the application is denied, (iii) has filed a written request for a review of the application in accordance with the appeal procedure described in Section 10(c) above, and (iv) has been notified that the Plan Administrator has denied the appeal. Notwithstanding the foregoing, if the Plan Administrator does not respond to an Eligible Employee's claim or appeal within the relevant time limits specified in this Section 10, the Eligible Employee may bring legal action for benefits under the Plan pursuant to Section 502(a) of ERISA.

Section 11. BASIS OF PAYMENTS TO AND FROM PLAN.

The Plan shall be unfunded, and all cash payments under the Plan shall be paid only from the general assets of the Company.

Section 12. OTHER PLAN INFORMATION.

(a) Employer and Plan Identification Numbers. The Employer Identification Number assigned to the Company (which is the "Plan Sponsor" as that term is used in ERISA) by the Internal Revenue Service is 82-3562771. The Plan Number assigned to the Plan by the Plan Sponsor pursuant to the instructions of the Internal Revenue Service is .

(b) Ending Date for Plan's Fiscal Year. The date of the end of the fiscal year for the purpose of maintaining the Plan's records is December 31.

(c) Agent for the Service of Legal Process. The agent for the service of legal process with respect to the Plan is:

Allogene Therapeutics, Inc.
Board of Directors or Representative
270 Littlefield Avenue
South San Francisco, CA 94080

In addition, service of legal process may be made upon the Plan Administrator.

(d) Plan Sponsor. The "Plan Sponsor" is:

Allogene Therapeutics, Inc.
Board of Directors or Representative
270 Littlefield Avenue
South San Francisco, CA 94080
(650) 457-2700

(e) Plan Administrator. The Plan Administrator is the Board prior to the Closing and the Representative upon and following the Closing. The Plan Administrator's contact information is:

Allogene Therapeutics, Inc.
Board of Directors or Representative
270 Littlefield Avenue
South San Francisco, CA 94080
(650) 457-2700

The Plan Administrator is the named fiduciary charged with the responsibility for administering the Plan.

Section 13. STATEMENT OF ERISA RIGHTS.

Participants in this Plan (which is a welfare benefit plan sponsored by Allogene Therapeutics, Inc.) are entitled to certain rights and protections under ERISA. If you are an Eligible Employee, you are considered a participant in the Plan and, under ERISA, you are entitled to:

(a) Receive Information About Your Plan and Benefits.

(1) Examine, without charge, at the Plan Administrator's office and at other specified locations, such as worksites, all documents governing the Plan and a copy of the latest annual report (Form 5500 Series), if applicable, filed by the Plan with the U.S. Department of Labor and available at the Public Disclosure Room of the Employee Benefits Security Administration;

(2) Obtain, upon written request to the Plan Administrator, copies of documents governing the operation of the Plan and copies of the latest annual report (Form 5500 Series), if applicable, and an updated (as necessary) Summary Plan Description. The Administrator may make a reasonable charge for the copies; and

(3) Receive a summary of the Plan's annual financial report, if applicable. The Plan Administrator is required by law to furnish each Eligible Employee with a copy of this summary annual report.

(b) Prudent Actions by Plan Fiduciaries. In addition to creating rights for Plan Eligible Employees, ERISA imposes duties upon the people who are responsible for the operation of the employee benefit plan. The people who operate the Plan, called "fiduciaries" of the Plan, have a duty to do so prudently and in the interest of you and other Eligible Employees and beneficiaries. No one, including your employer, your union or any other person, may fire you or otherwise discriminate against you in any way to prevent you from obtaining a Plan benefit or exercising your rights under ERISA.

(c) Enforce Your Rights. If your claim for a Plan benefit is denied or ignored, in whole or in part, you have a right to know why this was done, to obtain copies of documents relating to the decision without charge, and to appeal any denial, all within certain time schedules.

Under ERISA, there are steps you can take to enforce the above rights. For instance, if you request a copy of Plan documents or the latest annual report from the Plan, if applicable, and do not receive them within thirty (30) days, you may file suit in a Federal court. In such a case, the court may require the Plan Administrator to provide the materials and pay you up to $110 a day until you receive the materials, unless the materials were not sent because of reasons beyond the control of the Plan Administrator.

If you have a claim for benefits which is denied or ignored, in whole or in part, you may file suit in a state or Federal court.

If you are discriminated against for asserting your rights, you may seek assistance from the U.S. Department of Labor, or you may file suit in a Federal court. The court will decide who should pay court costs and legal fees. If you are successful, the court may order the person you have sued to pay these costs and fees. If you lose, the court may order you to pay these costs and fees, for example, if it finds your claim is frivolous.

(d) Assistance with Your Questions. If you have any questions about the Plan, you should contact the Plan Administrator. If you have any questions about this statement or about your rights under ERISA, or if you need assistance in obtaining documents from the Plan Administrator, you should contact the nearest office of the Employee Benefits Security Administration, U.S. Department of Labor, listed in your telephone directory or the Division of Technical Assistance and Inquiries, Employee Benefits Security Administration, U.S. Department of Labor, 200 Constitution Avenue N.W., Washington, D.C. 20210. You may also obtain certain publications about your rights and responsibilities under ERISA by calling the publications hotline of the Employee Benefits Security Administration.

APPENDIX A

ALLOGENE THERAPEUTICS, INC.

CHANGE IN CONTROL AND SEVERANCE BENEFIT PLAN

(OFFICERS)

PARTICIPATION AGREEMENT

Name: _____

Section 1. ELIGIBILITY.

You have been designated as eligible to participate in the Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the "***Plan***"), a copy of which is attached as Annex I to this Participation Agreement (the "***Agreement***"). Capitalized terms not explicitly defined in this Agreement but defined in the Plan shall have the same definitions as in the Plan.

Section 2. SEVERANCE BENEFITS

Subject to the terms of the Plan and Section 3 of this Agreement, if you are terminated in a Covered Termination, and meet all the other eligibility requirements set forth in the Plan, including, without limitation, executing the required Release within the applicable time period set forth therein and provided that such Release becomes effective in accordance with its terms, you will receive the severance benefits set forth in this Section 2. Notwithstanding the schedule for provision of severance benefits as set forth below, the provision of any severance benefits under this Section 2 is subject to any delay in payment that may be required under Section 5 of the Plan.

(a) Regular Termination. Upon a Regular Termination, you shall be eligible to receive the following severance benefits.

(1) *Cash Severance Benefit***.** You will be entitled to continue to receive your then-current Base Salary for [( )] months (such period of months, the "***Severance Period***") commencing on the first payroll period following the effective date of your Release.

(2) *Payment of Continued Group Health Plan Benefits*.

(i) If you timely elect continued group health plan continuation coverage under COBRA the Company shall pay the full amount of your COBRA premiums, or shall provide coverage under any self-funded plan, on behalf of you for your continued coverage under the Company's group health plans, including coverage for your eligible dependents, for the Severance Period (the "***COBRA Payment Period***"). Upon the conclusion of such period of insurance premium payments made by the Company, or the provision of coverage under a self-funded group health plan, you will be responsible for the entire payment of premiums (or payment for the cost of coverage) required under COBRA for the duration of your eligible COBRA coverage period. For purposes of this Section, (i) references to COBRA shall be deemed to refer also to analogous provisions of state law and (ii) any applicable insurance premiums that are paid by the Company shall not include any amounts payable by you under an Internal Revenue Code Section 125 health care reimbursement plan, which amounts, if any, are your sole responsibility.

(ii) Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums on the your behalf, the Company will instead pay you on the last day of each remaining month of the COBRA Payment Period a fully taxable cash payment equal to the COBRA premium for that month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to yours election of COBRA coverage or payment of COBRA premiums and without regard to your continued eligibility for COBRA coverage during the COBRA Payment Period. Such Special Severance Payment shall end upon expiration of the COBRA Payment Period.

(b) Change in Control Termination. Upon a Change in Control Termination, you shall be eligible to receive the following severance benefits. For the avoidance of doubt, in no event shall you be entitled to benefits under both Section 2(a) and this Section 2(b). If you are eligible for severance benefits under both Section 2(a) and this Section 2(b), you shall receive the benefits set forth in this Section 2(b) and such benefits shall be reduced by any benefits previously provided to you under Section 2(a).

(1) *Cash Severance Benefit***.** You will receive the cash severance benefit described in Section 2(a)(1) above, except that:

(i) your Severance Period will be [( )] months and Base Salary payments will commence on the first payroll period following the later of (i) the effective date of your Release, or (ii) the effective date of the Closing; and

(ii) you will additionally be entitled to a portion of your Target Bonus, if any, established for you by the Board for the year in which your Change in Control Termination occurs, in an amount equal to your annual Target Bonus for such year, if any, multiplied by the quotient of the Severance Period divided by twelve (12), which shall be payable in a lump sum payment within ten (10) business days following the later of (i) the effective date of your Release, or (ii) the effective date of the Closing.

(2) *Accelerated Vesting of Stock Awards*.

(i) Effective as of the later of the effective date of your Release or the effective date of the Closing, to the extent not previously vested: (i) the vesting and exercisability of all outstanding stock options to purchase the Company's common stock that are held by you on such date shall be accelerated in full, (ii) any reacquisition or repurchase rights held by the Company in respect of common stock issued pursuant to any other stock award granted to you by the Company shall lapse in full, and (iii) the vesting of any other stock awards granted to you by the Company, and any issuance of shares triggered by the vesting of such stock awards, shall be accelerated in full. Notwithstanding the foregoing, this Section 2(b)(2) shall not apply to stock awards issued under or held in any Qualified Plan. For purposes of determining the number of shares that will vest pursuant to the foregoing provision with respect to any performance based vesting award that has multiple vesting levels depending upon the level of performance, vesting acceleration shall occur with respect to the number of shares subject to the award as if the applicable performance criteria had been attained at a 100% level.

(ii) In order to give effect to the intent of the foregoing provision, notwithstanding anything to the contrary set forth in your stock award agreements or the applicable equity incentive plan under which such stock award was granted that provides that any then unvested portion of your award will immediately expire upon your termination of service, no unvested portion of your stock award shall terminate any earlier than three (3) months following any Involuntary Termination of your

employment that occurs prior to a Closing. Notwithstanding anything to the contrary set forth herein, your stock awards shall remain subject to earlier termination in connection with a "Corporate Transaction" as provided in the Equity Plan or substantially equivalent provisions applicable to your stock award.

(3) *Payment of Continued Group Health Plan Benefits.* You will receive the payment for continued group health plan benefits described in Section 2(a) (2) above, except that the COBRA Payment Period will be equal to the Severance Period applicable to a Change in Control Termination as set forth in Section 2(b)(1) above.

Section 3. REQUIREMENTS DURING SEVERANCE PERIOD.

Your eligibility for and receipt of any severance benefits to which you may become entitled as described in Section 2 above is expressly contingent upon your timely execution of an effective Release and your compliance with the terms and conditions of the provisions of the Proprietary Information and Invention Assignment Agreement between you and the Company dated _____ as may be amended from time to time (the "***PIIAA***")**.** Severance benefits under this Agreement shall immediately cease in the event of your violation of the provisions in this Section 3.

Section 4. DEFINITIONS.

(a) "***Equity Plan***" means the Company's 2018 Equity Incentive Plan or any successor or other equity incentive plan adopted by the Company which govern your stock awards, as applicable.

(b) "***Qualified Plan***" means a plan sponsored by the Company or an Affiliate that is intended to be qualified under Section 401(a) of the Internal Revenue Code.

Section 5. ACKNOWLEDGEMENTS.

As a condition to participation in the Plan, you hereby acknowledge each of the following:

(a) The severance benefits that may be provided to you under this Agreement are subject to all of the terms of the Plan which is incorporated into and becomes part of this Agreement, including but not limited to the reductions under Section 3 of the Plan.

(b) This Agreement and the Plan supersedes any severance benefit plan, policy or practice previously maintained by the Company that may have been applicable to you or any individually negotiated employment contract or agreement between you and the Company unless such employment contract or agreement provides for benefits that are in substance more favorable to you. This Agreement and the Plan do not supersede, replace or otherwise alter the PIIAA.

(c) You may not sell, transfer, or otherwise assign or pledge your right to benefits under this Agreement and the Plan to either your creditors or to your beneficiary, except to the extent permitted by the Plan Administrator if such action would not result in adverse tax consequences under Section 409A.

To accept the terms of this Agreement and participate in the Plan, please sign and date this Agreement in the space provided below and return it to _____ no later than _____, ___.

Allogene Therapeutics, Inc.

By: _____

Title: _____

_____

[Eligible Employee]

_____

Date

APPENDIX B

ALLOGENE THERAPEUTICS, INC.

CHANGE IN CONTROL AND SEVERANCE BENEFIT PLAN

(NON-OFFICERS)

PARTICIPATION AGREEMENT

Name: _____

Section 1. ELIGIBILITY.

You have been designated as eligible to participate in the Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the "***Plan***"), a copy of which is attached as Annex I to this Participation Agreement (the "***Agreement***"). Capitalized terms not explicitly defined in this Agreement but defined in the Plan shall have the same definitions as in the Plan.

Section 2. SEVERANCE BENEFITS.

Subject to the terms of the Plan and Section 3 of this Agreement, if you are terminated in a Change in Control Termination, and meet all the other eligibility requirements set forth in the Plan, including, without limitation, executing the required Release within the applicable time period set forth therein and provided that such Release becomes effective in accordance with its terms, you will receive the severance benefits set forth in this Section 2. Notwithstanding the schedule for provision of severance benefits as set forth below, the provision of any severance benefits under this Section 2 is subject to any delay in payment that may be required under Section 5 of the Plan.

(a) Change in Control Termination. Upon a Change in Control Termination, you shall be eligible to receive the following severance benefits.

(1) *Cash Severance Benefit***.** You will be entitled to:

(i) continue to receive your then-current Base Salary for [_____ (___)]months (such period of months, the "***Severance Period***") commencing on the first payroll period following the later of (A) the effective date of your Release, and (B) the effective date of the Closing; and

(ii) You will additionally be entitled to a portion of your Target Bonus, if any, for the year in which you Change in Control Termination occurs, in an amount equal to your annual Target Bonus for such year, if any, multiplied by the quotient of the Severance Period divided by twelve (12), which shall be payable in a lump sum payment within ten (10) business days following the later of (A) the effective date of your Release, or (B) the effective date of the Closing.

(2) *Accelerated Vesting of Stock Awards.*

(i) Effective as of the later of the effective date of your Release or the effective date of the Closing, to the extent not previously vested: (A) the vesting and exercisability of all outstanding stock options to purchase the Company's common stock that are held by you on such date shall be accelerated in full, (B) any reacquisition or repurchase rights held by the Company in respect of common stock issued pursuant to any other stock award granted to you by the Company shall lapse in full, and (C) the vesting of any other stock awards granted to you by the Company, and any issuance of shares triggered by the vesting of such stock awards, shall be accelerated in full. Notwithstanding the foregoing, this Section 2(a)(2) shall not apply to stock awards issued under or held in any Qualified Plan. For purposes of determining the number of shares that will vest pursuant to the foregoing provision with respect to any performance based vesting award that has multiple vesting levels depending upon the level of performance, vesting acceleration shall occur with respect to the number of shares subject to the award as if the applicable performance criteria had been attained at a 100% level.

(3) In order to give effect to the intent of the foregoing provision, notwithstanding anything to the contrary set forth in your stock award agreements or the applicable equity incentive plan under which such stock award was granted that provides that any then unvested portion of your award will immediately expire upon your termination of service, no unvested portion of your stock award shall terminate any earlier than three (3) months following any Involuntary Termination of your employment that occurs prior to a Closing. Notwithstanding anything to the contrary set forth herein, your stock awards shall remain subject to earlier termination in connection with a "Corporate Transaction" as provided in the Equity Plan or substantially equivalent provisions applicable to your stock award.

(4) *Payment of Continued Group Health Plan Benefits.*

(i) If you timely elect continued group health plan continuation coverage under COBRA the Company shall pay the full amount of your COBRA premiums, or shall provide coverage under any self-funded plan, on behalf of you for your continued coverage under the Company's group health plans, including coverage for your eligible dependents, for the Severance Period (the "***COBRA Payment Period***"). Upon the conclusion of such period of insurance premium payments made by the Company, or the provision of coverage under a self-funded group health plan, you will be responsible for the entire payment of premiums (or payment for the cost of coverage) required under COBRA for the duration of your eligible COBRA coverage period. For purposes of this Section, (i) references to COBRA shall be deemed to refer also to analogous provisions of state law and (ii) any applicable insurance premiums that are paid by the Company shall not include any amounts payable by you under an Internal Revenue Code Section 125 health care reimbursement plan, which amounts, if any, are your sole responsibility.

(ii) Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot provide the COBRA premium benefits without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then in lieu of paying COBRA premiums on the your behalf, the Company will instead pay you on the last day of each remaining month of the COBRA Payment Period a fully taxable cash payment equal to the COBRA premium for that month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to yours election of COBRA coverage or payment of COBRA premiums and without regard to your continued eligibility for COBRA coverage during the COBRA Payment Period. Such Special Severance Payment shall end upon expiration of the COBRA Payment Period.

Section 3. REQUIREMENTS DURING SEVERANCE PERIOD.

Your eligibility for and receipt of any severance benefits to which you may become entitled as described in Section 2 above is expressly contingent upon your timely execution of an effective Release and your compliance with the terms and conditions of the provisions of the Proprietary Information and Inventions Assignment Agreement between you and the Company as may be amended from time to time (the "***PIIAA***")**.** Severance benefits under this Agreement shall immediately cease in the event of your violation of the provisions in this Section 3.

Section 4. DEFINITIONS.

(a) "*Equity Plan*" means the Company's 2018 Equity Incentive Plan or any successor or other equity incentive plan adopted by the Company which govern your stock awards, as applicable.

(b) "*Qualified Plan*" means a plan sponsored by the Company or an Affiliate that is intended to be qualified under Section 401(a) of the Internal Revenue Code

Section 5. ACKNOWLEDGEMENTS.

As a condition to participation in the Plan, you hereby acknowledge each of the following:

(a) The severance benefits that may be provided to you under this Agreement are subject to all of the terms of the Plan which is incorporated into and becomes part of this Agreement, including but not limited to the reductions under Section 3 of the Plan.

(b) This Agreement and the Plan supersedes any severance benefit plan, policy or practice previously maintained by the Company that may have been applicable to you as well as any employment contract or agreement between you and the Company, unless such employment contract or agreement provides for benefits that are in substance more favorable to you. This Agreement and the Plan do not supersede, replace or otherwise alter the PIIAA.

(c) You may not sell, transfer, or otherwise assign or pledge your right to benefits under this Agreement and the Plan to either your creditors or to your beneficiary, except to the extent permitted by the Plan Administrator if such action would not result in adverse tax consequences under Section 409A.

To accept the terms of this Agreement and participate in the Plan, please sign and date this Agreement in the space provided below and return it no later than _____, ___.

Allogene Therapeutics, Inc.

By: _____

_____

Title: Chairman of the Board of Directors

_____ _____

[Eligible Employee] Date

ANNEX I

ALLOGENE THERAPEUTICS, INC. CHANGE IN CONTROL AND SEVERANCE BENEFIT PLAN

EXHIBIT A

RELEASE AGREEMENT

I understand and agree completely to the terms set forth in the Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the "*Plan*").

I understand that this Release Agreement (the "***Release***"), together with the Plan, constitutes the complete, final and exclusive embodiment of the entire agreement between the Company, affiliates of the Company and me with regard to the subject matter hereof. I am not relying on any promise or representation by the Company or an affiliate of the Company that is not expressly stated therein. Certain capitalized terms used in this Release are defined in the Plan.

I hereby confirm my continuing obligations under my proprietary information and inventions agreement with the Company and/or an affiliate of the Company.

In consideration of the severance benefits and other consideration provided to me under the Plan that I am not otherwise entitled to receive, I hereby generally and completely release the Company and its affiliates and assigns, and their parents, subsidiaries, successors, predecessors and affiliates, and their current and former partners, members, directors, officers, employees, stockholders, shareholders, agents, attorneys, predecessors, successors, insurers, affiliates and assigns, from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring at any time prior to and including the date I sign this Release (collectively, the "***Released Claims***"). The Released Claims include, but are not limited to: (a) all claims arising out of or in any way related to my employment with the Company and its affiliates, or their affiliates, or the termination of that employment; (b) all claims related to my compensation or benefits, including salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership, equity, or profits interests in the Company and its affiliates, or their affiliates; (c) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (d) all tort claims, including claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (e) all federal, state, and local statutory claims, including claims for discrimination, harassment, retaliation, attorneys' fees, penalties, or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990 (as amended), the federal Age Discrimination in Employment Act (as amended) ("***ADEA***"), the federal Employee Retirement Income Security Act of 1974 (as amended), the California Fair Employment and Housing Act (as amended), the California Labor Code (as amended), and any other state or local fair employment practice laws and regulations.

Notwithstanding the foregoing, I understand that the following rights or claims are not included in the Released Claims: (a) any rights or claims for indemnification I may have pursuant to any written indemnification agreement with the Company or its affiliate to which I am a party; the charter, bylaws, or operating agreements of the Company or its affiliate; or under applicable law; or (b) any rights that cannot be waived as a matter of law. In addition, I understand that nothing in this Release prevents me from filing, cooperating with, or participating in any proceeding before the Equal Employment Opportunity Commission, the Department of Labor, the California Department of Fair Employment and Housing, or any other government agency, except that I hereby waive my right to any monetary benefits in connection with any such claim, charge or proceeding. I hereby represent and warrant that, other than the claims identified in this paragraph, I am not aware of any claims I have or might have that are not included in the Released Claims.

I acknowledge that I am knowingly and voluntarily waiving and releasing any rights I may have under the ADEA, and that the consideration given under the Plan for the waiver and release in this paragraph is in addition to anything of value to which I was already entitled. I further acknowledge that I have been advised by this writing, as required by the ADEA, that: (a) my waiver and release do not apply to any rights or claims that may arise after the date I sign this Release; (b) I should consult with an attorney prior to signing this Release (although I may choose voluntarily not do so); (c) I have twenty-one (21) days to consider this Release (although I may choose voluntarily to sign this Release earlier); (d) I have seven (7) days following the date I sign this Release to revoke the Release by providing written notice to an employee of the Company; and (e) this Release shall not be effective until the date upon which the revocation period has expired, which shall be the eighth day after I sign this Release provided I have not revoked it.

I acknowledge that I have read and understand Section 1542 of the California Civil Code which reads as follows: **"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."** I hereby expressly waive and relinquish all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to my release of any claims I may have against the Company.

I hereby represent that I have been paid all compensation owed and for all hours worked; I have received all the leave and leave benefits and protections for which I am eligible pursuant to the Family and Medical Leave Act (if applicable), the California Family Rights Act (if applicable) or otherwise; and I have not suffered any on-the-job injury for which I have not already filed a workers' compensation claim.

I acknowledge that I must sign and return this Release to the Company so that it is received not later than twenty-one (21) days following the date it is provided to me or such other date as specified by the Company.

ELIGIBLE EMPLOYEE

Printed Name: _____

Signature: _____

Date: _____

EXHIBIT B

RELEASE AGREEMENT

I understand and agree completely to the terms set forth in the Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the *"Plan"*).

I understand that this Release Agreement (the "***Release***"), together with the Plan, constitutes the complete, final and exclusive embodiment of the entire agreement between the Company, affiliates of the Company and me with regard to the subject matter hereof. I am not relying on any promise or representation by the Company or an affiliate of the Company that is not expressly stated therein. Certain capitalized terms used in this Release are defined in the Plan.

I hereby confirm my continuing obligations under my proprietary information and inventions agreement with the Company and/or an affiliate of the Company.

In consideration of the severance benefits and other consideration provided to me under the Plan that I am not otherwise entitled to receive, I hereby generally and completely release the Company and its affiliates and assigns, and their parents, subsidiaries, successors, predecessors and affiliates, and its and their current and former partners, members, directors, officers, employees, stockholders, shareholders, agents, attorneys, predecessors, successors, insurers, affiliates and assigns, from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring at any time prior to and including the date I sign this Release (collectively, the "***Released Claims***"). The Released Claims include, but are not limited to: (a) all claims arising out of or in any way related to my employment with the Company and its affiliates, or their affiliates, or the termination of that employment; (b) all claims related to my compensation or benefits, including salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership, equity, or profits interests in the Company and its affiliates, or their affiliates; (c) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (d) all tort claims, including claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (e) all federal, state, and local statutory claims, including claims for discrimination, harassment, retaliation, attorneys' fees, penalties or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990 (as amended), the federal Age Discrimination in Employment Act (as amended) ("***ADEA***"), the federal Employee Retirement Income Security Act of 1974 (as amended), the California Fair Employment and Housing Act (as amended), the California Labor Code (as amended), and any other state or local fair employment practice laws and regulations..

Notwithstanding the foregoing, I understand that the following rights or claims are not included in the Released Claims: (a) any rights or claims for indemnification I may have pursuant to any written indemnification agreement with the Company or its affiliate to which I am a party; the charter, bylaws, or operating agreements of the Company or its affiliate; or under applicable law; or (b) any rights that cannot be waived as a matter of law. In addition, I understand that nothing in this Release prevents me from filing, cooperating with, or participating in any proceeding before the Equal Employment Opportunity Commission, the Department of Labor, the California Department of Fair Employment and Housing, or any other government agency, except that I hereby waive my right to any monetary benefits in connection with any such claim, charge or proceeding. I hereby represent and warrant that, other than the claims identified in this paragraph, I am not aware of any claims I have or might have that are not included in the Released Claims.

I acknowledge that I am knowingly and voluntarily waiving and releasing any rights I may have under the ADEA, and that the consideration given under the Plan for the waiver and release in this paragraph is in addition to anything of value to which I was already entitled. I further acknowledge that I have been advised by this writing, as required by the ADEA, that: (a) my waiver and release do not apply to any rights or claims that may arise after the date I sign this Release; (b) I should consult with an attorney prior to signing this Release (although I may choose voluntarily not to do so); (c) I have forty-five (45) days to consider this Release (although I may choose voluntarily to sign this Release earlier); (d) I have seven (7) days following the date I sign this Release to revoke the Release by providing written notice to an employee of the Company; (e) this Release shall not be effective until the date upon which the revocation period has expired, which shall be the eighth day after I sign this Release provided I have not revoked it; and (f) I have received with this Release all of the information required by the ADEA, including without limitation a detailed list of the job titles and ages of all employees who were terminated in this group termination and the ages of all employees of the Company in the same job classification or organizational unit who were not terminated.

I acknowledge that I have read and understand Section 1542 of the California Civil Code which reads as follows: **"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."** I hereby expressly waive and relinquish all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to my release of any claims I may have against the Company.

I hereby represent that I have been paid all compensation owed and for all hours worked; I have received all the leave and leave benefits and protections for which I am eligible pursuant to the Family and Medical Leave Act (if applicable), the California Family Rights Act (if applicable) or otherwise; and I have not suffered any on-the-job injury for which I have not already filed a workers' compensation claim.

I acknowledge that I must sign and return this Release to the Company so that it is received not later than forty-five (45) days following the date it is provided to me or such other date as specified by the Company.

ELIGIBLE EMPLOYEE

Printed Name: _____

Signature: _____

Date: _____

EXHIBIT C

RELEASE AGREEMENT

I understand and agree completely to the terms set forth in the Allogene Therapeutics, Inc. Change in Control and Severance Benefit Plan (the *"Plan"*).

I understand that this Release Agreement (the "***Release***"), together with the Plan, constitutes the complete, final and exclusive embodiment of the entire agreement between the Company, affiliates of the Company and me with regard to the subject matter hereof. I am not relying on any promise or representation by the Company or an affiliate of the Company that is not expressly stated therein. Certain capitalized terms used in this Release are defined in the Plan.

I hereby confirm my continuing obligations under my proprietary information and inventions agreement with the Company and/or an affiliate of the Company.

In consideration of the severance benefits and other consideration provided to me under the Plan that I am not otherwise entitled to receive, I hereby generally and completely release the Company and its affiliates and assigns, and their parents, subsidiaries, successors, predecessors and affiliates, and its and their current and former partners, members, directors, officers, employees, stockholders, shareholders, agents, attorneys, predecessors, successors, insurers, affiliates and assigns, from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring at any time prior to and including the date I sign this Release (collectively, the "Released Claims"). The Released Claims include, but are not limited to: (a) all claims arising out of or in any way related to my employment with the Company and its affiliates, or their affiliates, or the termination of that employment; (b) all claims related to my compensation or benefits, including salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership, equity, or profits interests in the Company and its affiliates, or their affiliates; (c) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (d) all tort claims, including claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (e) all federal, state, and local statutory claims, including claims for discrimination, harassment, retaliation, attorneys' fees, penalties or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990 (as amended), the federal Employee Retirement Income Security Act of 1974 (as amended), the California Fair Employment and Housing Act (as amended), the California Labor Code (as amended), and any other state or local fair employment practice laws and regulations.

Notwithstanding the foregoing, I understand that the following rights or claims are not included in the Released Claims: (a) any rights or claims for indemnification I may have pursuant to any written indemnification agreement with the Company or its affiliate to which I am a party; the charter, bylaws, or operating agreements of the Company or its affiliate; or under applicable law; or (b) any rights that cannot be waived as a matter of law. In addition, I understand that nothing in this Release prevents me from filing, cooperating with, or participating in any proceeding before the Equal Employment Opportunity Commission, the Department of Labor, the California Department of Fair Employment and Housing, or any other government agency, except that I hereby waive my right to any monetary benefits in connection with any such claim, charge or proceeding. I hereby represent and warrant that, other than the claims identified in this paragraph, I am not aware of any claims I have or might have that are not included in the Released Claims.

I acknowledge that I have read and understand Section 1542 of the California Civil Code which reads as follows: **"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."** I hereby expressly waive and relinquish all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to my release of any claims I may have against the Company.

I hereby represent that I have been paid all compensation owed and for all hours worked; I have received all the leave and leave benefits and protections for which I am eligible pursuant to the Family and Medical Leave Act (if applicable), the California Family Rights Act (if applicable) or otherwise; and I have not suffered any on-the-job injury for which I have not already filed a workers' compensation claim.

I acknowledge that to become effective, I must sign and return this Release to the Company so that it is received not later than fourteen (14) days following the date it is provided to me or such other date as specified by the Company.

ELIGIBLE EMPLOYEE

Printed Name: _____

Signature: _____

Date: _____

ALLOGENE THERAPEUTICS, INC.
NON-EMPLOYEE DIRECTOR COMPENSATION POLICY
ADOPTED: SEPTEMBER 26, 2018

Each member of the Board of Directors (the "***Board***") of Allogene Therapeutics, Inc. (the "***Company***") who is a non-employee director of the Company (each such member, a "***Non-Employee Director***") will receive the compensation described in this Non-Employee Director Compensation Policy (the "***Director Compensation Policy***") for his or her Board service following the closing of the initial public offering of the Company's common stock (the "***IPO***").

The Director Compensation Policy will be effective upon the execution of the underwriting agreement in connection with the IPO (the date of such execution being referred to as the "***IPO Date***"). The Director Compensation Policy may be amended at any time in the sole discretion of the Board or the Compensation Committee of the Board.

A Non-Employee Director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date cash is to be paid or equity awards are to be granted, as the case may be.

Annual Cash Compensation

Commencing at the beginning of the first calendar quarter following the IPO Date, each Non-Employee Director will receive the cash compensation set forth below for service on the Board. The annual cash compensation amounts will be payable in equal quarterly installments, in arrears following the end of each quarter in which the service occurred, pro-rated for any partial months of service. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
    a. All Eligible Directors: $40,000
2. Annual Committee Member Service Retainer:
    a. Member of the Audit Committee: $12,500
    b. Member of the Compensation Committee: $7,500
    c. Member of the Nominating and Corporate Governance Committee: $5,000
3. Annual Committee Chair Service Retainer (in lieu of Committee Member Service Retainer):
    a. Chairman of the Audit Committee: $25,000
    b. Chairman of the Compensation Committee: $15,000
    c. Chairman of the Nominating and Corporate Governance Committee: $10,000

Equity Compensation

Equity awards will be granted under the Company's Amended and Restated 2018 Equity Incentive Plan (the "***Plan***"), adopted in connection with the IPO. All stock options granted under this policy will be Nonstatutory Stock Options (as defined in the Plan), with a term of ten years

from the date of grant and an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying common stock of the Company on the date of grant.

(a) Automatic Equity Grants.

(i) Initial Grant for New Directors. Without any further action of the Board, each person who, after the IPO Date, is elected or appointed for the first time to be a Non-Employee Director will automatically, upon the date of his or her initial election or appointment to be a Non-Employee Director (or, if such date is not a market trading day, the first market trading day thereafter), be granted (i) a Nonstatutory Stock Option to purchase 54,075 shares of common stock of the Company (the "***Initial Option Grant***") and (ii) a restricted stock unit award covering 16,275 shares of common stock of the Company (the "***Initial RSU Grant***"). Each Initial Option Grant will vest in a series of 36 successive equal monthly installments over the three-year period measured from the date of grant. Each Initial RSU Grant will vest in a series of three successive equal annual installments over the three-year period measured from the date of grant.

(ii) Annual Grant. Without any further action of the Board, at the close of business on the date of each Annual Meeting following the IPO, each person who is then a Non-Employee Director will automatically be granted (i) a Nonstatutory Stock Option to purchase 27,300 shares of common stock (the "***Annual Option Grant***") and (ii) a restricted stock unit award covering 7,875 shares of common stock of the Company (the "***Annual RSU Grant***"). Each Annual Option Grant will vest in a series of 12 successive equal monthly installments over the one-year period measured from the date of grant. Each Annual RSU Grant will vest on the one-year anniversary of the date of grant.

(b) Vesting; Change in Control. All vesting is subject to the Non-Employee Director's "***Continuous Service***" (as defined in the Plan) on each applicable vesting date. Notwithstanding the foregoing vesting schedules, for each Non-Employee Director who remains in Continuous Service with the Company until immediately prior to the closing of a "***Change in Control***" (as defined in the Plan), the shares subject to his or her then-outstanding equity awards that were granted pursuant to this policy will become fully vested immediately prior to the closing of such Change in Control.

(c) Remaining Terms. The remaining terms and conditions of each award, including transferability, will be as set forth in the Company's Director Option Grant Package or Director RSU Grant Package, as applicable, in the forms adopted from time to time by the Board.

Expenses

The Company will reimburse Non-Employee Director for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board and committee meetings; *provided*, that the Non-Employee Director timely submit to the Company appropriate documentation substantiating such expenses in accordance with the Company's travel and expense policy, as in effect from time to time.

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Exhibit 10.10

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED AND FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION PURSUANT TO RULE 406 OF THE SECURITIES ACT OF 1933, AS AMENDED.

EXECUTION VERSION

ASSET CONTRIBUTION AGREEMENT

BY AND BETWEEN

PFIZER INC.

AND

ALLOGENE THERAPEUTICS, INC.

Dated as of April 2, 2018

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ASSET CONTRIBUTION AGREEMENT

This Asset Contribution Agreement (this "Agreement") is entered into as of April 2, 2018 (the "Effective Date"), by and between Pfizer Inc., a Delaware corporation ("Pfizer"), and Allogene Therapeutics, Inc., a Delaware corporation ("NewCo").

WHEREAS, Pfizer and the Pfizer Subsidiaries (the "Pfizer Parties") are engaged in, among other things, the Purchased Programs;

WHEREAS, NewCo desires to purchase from Pfizer, and Pfizer desires to sell to NewCo, certain assets related to the Purchased Programs, and NewCo is willing to assume certain Liabilities related to the Purchased Programs, in each case upon the terms and conditions set forth herein; and

WHEREAS, it is intended that the transactions contemplated by this Agreement, taken together with the transactions contemplated by the Preferred Stock Purchase Agreement, shall be treated as an exchange described in Section 351 of the Internal Revenue Code of 1986, as amended (the "Code").

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth below and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

ARTICLE 1

DEFINITIONS; CERTAIN RULES OF INTERPRETATION

1.1 Definitions. As used in this Agreement, the following terms shall have the meanings set forth or as referenced below:

"409A Plan" shall have the meaning specified in Section 7.2(e).

"Ablexis Agreement" shall mean that certain Consortium and License Agreement dated as of December 22, 2009, by and between Aliva Biopharmaceuticals, Inc. and Pfizer, as amended from time to time.

"Ablexis Antibodies" shall mean antibodies generated under the Ablexis Agreement in connection with any Purchased Assets.

"Affiliate" shall mean (a) in the case of an individual, the individual's spouse (or civil partner) and the members of the immediate family (which for purposes of this definition shall include only parents, siblings, children and spouses (or civil partners) of the foregoing) of (i) the individual, (ii) the individual's spouse (or civil partner) and (iii) any Entity that directly or indirectly, through one or more intermediaries, is controlled by, or is under common control with, any of the foregoing individuals, or (b) in the case of an Entity, another Entity or a Person that directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such Entity; *provided that*, for the purposes of this definition, "control"

(including with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

"Agreement" shall have the meaning specified in the Preamble.

"Allogeneic Product" shall mean a product for administration to humans, which embodies, incorporates or includes a CAR-T.

"Annual Net Sales" shall have the meaning specified in Section 5.1(c)(ii).

"Arising Patent" shall mean:

(a) (i) any Exclusive Know-How Patent (as that term is defined in the Patent and Know-How License Agreement), (ii) any Non-Exclusive Know-How Patent (as that term is defined in the Patent and Know-How License Agreement) and (iii) any non-provisionals, continuations, divisions, renewals, reexaminations, reissues, reexaminations, extensions, restorations, and foreign counterparts thereof, and any and all patents granted on the Patents in clauses (i) and (ii); and

(b) any non-provisionals, continuations, divisions, renewals, reexaminations, reissues, reexaminations, extensions, restorations, and foreign counterparts of a Transferred Pfizer Patent, and any and all patents granted thereon.

"Assigned Contracts" shall have the meaning specified in Section 2.1(a).

"Assigned Patent" shall mean any Patent included in the Pfizer Assigned IP Rights.

"Assignment Consent" shall have the meaning specified in Section 2.5(a).

"Assumed Liabilities" shall have the meaning specified in Section 2.3.

"Books and Records" shall have the meaning specified in Section 2.1(d).

"Business Day" shall mean any day other than (a) a Saturday or a Sunday or (b) a day on which banking institutions are closed in New York, New York or San Francisco, California.

"Calendar Quarter" shall mean the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

"Calendar Year" shall mean each twelve (12) month period commencing on January 1.

"Cap" shall have the meaning specified in Section 14.5(a).

"CAR" shall mean a chimeric antigen receptor expressed from an experimentally validated viral construct with specific molecular architecture and signaling domain sequences.

"CAR-T" shall mean a population of allogeneic T-cells with a unique set of experimentally validated biologic attributes expressing a CAR construct.

"CD19 Target" shall mean the Target corresponding to the B lymphocyte antigen Cluster of Differentiation 19.

"CD52 Product" shall mean a product that (a) comprises an antibody that binds CD52 and has the Pfizer identifier number of [***] and (b) incorporates, or is made, developed, or optimized, by the use of, the Transferred Pfizer Know-How.

"Cellectis" shall mean Cellectis SA.

"Class A Preferred Stock" shall mean, collectively, the Series A Preferred Stock and the Series A-1 Preferred Stock.

"Clinical Trial" shall mean a human clinical study conducted on sufficient numbers of human subjects that is designed to (a) establish that a pharmaceutical product is reasonably safe for continued testing, (b) investigate the safety and efficacy of the pharmaceutical product for its intended use, and to define warnings, precautions and adverse reactions that may be associated with the pharmaceutical product in the dosage range to be prescribed or (c) support Regulatory Approval of such pharmaceutical product or label expansion of such pharmaceutical product.

"Closing" shall have the meaning specified in Section 4.1.

"Closing Date" shall have the meaning specified in Section 4.1.

"Code" shall have the meaning specified in the Preamble.

"Combination Product" shall have the meaning specified in the definition of "Net Sales".

"Commercially Reasonable Efforts" shall mean, with respect to a party's obligations or activities under this Agreement, the carrying out of such obligations or activities with a level of effort and resources consistent with the commercially reasonable practices normally devoted by a similarly situated company, including, as applicable, [***] it being understood that commercially reasonable efforts may not require that such party develop each and every product in its portfolio or as to which it has rights simultaneously, and it being further understood that, without limiting any obligation in this Agreement, it is possible that the application of Commercially Reasonable Efforts as described in the foregoing definition may be consistent with the termination of the development of a product in certain circumstances.

"Common Stock" shall mean the common stock, par value $0.001 per share of NewCo.

"Confidential Information" shall have the meaning specified in Section 9.6(a).

"Confidential Disclosure Agreement" shall mean that certain confidentiality agreement between Two River Consulting, LLC, a Delaware limited liability company, and Pfizer, dated November 8, 2017.

"Confidential Information Agreements" shall have the meaning specified in Section 7.20.

"Consent" shall mean any approval, consent, ratification, permission, waiver or authorization (including any Governmental Approval).

"Consideration" shall have the meaning specified in Section 3.1.

"Consolidated Return" shall mean any affiliated consolidated, combined, or unitary Tax Return filed with respect to a group that includes a Pfizer Party (or any other Affiliate of the Pfizer Parties).

"Continuation Period" shall have the meaning specified in Section 10.1(b).

"Contract" shall mean any written or oral agreement, contract, obligation, promise, understanding, arrangement, license, or legally binding commitment or undertaking of any nature, other than a Pfizer Benefit Plan.

"Copyrights" shall mean all copyrightable works of authorship and all copyrights and applications, throughout the world, whether published or unpublished, including rights to prepare, reproduce, perform, display and distribute copyrighted works and copies, compilations and derivative works thereof.

"Cooperation Period" shall have the meaning specified in Section 2.5(a).

"Cover", "Covering" and "Covered" shall mean, with respect to a Patent and an invention, that, in the absence of ownership of or a license under such Patent, the practice of such invention (e.g., with respect to a Patent in the U.S., the manufacture, use, sale, offer for sale or importation of such invention) would infringe a Valid Claim of such Patent (assuming, in the case of a pending patent application, that the claims of such patent application as then existing were issued).

"Covered Benefit Plan" shall have the meaning specified in Section 6.8(d).

"Damages" shall mean losses, damages, settlements, awards, fines, penalties, fees, liabilities, costs, including costs of investigation, or expenses of any nature, including reasonable attorneys' fees.

"Deductible" shall have the meaning specified in Section 14.5(a)

"Developed Pfizer Targets" shall mean the following Targets: BCMA, FLT3, CD33, EGFRVIII, CD70, MUC16, DLL3, Claudin18.2, and Wt1.

"Development Update" shall have the meaning specified in Section 5.2(b)(iv)(A).

"Disclosing Party" shall have the meaning specified in Section 9.6(a).

"Drop-Dead Date" shall have the meaning specified in Section 13.1(d).

"Early Access Program" shall mean any program that provides patients with a Product prior to Regulatory Approval in any country or region in the Territory and in which the use of such Product is not primarily intended to obtain information about the safety or effectiveness of a drug. "Early Access Programs" shall include treatment INDs / protocols, and named patient programs.

"Early Stage Target" shall mean the following Targets: [***].

"Effective Date" shall have the meaning specified in the Preamble.

"Employee Transfer Date" shall mean May 1, 2018 or such other date as is mutually agreed to between the parties.

"Enforceability Exceptions" shall have the meaning specified in Section 6.2(b).

"Entity" shall mean any corporation (including any non-profit corporation), general partnership, limited partnership, limited liability partnership, joint venture, estate, trust or company (including any limited liability company or joint stock company) or other similar entity.

"Equity Commitment Letters" shall have the meaning specified in Section 7.9.

"Equity Consideration" shall have the meaning specified in Section 3.1.

"Equity Consideration Cancellation" shall have the meaning specified in Section 14.8.

"ERISA" shall mean the Employee Retirement Income Security Act of 1974, as amended.

"Excluded Assets" shall have the meaning specified in Section 2.2.

"Excluded Liabilities" shall have the meaning specified in Section 2.4.

"Excluded Taxes" shall mean, without duplication, (a) all Taxes of the Pfizer Parties or any of their Affiliates, or for which the Pfizer Parties or any of their Affiliates is or are liable (including under any common law doctrine of de facto merger or transferee or successor liability or otherwise by operation of contract or Law), for any taxable period, (b) all Taxes related to the Excluded Assets or Excluded Liabilities for any taxable period, (c) all Taxes relating to the Purchased Programs, the Purchased Assets, the Transferred Employees, or the Assumed Liabilities, in each case with respect to any Pre-Closing Tax Period (including the portion of any Straddle Period through the end of the Closing Date, as determined in accordance with Section 12.2(e)) and (d) all Taxes, if any, imposed on NewCo under Section 1445 or 1446(f) of the Code in connection with the transactions contemplated by this Agreement.

"Exclusive Group 3 Know-How" shall have the meaning set forth in the Patent and Know-How License Agreement.

"Exclusive Group 3 Patents" shall have the meaning set forth in the Patent and Know-How License Agreement.

"FCPA" shall have the meaning specified in Section 7.23.

"FD&C Act" shall mean the United States Federal Food, Drug, and Cosmetic Act, as amended, and the rules and regulations promulgated thereunder.

"FDA" shall mean the United States Food and Drug Administration and any successor agency.

"Financing" shall have the meaning specified in Section 7.9.

"Financing Agreements" shall mean, collectively, the Preferred Stock Purchase Agreement, the Investors' Rights Agreement, the Right of First Refusal and Co-Sale Agreement and the Voting Agreement.

"First Commercial Sale" shall mean, with respect to a given Product in a given country or region of the Territory, the first sale of such Product by NewCo, its Affiliates or Sublicensees to a Third Party in such country after such Product has been granted Regulatory Approval by the appropriate Governmental Authority for commercial sale in such country; *provided* that, any sale occurring under an Early Access Program shall be deemed a "First Commercial Sale" for purposes hereunder.

"Founders" shall mean David D. Chang, Joshua A. Kazam, Veer Bhavnagri, David M. Tanen and Arie S. Belldegrun.

"GAAP" shall mean United States generally accepted accounting principles in effect from time to time.

"General Assignment and Bill of Sale" shall have the meaning specified in Section 4.2(a).

"Governmental Approval" shall mean any: (a) permit, license, certificate, concession, Consent, clearance, confirmation, exemption, franchise, certification, designation, rating, registration, variance, qualification or accreditation issued, granted, given or otherwise made available by or under the authority of any Governmental Authority or pursuant to any Law; (b) with respect to a pharmaceutical or biological product in a country or regulatory jurisdiction, the act of a Governmental Authority necessary for the testing, manufacturing, marketing, labeling, distribution, advertising, commercial sale or use of such product in such country or regulatory jurisdiction, including the approval of an Investigational New Drug Application, Biologic License Application or New Drug Application by the FDA or any analogous approval in jurisdictions other than the United States, but, in all cases, excluding any separate pricing or reimbursement approval, where required ("Regulatory Approval"); or (c) right under any Contract with any Governmental Authority.

"Governmental Authority" shall mean any: (a) nation, principality, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign or other government; (c) governmental or quasi-governmental

authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, board, instrumentality, officer, official, representative, organization, unit, body or Entity and any court or other tribunal); (d) multinational organization or body; or (e) individual, Entity or body exercising, or entitled to exercise, any executive, legislative, judicial, administrative, arbitral, regulatory, police, military or Tax Authority or power.

"Group 1 Pfizer IP Rights" shall mean those Intellectual Property Rights set forth on Schedule 2.1(c)(1) under the heading "Group 1 Pfizer IP Rights".

"Group 2 Pfizer IP Rights" shall mean those Intellectual Property Rights set forth on Schedule 2.1(c)(2) under the heading "Group 2 Pfizer IP Rights".

"Group 3 Pfizer IP Rights" shall mean those Intellectual Property Rights set forth on Schedule 4.2(c) under the heading "Group 3 Pfizer IP Rights" under which NewCo is granted licenses from Pfizer pursuant to the Patent and Know-How License Agreement.

"IFRS" shall mean International Financial Reporting Standards in effect from time to time.

"Inactive Employee" shall have the meaning specified in Section 10.1(a).

"IND" shall mean an Investigational New Drug Application submitted under the FD&C Act, or an analogous application or submission with any analogous agency or Governmental Authority outside of the United States for the purposes of obtaining permission to conduct Clinical Trials.

"Indemnitee" shall have the meaning specified in Section 14.4.

"Indemnitor" shall have the meaning specified in Section 14.4.

"Initial NewCo Organizational Documents" shall have the meaning specified in Section 7.1(b).

"Intellectual Property Rights" or "IP Rights" shall mean any or all rights in and to intellectual property and intangible industrial property rights of a Pfizer Party, including Patents, Trade Secrets, Copyrights, Trademarks, Know-How, internet domain names and any rights similar, corresponding or equivalent to any of the foregoing anywhere in the world.

"Investors' Rights Agreement" shall have the meaning specified in Section 4.2(e).

"IRS" shall mean the United States Internal Revenue Service.

"Key Assigned Contract" shall mean the Pfizer-Cellectis Agreement, the Pfizer-Servier Agreement and the WuXi Agreement.

"Key Assigned Contract Patents" shall mean (a) those Patents licensed to Pfizer under the Pfizer-Servier Agreement or the Pfizer-Cellectis Agreement immediately prior to the Closing Date and (b) any Patents that, under the terms of the Pfizer-Servier Agreement or the Pfizer-Cellectis

Agreement, would be licensed to Pfizer following the Closing if, in each case, Pfizer had remained a party thereto, in each case of clauses (a) and (b) taking into account any field or use limitations in effect under such relevant Key Assigned Contract.

"Key Employee" shall mean Joshua A. Kazam, David M. Tanen, and any other executive-level employee (including division director and vice president-level positions) as well as any employee or consultant who either alone or in concert with others develops, invents, programs or designs any of the NewCo Intellectual Property.

"Know-How" shall mean any non-public or proprietary information, inventions, discoveries, compounds, compositions, formulations, formulas, practices, procedures, processes, methods, knowledge, technology, techniques, designs, drawings, correspondence, computer programs, documents, apparatus, results, strategies, Regulatory Filings, information and submissions pertaining to, or made in association with, filings with any Governmental Authority or patent office, data (including pharmacological, toxicological, non-clinical and clinical data, analytical and quality control data, manufacturing data and descriptions, market data, financial data or descriptions), devices, assays, chemical formulations, specifications, material, product samples and other samples, physical, chemical and biological materials and compounds, whether or not patentable.

"Law" shall mean any federal, state, local, foreign and supranational or other law, statute, code, constitution, treaty, principle of common law, directive, ordinance, rule, regulation or Order, or any similar provision or requirement having the force or effect of law, of any Governmental Authority.

"Liability" shall mean any and all debts, liabilities and obligations, whether fixed, contingent or absolute, matured or unmatured, accrued or not accrued, determined or determinable, secured or unsecured, disputed or undisputed, subordinated or unsubordinated, or otherwise.

"Lien" shall mean any lien, claim, mortgage, encumbrance, pledge, license, security interest, equity or charge of any kind.

"Material Adverse Effect" shall mean any event, change or effect that, when taken individually or together with all other adverse events, changes and effects (a) would reasonably be expected to be materially adverse to the condition (financial or otherwise), assets, business or operations of the Purchased Programs, the Purchased Assets and the Products, taken as a whole, or (b) would prevent or materially delay the Pfizer Parties' consummation of the Transactions; *provided*, *however*, that any events, changes or effects will not be deemed to constitute a Material Adverse Effect to the extent resulting from (1) general economic, political or market conditions in the pharmaceutical industry as a whole, but only to the extent that such changes or conditions do not have a materially disproportionate effect on the Purchased Programs, taken as a whole, compared with other industry participants; (2) the impact of the Transactions, including the announcement or pendency of this Agreement or the Transactions, on relationships, contractual or otherwise, with customers, suppliers, distributors, partners or employees; (3) any failure by any Pfizer Party or the Purchased Programs to meet internal projections or forecasts for any period (provided that the underlying causes of such failure may, to the extent applicable, be considered in determining whether there has been a Material Adverse Effect); (4) acts of war or terrorism (or

the escalation of the foregoing) or natural disasters or other force majeure events; (5) changes in any Law applicable to the Purchased Programs or applicable accounting regulations or principles or the interpretation thereof; (6) compliance by Pfizer or any of its Affiliates with a request by NewCo that Pfizer or any of its Affiliates take an action (or refrain from taking an action) to the extent such action or inaction is in compliance with such request; or (7) any action taken by Pfizer or any of its Affiliates as required by this Agreement or with NewCo's written consent.

"Marginal Royalty Rates" shall have the meaning specified in Section 5.1(c)(ii).

"Milestone Event" shall have the meaning specified in Section 5.1(a) .

"Milestone Payment" shall have the meaning specified in Section 5.1(a).

"Net Sales" shall mean, in the case of sales of any Product(s) by or for the benefit of NewCo, its Affiliates or Sublicensees (for the purpose of this definition only, the "Seller") in the Royalty Territory applicable to such Product to independent, unrelated persons, including any distributor who purchases for purposes of resale to end-users (such a distributor to expressly not be deemed a Seller under this definition and, along with other such independent, unrelated persons, for the purpose of this definition only, "Buyers") in bona fide arm's length transactions (except as provided below with respect to clinical trial samples), the gross amount billed or invoiced by Seller with respect to such Product during the applicable period, less the following deductions, in each case to the extent actually paid, granted or accrued by such Seller (each as recognized by GAAP applied consistently throughout the calculation, as applicable) or allowed and taken by such Buyers and, in each case, not otherwise recovered by or reimbursed to Seller in connection with such Product (for the purpose of this definition only, "Permitted Deductions"): [

(a) trade, cash, promotional, prompt payment and quantity discounts;

(b) uncollectible amounts or reasonable reserves accrued therefor (it being understood that any subsequent reductions in such accrual amounts due to collections in subsequent periods shall be included in Net Sales when such reductions occur);

(c) returns, refunds, allowances, rebates and chargebacks;

(d) customs or excise duties, excise (including, but not limited to, the amount of any annual branded prescription drug manufacturer and importer fees attributable to the Products paid by the Seller), sales or use Taxes, consumption Tax, value added Tax or other Taxes (except income Taxes) or duties relating to sales Taxes on sales (such as excise, sales or use Taxes or value added Tax);

(e) Taxes on sales of pharmaceutical specialties reimbursed pursuant to a government health service, health insurance, social insurance or similar social services program;

(f) freight, insurance, packing costs and other transportation charges to the extent added to the sales price;

(g) amounts repaid or credits taken by reason of rejections, defects or returns or because of retroactive price reductions, or due to recalls or Laws requiring rebates;

(h) rebates taken by or fees paid to distributors, wholesalers, group purchasing organizations, pharmacy benefit management companies and management care entities and charge-backs, including any discount, rebate or reimbursement program applicable to a Product under which Seller provides to low income, uninsured or other patients the opportunity to purchase Products at discounted prices;

(i) rebates and/or discounts on sales of Products given to health insurance and other types of payers due to specific agreements ("claw-back" type of agreements) involving the Products; and

(j) any other specifically identifiable amounts included in gross amounts invoiced for the Products, to the extent such amounts are customary deductions from net sales calculations in the pharmaceutical or biotechnology industries in the applicable country or countries for reasons substantially equivalent to those listed above.

"Net Sales" shall not include any consideration received with respect to a sale, use or other disposition of any Product in a country for development purposes or as samples or for charitable purposes. Notwithstanding the foregoing, the amounts invoiced by NewCo, its Affiliates, or Sublicensees for the sale of Product among NewCo, its Affiliates, or Sublicensees for resale shall not be included in the computation of Net Sales hereunder and Net Sales shall be the gross invoice or contract price charged to the Third Party customer for that Product, less the Permitted Deductions. All of the foregoing elements of Net Sales calculations shall be determined in accordance with GAAP or IFRS, as applicable to the Seller.

Notwithstanding the foregoing, if a Product either (i) is sold in the form of a combination product containing both the Product and one or more independently therapeutically active pharmaceutical molecules (i.e. a chemical entity performing a therapeutic or prophylactic function distinct from the enhancement of the activity of the Product itself) that are not other Products or (ii) is sold in a form that contains (or is sold bundled with for the same price) a delivery device therefor (in either case of (i) or (ii), a "Combination Product" and any such other independently therapeutically active pharmaceutical molecules or delivery device, an "Other Component" of such Combination Product), the Net Sales of such Product for the purpose of calculating royalties owed under this Agreement for sales of such Product shall be determined by multiplying the actual Net Sales of the Combination Product (calculated using the above provisions) by the fraction A/(A+B), where A is the invoice price on a country-by-country basis, during the Royalty Term in question, of the Product when sold separately and B is the invoice price on a country-by-country basis, during the Royalty Term in question, of the other active pharmaceutical molecule or delivery device when sold separately. If any other active pharmaceutical molecule or delivery device in the combination is not sold separately in a country, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product by a fraction: (A/C), where A is the invoice price of the Product in such country if sold separately, and C is the invoice price of the Combination Product in such country. If neither the Product nor any other active pharmaceutical molecule or delivery device in the Combination Product is sold separately, the adjustment to Net Sales shall be determined by the parties in good faith to reasonably reflect the fair market value of the contribution of the Product in the Combination Product to the total fair market value of such Combination Product; provided that in the event the parties do not agree on such relative value contributions, either party may

require that the matter be referred to an independent expert selected by agreement of the parties. Except in the case of fraud or manifest error on the part of such independent expert, the decision of such independent expert as to such relative value contributions shall be binding upon the parties. The costs of the independent expert shall be borne by the non-prevailing party.

"NewCo" shall have the meaning specified in the Preamble.

"NewCo 401(k) Plan" shall have the meaning specified in Section 10.1(g).

"NewCo Damages" shall have the meaning specified in Section 14.1.

"NewCo Fundamental Representations" shall have the meaning specified in Section 11.2(a).

"NewCo Indemnified Persons" shall have the meaning specified in Section 14.1.

"NewCo Intellectual Property" shall mean all patents, patent disclosures and all related continuation, continuation-in-part, divisional, reissue, reexamination, utility model, renewals, extensions, certificate of invention and design patents, patent applications, registrations and applications for registrations, registered and unregistered trademarks, trademark applications, registered and unregistered service marks, service mark applications, tradenames, copyrights, trade secrets, domain names, information and proprietary rights and processes, similar or other intellectual property rights or know-how, subject matter of any of the foregoing, tangible embodiments of any of the foregoing, licenses in, to and under any of the foregoing, and any and all such cases that are owned or used by, or are necessary to, NewCo in the conduct of the NewCo's business as now conducted and as presently proposed to be conducted.

"Non-Assignable Asset" shall have the meaning specified in Section 2.5(a).

"Order" shall mean any (a) temporary, preliminary or permanent order, judgment, injunction, edict, decree, ruling, pronouncement, determination, decision, opinion, verdict, sentence, stipulation, writ or award that is or has been issued, made, entered, rendered or otherwise put into effect by or under the authority of any court, administrative agency or other Governmental Authority or any arbitrator or arbitration panel; or (b) settlement or conciliation agreement with any Governmental Authority that is or has been entered into in connection with any Proceeding.

"Organizational Documents" shall mean a certificate of incorporation, bylaws, limited partnership agreement, limited liability company agreement or comparable constituent or organizational documents.

"Other Assets" shall have the meaning specified in Section 2.1(f).

"Other Investors" shall mean TPG Carthage Holdings, L.P., a Delaware limited partnership, The Rise Fund Carthage, L.P., a Delaware limited partnership, VVAG Special Fund LLC, a Delaware limited liability company, Vida Ventures, LLC, a Delaware limited liability company, The Regents of the University of California, the Seaview Trust, the Belldegrun Family Trust, Franz Humer, Owen Witte, Chang 2006 Family Trust, Christine Cassiano, Joshua A. Kazam, KB/V LLC, James Economou, Allan Pantuck, Linda Barnes, Stuart Holden, Roy

Doumani, Kiernan Family Trust, Vera Kiernan Trustee, David M. Tanen, Veer Bhavnagri and, if it enters into an Equity Commitment Letter prior to the Closing, Gilead Sciences, Inc.

"Other Royalty-Bearing Product" shall mean any Allogeneic Product that (a) Targets a Target that is not a Pfizer Target, (b) is either (i) Covered by a Valid Claim of any Transferred Pfizer Patent, Arising Patent or Key Assigned Contract Patent or (ii) incorporates or is made, discovered, developed, or derived from the use of Transferred Pfizer Know-How and (c) for which an IND is first filed on or before the fifth (5^{th}) anniversary of the Closing Date.

"Patent and Know-How License Agreement" shall have the meaning specified in Section 4.2(c).

"Patent Assignment" shall have the meaning specified in Section 4.2(b).

"Patents" shall mean any and all (a) issued patents, (b) pending patent applications, including all non-provisional or provisional applications, substitutions, continuations, continuations-in-part, divisions and renewals, and all patents granted thereon, (c) patents-of-addition, reissues, reexaminations and extensions or restorations by existing or future extension or restoration mechanisms, including patent term adjustments, patent term extensions, supplementary protection certificates or the equivalent thereof, (d) inventor's certificates, (e) other forms of government-issued rights substantially similar to any of the foregoing and (f) United States and foreign counterparts of any of the foregoing.

"Permits" shall mean, with respect to any Person, any license, franchise, permit, approval or other similar authorization issued by, or otherwise granted by, any Governmental Authority to which or by which such Person is subject or bound.

"Permitted Lien" shall mean (a) any Lien for Taxes not yet due or delinquent as of the Closing Date or which are being contested in good faith by appropriate Proceedings and for which appropriate reserves have been established under GAAP, (b) vendors', mechanics', materialmen's, carriers', workers', landlords', repairmen's, warehousemen's, construction and other similar Liens arising or incurred in the ordinary and usual course of business and consistent with past practice or with respect to Liabilities that are not yet due and payable or, if due, are not delinquent or are being contested in good faith by appropriate Proceedings, (c) Liens imposed or promulgated by applicable Law or any Governmental Authority with respect to real property, including zoning, building or similar restrictions, (d) pledges or deposits in connection with workers' compensation, unemployment insurance, and other social security legislation, (e) Liens imposed by securities Laws, (f) Liens relating to intercompany borrowings among a person and its wholly owned subsidiaries, provided that, as to the Pfizer Parties and the Purchased Assets, the Products and/or the Purchased Programs, such Liens are released and extinguished prior to or at the Closing, (g) defects, irregularities or imperfections of title which do not materially interfere with, or materially impair the use of, the property or assets subject thereto, or (h) Liens resulting from the action or inaction of NewCo or any of its Affiliates.

"Person" shall mean any individual, Entity or Governmental Authority.

"Personal Information" shall have the meaning specified in Section 7.24.

"Pfizer" shall have the meaning specified in the Preamble.

"Pfizer Assigned IP Rights" shall mean the Group 1 Pfizer IP Rights and the Group 2 Pfizer IP Rights.

"Pfizer Benefit Plan" shall mean each "employee benefit plan" as defined in Section 3(3) of ERISA (whether or not subject to ERISA) and each other pension, retirement, profit-sharing, deferred compensation, change in control, retention, employment, independent contractor, consulting, equity or equity-based compensation, stock purchase, employee stock purchase, severance or termination pay, vacation or paid time-off, bonus or other incentive, medical, health or welfare benefit, retiree medical, health or welfare benefit, life insurance, medical reimbursement, fringe benefit or other plan, agreement, arrangement, program, policy or contract (including any related funding mechanism), in each case, whether oral or written, funded or unfunded, or insured or self-insured, that is sponsored, maintained, contributed to or required to be contributed to by Pfizer or any of its Subsidiaries.

"Pfizer-Cellectis Agreement" shall mean that certain Research Collaboration and License Agreement between Pfizer, Inc. and Cellectis SA dated June 17, 2014, as amended as of the Effective Date.

"Pfizer Damages" shall have the meaning specified in Section 14.2.

"Pfizer Damages Fraction" shall have the meaning specified in Section 14.2.

"Pfizer Fundamental Representations" shall have the meaning specified in Section 11.1(a).

"Pfizer Indemnified Persons" shall have the meaning specified in Section 14.2.

"Pfizer Parties" shall have the meaning set forth in the Preamble.

"Pfizer Savings Plan" shall mean the Pfizer Savings Plan (plan number 002).

"Pfizer-Servier Agreement" shall mean that certain Exclusive License and Collaboration Agreement between Servier and Pfizer, Inc. dated October 30, 2015.

"Pfizer Subsidiaries" shall mean the Subsidiaries of Pfizer set forth on Exhibit A.

"Pfizer Target" shall mean (a) the Developed Pfizer Targets, (b) the Early Stage Targets, and (c) the ROR1 Target and the CD19 Target.

"Pfizer Territory" shall, with respect to a Product, mean the United States and any other countries included in the "Pfizer Territory" as defined for such Product in the Pfizer-Servier Agreement (including to the extent the license conversion provisions in such agreement apply); *provided* that in the event NewCo, its Affiliate or Sublicensee otherwise obtains the right to sell or otherwise commercialize such Product in any country or countries other than the United States, including by termination or amendment, in whole or in part, of the Pfizer-Servier Agreement as it may be amended from time to time, the Pfizer Territory shall include such country or countries with respect to such Product.

"Pfizer's knowledge" and similar phrases shall mean the actual knowledge of the individuals listed on Schedule 1.1(a) after due and reasonable inquiry.

"Post-Closing NewCo Organizational Documents" shall have the meaning specified in Section 7.1(b).

"Post-Closing Tax Period" shall mean any Tax period beginning after the Closing Date and, in the case of a Straddle Period, the portion of such period beginning after the Closing Date.

"Pre-Closing Tax Period" shall mean any Tax period ending on or before the Closing Date and, in the case of a Straddle Period, the portion of such period ending on and including the Closing Date.

"Preferred Stock Purchase Agreement" shall have the meaning specified in Section 4.2(f).

"Price Approval" shall mean, in any country where a Governmental Authority authorizes reimbursement for, or approves or determines pricing for, pharmaceutical products, receipt (or, if required to make such authorization, approval or determination effective, publication) of such reimbursement authorization or pricing approval or determination (as the case may be).

"Proceeding" shall mean any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), prosecution, hearing, inquiry, audit, examination or investigation that is, has been or may in the future be commenced, brought, conducted or heard at law or in equity or before any Governmental Authority.

"Product" shall mean any Royalty-Bearing Product or Other Royalty-Bearing Product.

"Prospective Employees" shall have the meaning specified in Section 6.8(a).

"Purchased Assets" shall have the meaning specified in Section 2.1.

"Purchased Inventory" shall have the meaning specified in Section 2.1(b).

"Purchased Programs" shall mean the programs conducted by the Pfizer Parties as of the date hereof related to developing, manufacturing, commercializing, distributing, promoting, packaging, importing, marketing, selling and otherwise exploiting the Products with respect to the Pfizer Targets, but for the avoidance of doubt, excluding the Excluded Assets.

"Purchased Programs Registered Intellectual Property" shall have the meaning specified in Section 6.9(a).

"Purchased Programs Permits" shall have the meaning specified in Section 6.4.

"Receiving Party" shall have the meaning specified in Section 9.6(a).

"Regulatory Approval" shall have the meaning specified in the definition of "Governmental Approval".

"Regulatory Filing" shall mean any documentation constituting or relating to or supporting any filing or application with any Governmental Authority with respect to a Product, including any documents submitted to any Governmental Authority, including INDs, applications for Regulatory Approval, and all correspondence with any Governmental Authority with respect to any Product (including minutes of any meetings, telephone conferences or discussions with any Governmental Authority).

"Regulatory Laws" shall mean the following Laws: (a) the Federal Food, Drug, and Cosmetic Act, as amended, and all regulations promulgated thereunder, (b) the federal False Claims Act (42 U.S.C. § 1320a-7b(a)), as amended, (c) the Physician Payments Sunshine Act, (d) the Patient Protection and Affordable Care Act, (e) the federal Medicare and Medicaid statutes, (f) the federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b, (g) the federal Physician Self-Referral (Stark) Law, 42 U.S.C. § 1395nn, (h) the federal Civil Monetary Penalties Law, 42 U.S.C. § 1320a-7a, (i) the Federal Trade Commission Act, (j) the Public Health Service Act and (k) any other Laws governing research, development, clinical testing, investigational use, marketing clearance, marketing approval, manufacturing, servicing, packaging, labeling, promotion, sale, import or export of a pharmaceutical product.

"Representatives" shall mean officers, directors, employees, agents, advisors and Affiliates.

"Restated Bylaws" shall have the meaning specified in Section 7.1(b).

"Restated Certificate" shall mean the Amended and Restated Certificate of Incorporation of NewCo, adopted and filed by NewCo on or before the closing of the transaction contemplated by the Preferred Stock Purchase Agreement.

"Right of First Refusal and Co-Sale Agreement" shall have the meaning specified in Section 4.2(g).

"ROR1 Target" shall mean the Target corresponding to Tyrosine-protein kinase transmembrane receptor ROR1, also known as neurotrophic tyrosine kinase, receptor-related 1 (NTRKR1).

"Royalty-Bearing Product" shall mean either (a) any CD52 Product or (b) any Allogeneic Product that Targets a Pfizer Target and:

(i) is, on a country-by-country basis, Covered by a Valid Claim of (A) any Transferred Pfizer Patent, (B) any Arising Patent, or (C) any Key Assigned Contract Patent;

(ii) incorporates or is made, discovered, developed, or derived from the use of Transferred Pfizer Know-How; or

(iii) meets the definition of a (A) "Pfizer Licensed Product" under the Pfizer-Cellectis Agreement, (B) "Pfizer Licensed Product" under the Pfizer-Servier Agreement or (C) "Servier Licensed Product" under the Pfizer-Servier Agreement.

"Royalty Term" shall mean, with respect to a given Product in a given country in the Territory, the period beginning upon the First Commercial Sale of such Product in such country and ending on the later of (a) expiration of the last to expire Valid Claim of (i) any applicable Transferred Pfizer Patent, (ii) any Arising Patent or (iii) any Key Assigned Contract Patent, in each case ((i), (ii) or (iii)) Covering such Product in such country or (b) twelve (12) years from First Commercial Sale of such Product in such country.

"Royalty Territory" shall mean (i) for any Product Targeting the Pfizer Targets CD19 or ROR1, the Pfizer Territory and (ii) for any other Product, all countries of the world.

"Sales Milestone Payment" shall have the meaning specified in Section 5.1(b).

"Series A Preferred Stock" shall mean the Company's Series A Preferred Stock, $0.001 par value per share.

"Series A-1 Preferred Stock" shall mean the Company's Series A-1 Preferred Stock, $0.001 par value per share.

"Servier" shall mean, collectively, Les Laboratoires Servier and Institut de Recherches Internationales Servier.

"Servier Product" shall mean any Product Targeting the Pfizer Targets CD19, ROR1 and EGFRVIII, and as to which either (i) Cellectis has granted Servier a license to develop and commercialize such Product in the Servier Territory, prior to the Effective Date, and which Servier has granted to Pfizer a sublicense under such rights in the United States pursuant to the Pfizer-Servier Agreement, prior to the Effective Date, or (ii) Pfizer has granted Servier a license to develop and commercialize such Product in the Servier Territory, under the Pfizer-Servier Agreement, prior to the Effective Date; *provided* that a Product Targeting EGFRVIII will no longer be deemed a Servier Product under this Agreement if Servier no longer is granted such license referred to in clause (ii) from Pfizer or its assignee under the Pfizer-Servier Agreement, as it may be amended from time to time.

"Servier Territory" shall have the meaning as set forth in the Pfizer-Servier Agreement.

"Set-off" shall have the meaning specified in Section 14.8.

"Shared Contracts" shall mean all Contracts listed on Schedule 2.6, which relate in part, but not exclusively, to the Purchased Programs.

"Stock Plan" shall have the meaning specified in Section 7.2(b)

"Straddle Period" shall have the meaning specified in Section 12.2(e).

"Sublicensee" shall mean any Person, including any assignee, transferee, licensee or sublicensee of NewCo or its Affiliates, to whom NewCo or its Affiliate has granted, including via sale, assignment, license, sublicense or other transfer of assets, any rights (a) assigned or otherwise transferred to NewCo or its Affiliates under this Agreement or (b) licensed or sublicensed to NewCo or its Affiliates under the Patent and Know-How License Agreement.

"Subsidiary" shall mean, with respect to any Person, any Entity in which such Person has a fifty percent (50%) or greater interest.

"Target" shall mean (a) a specific biological molecule that is identified by a GenBank accession number or similar information, or by its amino acid or nucleic acid sequence, and (b) any biological molecule substantially similar in amino acid or nucleic acid sequence that has substantially the same biological function as a molecule disclosed in clause (a), including any naturally occurring mutant or allelic variant of a molecule disclosed in clause (a), including naturally occurring variants, mutants, transcriptional and post-transcriptional isoforms (e.g., alternative splice variants), and post-translational modification variants (e.g., protein processing, maturation and glycosylation variants); and (c) truncated forms (including fragments thereof) which have a biological function substantially similar to that of any biological molecules disclosed in clause (a) or clause (b).

"Targeting" shall mean, when used to describe the relationship between a molecule and a Target, that the molecule (a) binds to the Target (or a portion thereof) and (b) is designed or being developed to exert its biological effect in whole or in part through binding to such Target (or such portion thereof).

"Targets" shall mean, when used as a verb, the correlative meaning of "Targeting."

"Tax" shall mean all forms of taxation imposed by any Tax Authority, including all national, state or local taxation (including income, value added, alternative or add-on minimum, occupation, real and personal property, escheat or unclaimed property, social security, gross receipts, sales, use, production, transfer, registration, ad valorem, franchise, profits, license, withholding, payroll, employment, unemployment, disability, excise, severance, occupation, premium or windfall profit taxes, stamp, customs duties, capital stock, and other import or export duties, estimated and other taxes of any kind whatsoever), together with any interest, penalties, and additions to tax, whether disputed or not.

"Tax Authority" shall mean a Governmental Authority responsible for the imposition, assessment or collection of any Tax (domestic or foreign).

"Tax Contest" shall have the meaning specified in Section 12.3(a).

"Tax Referee" shall have the meaning specified in Section 12.2(c).

"Tax Return" shall mean any report, return, statement, declaration, notice, claim for refund, certificate or other document (including any related or supporting schedules, statements or information) filed or required to be filed with any Tax Authority, or required to be maintained by any Person, in connection with the determination, assessment, collection or payment of any Tax.

"Term" shall mean the period of time commencing on the Effective Date and extending on a country-by-country basis until the earlier of (a) the last to expire of any Royalty Term for any Product in such country in the Territory and (b) the termination of this Agreement in accordance with ARTICLE 13.

"Territory" shall have the meaning specified on Schedule 1.1(b).

"Territory Option Agreement" means that certain Option Letter, dated as of the Effective Date, by and between Pfizer and NewCo, wherein NewCo is granted an option by Pfizer to expand the Territory under certain conditions.

"Third Party" shall mean any Person other than Pfizer, NewCo or their respective Affiliates.

"Total Annual Net Sales" shall have the meaning specified in Section 5.1(b).

"Trade Secrets" shall mean all trade secrets under applicable law and other rights in know-how and confidential or proprietary information, processing, manufacturing or marketing information, including new developments, inventions, processes, ideas or other proprietary information that provide any Pfizer Party with advantages over potential or actual competitors who do not know or use it and documentation thereof (including related papers, invention disclosures, blueprints, drawings, research data and results, flowcharts, diagrams, chemical compositions, formulae, diaries, notebooks, specifications, designs, methods of manufacture, processing techniques, data processing techniques, compilations of information, customer and supplier lists, pricing and cost information, and business and marketing plans and proposals) and all claims and rights related thereto.

"Trademarks" shall mean any and all trademarks, service marks, trade dress, logos, slogans, trade names, all material unregistered trademarks, together with all adaptations, derivations and combinations thereof, and all goodwill associated with any of the foregoing throughout the world.

"Transaction Agreements" shall mean this Agreement and the General Assignment and Bill of Sale, the Patent Assignment, the Patent and Know-How License Agreement, the Transition Services Agreement, the Territory Option Agreement, the Preferred Stock Purchase Agreement, the Investors' Rights Agreement, the Right of First Refusal and Co-Sale Agreement, the Voting Agreement and the Equity Commitment Letters.

"Transactions" shall mean, collectively, the transactions contemplated by this Agreement.

"Transfer Taxes" shall mean all federal, state, local or foreign sales (including bulk sales), use, VAT, transfer, real property transfer, recording, mortgage recording, license, stamp, stamp duty, documentary, conveyance, excise, registration, or similar Taxes that may be imposed in connection with the transfer of Purchased Assets.

"Transferred Employee" shall have the meaning specified in Section 10.1(a).

"Transferred Pfizer Know-How" shall mean Know-How included in the Pfizer Assigned IP Rights or the Group 3 Pfizer IP Rights licensed to NewCo pursuant to the Patent and Know-How License Agreement, including manufacturing Know-How, in each case which is maintained as a Trade Secret as of the Closing Date. Notwithstanding the foregoing, Transferred Pfizer Know-How shall not include any such Know-How which NewCo can demonstrate through competent, written evidence was known to NewCo or any of its Representatives (other than a Transferred Employee) prior to the Closing Date other than (a) from a Pfizer Party, its licensor or its

Representative or (b) from a Third Party who is, or was at the relevant time of disclosure, under an obligation of confidentiality with respect to such Know-How.

"Transferred Pfizer Patents" shall mean the Assigned Patents and the Patents included in the Group 3 Pfizer IP Rights.

"Transition Services Agreement" shall have the meaning specified in Section 4.2(d).

"Treasury Regulations" shall mean the regulations promulgated under the Code by the United States Treasury and IRS.

"Valid Claim" shall mean: (a) a claim of any issued and unexpired patent that (i) has not been, disclaimed, revoked or held unenforceable or invalid by a decision of a Governmental Authority of competent jurisdiction from which no appeal can be taken, or by a decision of a Governmental Authority of competent jurisdiction that can be appealed, but with respect to which an appeal has not taken within the time allowed for appeal, and (ii) has not been disclaimed or admitted to be invalid or unenforceable through reissue, disclaimer or otherwise; or (b) a claim of any pending patent application that (i) has not been cancelled, withdrawn or abandoned, without being re-filed in another application in the applicable jurisdiction, (ii) has not been finally rejected by an administrative agency or other governmental action from which no appeal can be taken and (iii) has not been pending or filed more than [***] years from the earliest possible priority date for such patent application; provided that if such claim is later issued, it shall from the issuance date forward be deemed to be a Valid Claim.

"VAT" shall mean (i) value added tax goods and services tax and (ii) any other similar turnover, sales or purchase, tax or duty, in the case of each of clause (i) and clause (ii), levied by any jurisdiction whether central, regional or local.

"Voting Agreement" shall have the meaning specified in Section 4.2(h).

"Worker Notification Law" shall mean the United States Worker Adjustment and Retraining Notification Act of 1988 or similar state or local Law.

"WuXi Agreement" shall mean that certain Master Services Agreement between Pfizer and WuXi AppTec, Inc., dated December 4, 2015.

1.2 Rules of Interpretation. Except as otherwise explicitly specified to the contrary, (a) references to a Section, Article, Exhibit or Schedule mean a Section or Article of, or Schedule or Exhibit to, this Agreement, unless another agreement is specified, (b) the word "including" (in its various forms) means "including without limitation," (c) references to a particular statute or regulation include all rules and regulations thereunder and any predecessor or successor statute, rules or regulation, in each case as amended or otherwise modified from time to time, (d) words in the singular or plural form include the plural and singular form, respectively, (e) references to a particular Person include such Person's successors and assigns to the extent not prohibited by this Agreement, (f) "extent" in the phrase "to the extent" means the degree to which a subject or other thing extends, and such phrase does not mean simply "if," (g) the headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this

Agreement, (h) the words “will” and “shall” shall be interpreted to have the same meaning, (i) unless otherwise specifically provided for herein, the term “or” shall not be deemed to be exclusive and (j) references to “$” shall mean U.S. dollars.

ARTICLE 2

THE TRANSACTION AGREEMENT

2.1 Purchased Assets. Subject to the terms and conditions of this Agreement, including the terms of Section 2.2, Pfizer shall, and shall cause the other Pfizer Parties to, transfer, convey, assign and deliver to NewCo, and NewCo shall acquire and accept from the Pfizer Parties, all of their respective right, title and interest in, to and under the following (collectively, the “Purchased Assets”), in each case free and clear of all Liens except Permitted Liens:

(a) Contracts. All Contracts set forth on Schedule 2.1(a) or otherwise used or held for use by Pfizer exclusively in connection with the Purchased Programs (collectively, the “Assigned Contracts”);

(b) Inventory. The inventory of raw materials, works-in-progress and drug substance to the extent related exclusively to the Purchased Programs and owned by the Pfizer Parties as of the Closing Date, including, without limitation, the inventory set forth on Schedule 2.1(b) (collectively, the “Purchased Inventory”);

(c) Intellectual Property. The Pfizer Assigned IP Rights;

(d) Books and Records. All books and records exclusively relating to the Purchased Assets, other than Consolidated Returns, and other than any books and records the disclosure of which would reasonably be expected to violate any Law or that relate solely to (i) personnel matters unrelated to Transferred Employees, (ii) any Excluded Asset, and (iii) any attorney work product, attorney-client communications, and other items that are protected by attorney-client privilege (the “Books and Records”);

(e) Goodwill. All goodwill of the Pfizer Parties related to the Purchased Programs;

(f) Other Assets. The other assets of the Pfizer Parties identified on Schedule 2.1(f), which includes the Transferred Pfizer Know-How (the “Other Assets”); and

(g) Subsequently Assigned Assets. Non-Assignable Assets assigned pursuant to Section 2.5.

2.2 Excluded Assets. Notwithstanding any other provision of this Agreement, the Purchased Assets shall not include, and the Pfizer Parties and their Affiliates shall retain and shall not contribute, transfer, convey, assign or deliver to NewCo any of the following (collectively, the “Excluded Assets”):

(a) any assets of the Pfizer Parties that are not included within the definition of Purchased Assets;

(b) any Contracts or intercompany payables or receivables between and among Pfizer and its Subsidiaries;

(c) any cash, checks, money orders, marketable securities, short-term instruments and other cash equivalents, funds in time and demand deposits or similar accounts, and any evidence of indebtedness issued or guaranteed by any Governmental Authority;

(d) any Intellectual Property Rights (including retained rights under the Intellectual Property Rights owned by the Pfizer Parties and licensed to NewCo under the Patent and Know-How License Agreement) other than the Pfizer Assigned IP Rights;

(e) any Pfizer Benefit Plan and any assets related thereto;

(f) all Tax losses and credits, Tax loss and credit carry forwards and other Tax attributes, all deposits or advance payments with respect to Taxes, and any claims, rights, and interest in and to any refund, credit or reduction of Taxes, in each case relating to Excluded Taxes (regardless of when received);

(g) all rights, claims or causes of action of a Pfizer Party against Third Parties to the extent relating to any Excluded Asset or any Excluded Liability;

(h) Non-Assignable Assets, subject to Section 2.5;

(i) the assets, Contracts, equipment or other property listed on Schedule 2.2(i); and

(j) all income Tax Returns and records and other Tax Returns to the extent not exclusively related to the Purchased Programs or Purchased Assets.

For the purposes of Section 2.1 and Section 2.2, the terms Purchased Assets and Excluded Assets, as applicable, shall not include any Tax assets.

2.3 Assumed Liabilities. NewCo shall assume, satisfy and thereafter discharge the following Liabilities of Pfizer or its Affiliates, as applicable (the "Assumed Liabilities"):

(a) all Liabilities under the Assigned Contracts arising after the Closing, and including all unfulfilled binding commitments made prior to the Closing Date to purchase inventory that are scheduled to be delivered or provided thereafter;

(b) all other Liabilities arising from or relating to the Purchased Assets or the conduct of the Purchased Programs after the Closing, including all Liabilities under, and obligations to comply with, applicable Laws; *provided that* Assumed Liabilities shall not include any Liability for Excluded Taxes;

(c) all Liabilities arising from or relating to the practice by NewCo, its Affiliates or Sublicensees of any Intellectual Property Rights owned by the Pfizer Parties and licensed to NewCo under the Patent and Know-How License Agreement;

(d) all Liabilities arising from or relating to the employment or termination of employment of any Prospective Employee on or after the Closing Date (except as provided in Section 2.4(c)(ii));

(e) all Liabilities arising from any lawsuits commenced and claims made after the Closing to the extent resulting from the conduct of the Purchased Programs or the ownership of, or license to, the Purchased Assets after the Closing, including lawsuits and claims arising from the developing, manufacturing, commercializing, distributing, promoting, packaging, importing, marketing, selling or otherwise exploiting any Product after the Closing, including any post-Closing product liability claims, warranty obligations and intellectual property infringement or misappropriation and irrespective of the legal theory asserted;

(f) all Liabilities, including but not limited to any obligation to provide any notices, payments or any other benefits due to any Transferred Employees, if any, and any notices due to any Governmental Authority, if any, which may be required as a result of any "employment loss" (as defined under the Worker Notification Law), in each case, caused by NewCo's actions that occur on or after the Closing Date;

(g) all Liabilities arising after the Closing under the Non-Assignable Assets to the extent NewCo receives the benefits of such Non-Assignable Asset; and

(h) all Liabilities set forth in Schedule 2.3(h).

2.4 Excluded Liabilities. Pfizer and its Affiliates shall retain, and shall be responsible for paying, performing and discharging when due, and NewCo shall not assume or have any responsibility for, any Liabilities of Pfizer and its Affiliates other than the Assumed Liabilities and except as set forth in Section 12.2(d), including the following Liabilities (collectively, the "Excluded Liabilities"):

(a) all Liabilities arising from the Excluded Assets;

(b) all Liabilities under the Assigned Contracts arising prior to the Closing, including all outstanding accounts payable under the Assigned Contracts arising prior to the Closing;

(c) all Liabilities arising from or relating to any (i) Pfizer Benefit Plan or the employment, or termination of employment, of any employee of a Pfizer Party including any Prospective Employee or Transferred Employee, in each case arising prior to the Closing Date or (ii) termination of employment of any Prospective Employee that does not accept an offer of employment from NewCo;

(d) all Liabilities in respect of Excluded Taxes;

(e) all Liabilities arising from or relating to the use of Group 2 Pfizer IP Rights licensed to Pfizer by Pfizer or its sublicensees pursuant to the Patent and Know How License Agreement;

(f) all Liabilities arising from any lawsuits commenced and claims made prior to or after the Closing to the extent resulting from the conduct of the Purchased Programs or the ownership of, or license to, the Purchased Assets prior to the Closing; and

(g) all Liabilities set forth on Schedule 2.4(g).

2.5 Non-Assignable Assets.

(a) Notwithstanding the foregoing, and without limiting Section 11.1, if any Contract that would be an Assigned Contract, or other asset that would be a Purchased Asset, including the portion of any Shared Contract which is applicable to the Purchased Programs pursuant to Section 2.6, is not assignable or transferable (each, a "Non-Assignable Asset") without the consent of, or waiver by, a Third Party or action by a Governmental Authority (each, an "Assignment Consent"), either as a result of the provisions thereof or applicable Laws, and any such Assignment Consent is not obtained on or prior to the Closing Date, then this Agreement and the related instruments of transfer shall not constitute an assignment or transfer of such Non-Assignable Asset and such Non-Assignable Asset shall not be included in the Purchased Assets. Without limiting the Pfizer Parties' obligations under Section 8.4 or Section 9.1, each of the parties hereto, for a period of [***] following the Closing Date, or longer to the extent provided for or contemplated by the Transition Services Agreement (the "Cooperation Period"), shall use commercially reasonable efforts to obtain all such Assignment Consents; *provided*, *however*, that nothing in this Section 2.5(a) shall require any of the Pfizer Parties or any of their Affiliates to modify any of its respective rights in a manner adverse to any of the Pfizer Parties or any of their Affiliates or to pay any fee or other payment, or incur any Liability, cost or out-of-pocket expense in connection with the efforts set forth in this Section 2.5(a), with any such Liabilities, costs or out-of-pocket expenses to be borne by NewCo. To the extent such Assignment Consents are obtained during the Cooperation Period, the Pfizer Parties shall assign to NewCo or its designee such Non-Assignable Assets. Following any such assignment, such assets shall be deemed Purchased Assets for purposes of this Agreement.

(b) During the Cooperation Period, the Pfizer Parties shall cooperate with NewCo in any commercially reasonable arrangement reasonably designed to provide NewCo or its designee with the net benefits of the Non-Assignable Assets after the Closing as if the appropriate Assignment Consents had been obtained, including by granting rights and establishing arrangements whereby NewCo or its designee shall undertake the work necessary to perform under Assigned Contracts, *provided*, *however*, that none of the Pfizer Parties shall be required to (i) undertake any work that would constitute a breach of the Assigned Contracts, (ii) modify any of its respective rights in a manner adverse to the Pfizer Parties or (iii) incur any Liability, cost or out-of-pocket expense in connection therewith; *provided further*, that such benefits shall be calculated net of documented out-of-pocket additional costs in connection therewith (including Taxes). To the extent the benefits of a

Non-Assignable Asset are made available to NewCo during the Cooperation Period, NewCo shall perform, at the direction of the applicable Pfizer Party, the obligations of such Pfizer Party under such Non-Assignable Asset and assume all Liabilities related thereto, and economically bear any out-of-pocket additional costs in connection with such Non-Assignable Asset (including Taxes). After the Cooperation Period, the Pfizer Parties shall continue to be subject to the obligations set forth in Section 9.2.

2.6 Shared Contracts. Each Pfizer Party shall use reasonable best efforts prior to the Closing to cooperate with NewCo in NewCo's efforts to enter into a new Contract related to the Purchased Programs with the counterparty to each Shared Contract on substantially the same terms and conditions as exist under such Shared Contract, in each case as of the Closing; *provided*, *however*, that nothing in this Section 2.6 shall require any of the Pfizer Parties or any of their Affiliates to modify any of its respective rights in a manner adverse to any of the Pfizer Parties or any of their Affiliates or to pay any fee or other payment, or incur any Liability, cost or out-of-pocket expense, in connection with the efforts set forth in this Section 2.6, with any such Liabilities, costs or out-of-pocket expenses to be borne by NewCo. The Pfizer Parties shall keep NewCo reasonably informed and shall consult with NewCo in good faith in connection with any material actions taken with respect to any Shared Contract in furtherance of this Section 2.6 prior to Closing. Any Shared Contract for which the replacement Contract described in this Section 2.6 could not be entered into prior to the Closing shall be a Non-Assignable Asset subject to Section 2.5(b).

ARTICLE 3

CONSIDERATION FOR TRANSFER

3.1 Consideration. As consideration for the Pfizer Parties' sale to NewCo of the Purchased Assets, NewCo shall (a) issue to Pfizer 3,187,772 shares of Series A-1 Preferred Stock (the "Equity Consideration"); (b) assume at the Closing and subsequently, in due course in accordance with the terms applicable thereto, timely pay, perform and discharge the Assumed Liabilities and (c) subject to ARTICLE 14, make such payments as are required pursuant to ARTICLE 5 if, as and when due and payable thereunder (collectively, the "Consideration").

3.2 Withholding Taxes. NewCo (and its agents), the Pfizer Parties (and their agents), and any other applicable withholding agent shall be entitled to deduct and withhold from any consideration payable or otherwise deliverable pursuant to this Agreement such amounts as may be required to be deducted or withheld therefrom under any provision of federal, state, local or foreign Tax law or under any applicable Law and to request any necessary Tax forms, including Form W-9 or the appropriate series of Form W-8, as applicable, or any similar information. Prior to withholding any amount, the applicable withholding agent shall provide written notice to the Person to whom such amounts would otherwise have been paid, together with reasonably sufficient details regarding the nature of the relevant withholding Tax. If any reduction of or exemption from such Tax is available, the withholding agent shall cooperate with the Person to whom such amounts would otherwise have been paid to the extent commercially reasonable to obtain any such reduction or exemption. To the extent such amounts are so deducted or withheld and properly remitted to the appropriate Governmental Authority, such amounts shall be treated for all purposes under this Agreement as having been paid to the Person to whom such amounts would otherwise have been paid.

ARTICLE 4

CLOSING AND CLOSING DELIVERIES

4.1 Closing; Time and Place. The closing of the Transactions (the "Closing") shall occur at the offices of Ropes & Gray LLP, Prudential Tower, 800 Boylston Street, Boston, Massachusetts (or, if agreed by the parties, electronically through the exchange of documents), at 10:00 A.M. Eastern time on the date that is two (2) Business Days after the day on which all of the conditions to closing set forth in ARTICLE 11 are satisfied or waived (other than conditions that are intended to be satisfied at the Closing but subject to the satisfaction or waiver of such conditions), which is expected to be on or about April 6, 2018 or at such other date, time or place as the parties may agree (the "Closing Date").

4.2 Deliveries by Pfizer Parties. At the Closing, Pfizer shall, or shall cause the Pfizer Subsidiaries to, deliver, each of the following items, duly executed and delivered by the applicable Pfizer Party or Pfizer Parties:

(a) Contribution, Assignment and Assumption and Bill of Sale. A Contribution, Assignment and Assumption and Bill of Sale covering all of the applicable Purchased Assets and Assumed Liabilities, substantially in the form attached hereto as Exhibit B (the "General Assignment and Bill of Sale");

(b) Intellectual Property Assignments. A patent assignment (the "Patent Assignment") substantially in the form attached hereto as Exhibit C, for all of the Patents included in the Pfizer Assigned IP Rights;

(c) Patent and Know-How License Agreement. A patent and know-how license agreement, substantially in the form attached hereto as Exhibit D, pursuant to which, in part, (i) the Pfizer Parties will grant certain non-exclusive and exclusive licenses to NewCo under the Group 3 Pfizer IP Rights and certain other Intellectual Property Rights of Pfizer, and (ii) NewCo will grant certain non-exclusive and exclusive licenses to the Pfizer Parties under certain of the Intellectual Property Rights of NewCo (the "Patent and Know-How License Agreement");

(d) Transition Services Agreement. A transition services agreement, substantially in the form attached hereto as Exhibit E (the "Transition Services Agreement"), obligating the Pfizer Parties and certain of their Affiliates to provide certain transition services to NewCo and certain of its Affiliates for the period following the Closing set forth therein;

(e) Investors' Rights Agreement. A shareholder rights agreement among Pfizer, NewCo and the Other Investors, substantially in the form attached hereto as Exhibit F (the "Investors' Rights Agreement");

(f) Preferred Stock Purchase Agreement. A preferred stock purchase agreement among Pfizer, NewCo, the Other Investors, and the Founders substantially in the form attached hereto as Exhibit H-1, provided that if Gilead Sciences, Inc. or its Affiliate enters into an Equity Commitment Letter with respect to a funding commitment

of [***] prior to Closing, such preferred stock purchase agreement shall be in the form attached hereto as Exhibit H-2 (in either case, the "Preferred Stock Purchase Agreement");

(g) Right of First Refusal and Co-Sale Agreement. A right of first refusal and co-sale agreement among Pfizer, NewCo, the Other Investors and the Founders, substantially in the form attached hereto as Exhibit I (the "Right of First Refusal and Co-Sale Agreement").

(h) Voting Agreement. A voting agreement among Pfizer, NewCo, the Other Investors and the Founders, substantially in the form attached hereto as Exhibit J (the "Voting Agreement").

(i) Books and Records. The Books and Records;

(j) FIRPTA Documentation. From each of Pfizer and Rinat Neuroscience Corp., a duly executed certificate of non-foreign status, dated as of the Closing Date, in form and substance reasonably satisfactory to NewCo, and conforming to the requirements of Treasury Regulations Section 1.1445-2(b)(2), stating that each of Pfizer and Rinat Neuroscience Corp. is not a "foreign person" as defined in Section 1445 of the Code;

(k) Form W-9. From each of Pfizer and Rinat Neuroscience Corp., an original, properly completed and duly executed IRS Form W-9 (Rev. November 2017) executed on behalf of Pfizer and Rinat Neuroscience Corp., as applicable, by a duly authorized representative; and

(l) Certificate of Representations and Warranties. A certificate executed on behalf of Pfizer by an officer of Pfizer, certifying as to the matters in Section 11.1(a).

4.3 Deliveries by NewCo. At the Closing, NewCo shall deliver the following items, duly executed by NewCo as applicable:

(a) Consideration. The Equity Consideration;

(b) General Assignment and Bill of Sale. The General Assignment and Bill of Sale;

(c) Patent Assignment. The Patent Assignment;

(d) Patent and Know-How License Agreement. The Patent and Know-How License Agreement;

(e) Transition Services Agreement. The Transition Services Agreement;

(f) Investors' Rights Agreement. The Investors' Rights Agreement;

(g) Preferred Stock Purchase Agreement. The Preferred Stock Purchase Agreement;

(h) Right of First Refusal and Co-Sale Agreement. The Right of First Refusal and Co-Sale Agreement;

(i) Voting Agreement. The Voting Agreement; and

(j) Certificate of Representations and Warranties. A certificate executed on behalf of NewCo by an officer of NewCo, certifying as to the matters in Section 11.2(a).

ARTICLE 5

MILESTONES, ROYALTIES AND OTHER FINANCIAL OBLIGATIONS

5.1 Post-Closing Financial Obligations.

(a) Payments Upon Regulatory Approval. Subject to the remainder of this Section 5.1(a), on a Pfizer Target-by-Pfizer Target basis, NewCo will pay Pfizer the amounts set forth below within [***] days following the first occurrence of the event described in row (i), (ii), (iii) or (iv) of Table A, as applicable (such event, a "Milestone Event") that is achieved by NewCo or any of its Affiliates or any Sublicensee (each amount, a "Milestone Payment").

Table A: Milestone Events and Payments

	Event	**Milestone Payment**
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

Each of the Milestone Payments set forth in Table A above will be payable only once for each applicable Pfizer Target (if at all), irrespective of how many Products Targeting such

Pfizer Target achieve the applicable Milestone Event. For clarity, no payments are due hereunder for any CD52 Product.

(b) Sales Milestone Payments. On a Pfizer Target-by-Pfizer Target basis, other than for Early Stage Targets (i.e., for all Developed Pfizer Targets, the ROR1 Target and the CD19 Target), NewCo will pay Pfizer the following one-time payments (each, a "Sales Milestone Payment") when aggregate Territory Annual Net Sales of all Products Targeting such Pfizer Target (other than an Early Stage Target), in any Calendar Year during the Term (the "Total Annual Net Sales") first reach the respective thresholds indicated below for the [***] such Pfizer Targets for which such threshold is achieved:

Table B: Sales Milestone Payments

Total Annual Net Sales	**Sales Milestone Payment**
[***]	[***]
[***]	[***]
[***]	[***]
Total per Pfizer Target	**$ 325,000,000**

NewCo will make any Sales Milestone Payment payable with respect to a Calendar Year within [***] days after the end of the applicable Calendar Year, and such payment will be accompanied by a report identifying the applicable Pfizer Target and applicable Products, the Annual Net Sales of such Products, and the amount payable to Pfizer under this Section 5.1(b). Each of the Sales Milestone Payments set forth in Table B above will be payable one time only for each applicable Pfizer Target, regardless of the number of times the corresponding Total Annual Net Sales levels are achieved with respect to such Target. In the event more than one of the Total Annual Net Sales levels set forth in Table B above are achieved in the same Calendar Year, each applicable Sales Milestone Payment will become due and payable to Pfizer. For clarity, no sales based milestone payments will be payable with respect to any Products Targeting any Early Stage Target, or with respect to CD52 Products.

(c) Royalty Payments.

(i) Royalties for Products Targeting CD19 and ROR1 Targets. On a Product-by-Product and country-by-country basis, NewCo will pay Pfizer royalties equal to [***] percent ([***]%) of Annual Net Sales of Products Targeting the CD19 Target or the ROR1 Target during the applicable Royalty Term for each such Product in such country, subject to adjustment as provided under Section 5.1(c)(iv).

(ii) Royalties for Royalty-Bearing Products. On a Royalty-Bearing Product-by-Royalty-Bearing Product and country-by-country basis, NewCo will pay Pfizer royalties for each Royalty-Bearing Product (other than Products

Targeting the CD19 Target and the ROR1 Target, which are addressed under subsection (i) above), on a tiered marginal royalty rate basis as set forth below (the "Marginal Royalty Rates") based on the annual aggregate Royalty Territory-wide Net Sales of such Royalty-Bearing Product during each Calendar Year of the applicable Royalty Term for each such Royalty-Bearing Product in such country (each, the "Annual Net Sales"), subject to adjustment as provided under Section 5.1(c)(iv):

Table C: Marginal Royalty Rates

Annual Net Sales of a Royalty-Bearing Product	Marginal Royalty Rate (% of Annual Net Sales)
Annual Net Sales above $[***], up to $[***] million	[***]%
Annual Net Sales including and above $[***], up to $[***]	[***]%
Annual Net Sales including and above $[***]	[***]%

Each Marginal Royalty Rate set forth in Table C above will apply only to that portion of the Net Sales of such Royalty-Bearing Product in the Territory during a given Calendar Year that falls within the indicated range.

(iii) Royalties for Other Royalty-Bearing Products. On an Other Royalty-Bearing Product-by-Other Royalty-Bearing Product and country-by-country basis, NewCo will pay Pfizer royalties equal to [***] percent ([***]%) of Net Sales of Other Royalty-Bearing Products during the applicable Royalty Term for each such Other Royalty-Bearing Product in such country in the Territory.

(iv) Adjustments.

(A) Third Party Intellectual Property. Except with respect to any amounts payable by NewCo under Section 2.6 of the Patent and Know-How License Agreement or any amounts payable to Ablexis, LLC, Aliva Biopharmaceuticals, Inc. or any Affiliate thereof pursuant to the Ablexis Agreement or any new agreement entered into with respect to the Ablexis Antibodies, NewCo shall have the right to offset up to [***] percent ([***]%) of the royalty payments actually paid to a Third Party by NewCo, its Affiliates, or its Sublicensees on the sales of a Royalty-Bearing Product in a country in the Royalty Territory with respect to any license to intellectual property owned or controlled by such Third Party that is necessary or useful for development, manufacture, use or sale of such Royalty-Bearing Product in such country in the Royalty Territory against royalties otherwise payable by NewCo to Pfizer under subsection (i) or (ii) above for such Royalty-Bearing Product in such country; provided, however, that the maximum reduction under this subsection (A) in the amount of royalties otherwise payable hereunder for such Royalty-Bearing Product shall be capped at

(B) [***] percent ([***]%), subject to subsection (B) below. If, but for the proviso in the preceding sentence, the calculation of any deduction hereunder would have the effect of reducing a royalty payment made by NewCo by more than [***] percent ([***]%), then such deduction amount in excess of [***] percent ([***]%) will be applied to one or more subsequent royalty payments until the full amount that NewCo would have been entitled to deduct with respect to such deduction (absent the foregoing limitation) is deducted. Prior to applying any offset under this Section 5.1(c)(iv)(A), NewCo shall inform Pfizer in advance that amounts paid to a Third Party will be so offset against royalties owed to Pfizer in consideration for a license to intellectual property owned or controlled by such Third Party for the development, manufacture, use or sale of the applicable Royalty-Bearing Product in the applicable country.

(C) Non-Exclusive Group 3 Patents, Non-Exclusive Know-How Patents, Non-Exclusive Group 3 Know-How. If a Royalty-Bearing Product is (1) not Covered by a Valid Claim of any Assigned Patent, Key Assigned Contract Patent, Exclusive Group 3 Patent, Exclusive Know-How Patent or an Arising Patent that is an Arising Patent under clause (b) of the "Arising Patent" definition in Section 1.1 (with respect to an Assigned Patent or Exclusive Group 3 Patent) and (2) does not incorporate and is not made, discovered, developed or derived from the use of Exclusive Group 3 Know-How, or any Know-How included in the Pfizer Assigned IP Rights, then, notwithstanding Section 5.1(c)(ii), the royalty rate payable by NewCo for such Product under this Agreement shall be, on a country-by-country basis, equal to [***] percent ([***]%) of Net Sales of such Royalty-Bearing Product during the applicable Royalty Term in such country.

(D) Floor. The royalty rates set forth in Sections 5.1(c)(i) and (ii) may not be reduced for a given country in the Royalty Territory by application of the adjustments set forth in Section 5.1(c)(iv)(A) in the aggregate to less than the greater of (1) [***] percent ([***]%) of Net Sales and (2) [***] percent ([***]%) of the applicable royalty rate of Net Sales set forth in Sections 5.1(c)(i) or (ii).

(v) Third Party Payment Obligations. NewCo will be solely responsible for all obligations (including any milestone, royalty or other obligations that relate to the Products) under the Assigned Contracts arising as of or after the Closing Date and NewCo's other existing or future agreements with Third Parties. For the avoidance of doubt, no such obligations under the Assigned Contracts may be offset pursuant to Section 5.1(c)(iv) against royalties or any other payments owed to Pfizer under this Agreement.

(d) Reports and Payments.

(i) Royalty Statements and Payments. Within [***] days of the end of each Calendar Quarter, NewCo will deliver to Pfizer a report setting forth, for such Calendar Quarter, the following information, on a Product-by-Product, Target-by- Target, country-by-country and Territory-wide basis: (A) Net Sales of each Product for each Target, (B) the type of permitted deductions from

(ii) gross sales to determine Net Sales and the total amount of such deductions; (C) the calculation of the royalties due to Pfizer for such Calendar Quarter, and (D) the royalty due hereunder for the sale of each such Product. NewCo will remit to Pfizer the total royalty due for the sale of all Products during the applicable Calendar Quarter at the time each such report is delivered.

(iii) Currency. As applicable, Net Sales that are recorded in local currencies other than United States dollars will be translated into United States dollars in a manner consistent with NewCo's normal practices used to prepare its audited financial statements for external reporting purposes, provided that such practices use a widely accepted source of published exchange rates.

(iv) Blocked Currency. If by applicable Law in a country or region, conversion into United States dollars or transfer of funds of a convertible currency to the United States becomes restricted, forbidden or substantially delayed, then NewCo shall promptly notify Pfizer and, thereafter, amounts accrued in such country or region shall be paid to Pfizer (or its designee) in such country or region in local currency by deposit in a local bank designated by Pfizer and to the credit of Pfizer.

(v) Method of Payment. Each payment hereunder will be made by electronic transfer in immediately available funds via either a bank wire transfer, an ACH (automated clearing house) mechanism, or any other means of electronic funds transfer, at Pfizer's election, to such bank account as Pfizer will designate in writing to NewCo at least [***] days before the payment is due.

(vi) Late Payments. Interest on any late payment by NewCo shall accrue from the date such payment was originally due at a rate equal to [***] percent ([***]%) above the prime rate of interest as reported in the Wall Street Journal on the date payment was due. Such interest shall be computed on the basis of a year of 360 days for the actual number of days payment is delinquent.

(vii) Record Keeping. NewCo will keep and will cause its Affiliates, licensees and Sublicensees to keep, books and accounts of record in connection with the sale of Products in sufficient detail to permit accurate determination of all figures necessary for verification of royalties and Sales Milestone Payments to be paid hereunder. NewCo and its Affiliates will maintain such records for a period of at least [***] years after the end of the Calendar Quarter in which they were generated, or such longer period as is required by applicable Law.

(viii) Audits. Upon [***] days prior notice from Pfizer, NewCo will permit, and will cause its Affiliates and Sublicensees to permit, an independent certified public accounting firm of nationally recognized standing selected by Pfizer and reasonably acceptable to NewCo, to examine, at Pfizer's sole expense, the relevant books and records of NewCo, its Affiliates and Sublicensees who are Sellers for the sole purpose of verifying the amounts reported by NewCo in accordance with Section 5.1 and the payment of royalties and Sales Milestone

(ix) Payments hereunder. An audit by Pfizer under this Section 5.1(d)(viii) will occur not more than once in any Calendar Year and will be limited to the pertinent books and records for any Calendar Year ending not more than [***] years before the date of the request. The accounting firm will be provided access to such books and records at the facility(ies) of NewCo, its Affiliates or Sublicensees, as applicable, where such books and records are normally kept and such examination will be conducted during normal business hours. NewCo or the applicable Sublicensee may require the accounting firm to sign a reasonably acceptable non-disclosure agreement before providing the accounting firm with access to facilities or records. Upon completion of the audit, the accounting firm will provide both Pfizer and NewCo a written report disclosing any discrepancies in the reports submitted by NewCo or the royalties or Sales Milestone Payments paid by NewCo, and, in each case, the specific details concerning any discrepancies. Such accounting firm shall not disclose NewCo's Confidential Information to Pfizer, except to the extent such disclosure is necessary to verify the accuracy of the reports furnished by NewCo in accordance with Section 5.1 or the amount of payments by NewCo under this Agreement, in which case Pfizer's obligations with respect to such Confidential Information shall be subject to Section 9.6.

(x) Underpayments/Overpayments. If such accounting firm concludes that additional royalties or Sales Milestone Payments were due to Pfizer, then NewCo will pay to Pfizer the additional royalties or Sales Milestone Payments within [***] days of the date NewCo receives such accountant's written report. Further, if the amount of such underpayments exceeds more than [***percent ([***]%) of the amount that was properly payable to Pfizer, then NewCo will reimburse Pfizer for Pfizer's reasonable documented out-of-pocket costs in connection with the audit. If such accounting firm concludes that NewCo overpaid royalties or Sales Milestone Payments to Pfizer, then such overpayments will be credited against future amounts payable by NewCo to Pfizer under this Section 5.1, or, if no further payments are to be made to Pfizer under this Agreement, Pfizer shall promptly repay such overpayment.

(xi) Confidentiality. Notwithstanding any provision of this Agreement to the contrary all reports and financial information of NewCo or its Affiliates' Sublicensees which are provided to or subject to review by Pfizer under this Section 5.1 will be deemed to be NewCo's Confidential Information and subject to the provisions of Section 9.6.

5.2 Diligence and Post-Closing Obligations.

(a) Generally. Subject to Section 5.2(b) below, NewCo will have sole authority over and control of the development, manufacture, seeking and obtaining Regulatory Approval and commercialization of Products in the Territory and will retain final decision-making authority with respect thereto.

(b) Diligence.

(i) Development and Regulatory Approval. NewCo shall use Commercially Reasonable Efforts to develop, and to file for and seek to obtain Regulatory Approval for Royalty-Bearing Products in and for the United States and for Royalty-Bearing Products other than the Servier Products, the European Union (including for such purpose, the United Kingdom), which such obligation shall remain in effect until the tenth anniversary of the Closing Date.

(ii) Commercialization. On a Product-by-Product and country-by-country basis, NewCo will use Commercially Reasonable Efforts to commercialize each Product in each country in the applicable Royalty Territory in which Regulatory Approval for such Product has been obtained.

(iii) Compliance with Law and Procedures. NewCo will perform all development, Regulatory Approval and commercialization activities relating to Products in compliance with all applicable Laws.

(iv) Diligence Reports.

(A) NewCo shall deliver to Pfizer a written report summarizing material development and Regulatory Approval activities undertaken by or on behalf of NewCo with respect to the Products and Purchased Programs and a reasonably detailed summary of all results and data stemming from such development activities (each, a "Development Update"). NewCo shall deliver such Development Updates (x) within [***] days of the end of each Calendar Quarter during the period from the Closing Date until [***] anniversary of the Closing Date; and (y) every [***] thereafter until Regulatory Approval of the first Product, and (z) [***], thereafter, until [***] anniversary of such initial Regulatory Approval.

(B) Beginning on or before January 1 of the Calendar Year following the Calendar Year in which Regulatory Approval of the first Product is received, NewCo shall provide written reports to Pfizer on an annual basis, summarizing material commercial activities undertaken by or on behalf of NewCo with respect to such Product and any other Products.

(C) Upon at least [***] days' notice from Pfizer, NewCo shall arrange for representatives of NewCo to meet in person with Pfizer, no more than [***] per twelve (12) month period and following delivery of any of the above reports, to discuss the contents of such report and any prior report.

[***] = CONFIDENTIAL TREATMENT REQUESTED

ARTICLE 6

REPRESENTATIONS AND WARRANTIES OF PFIZER

Subject to the terms of this Agreement and except as set forth in the corresponding sections or subsections of the disclosure schedules attached hereto, Pfizer represents and warrants to NewCo as of the date of this Agreement as follows:

6.1 Organization. Pfizer is a corporation duly incorporated, validly existing and in good standing under the Laws of the State of Delaware. Each of the other Pfizer Parties is a legal entity duly organized, validly existing and in good standing (where such concept is recognized under applicable Law) under the Laws of its respective jurisdiction of organization. Each Pfizer Party is duly qualified or licensed, and has, or has a license to, all Governmental Approvals necessary, to do business and is in good standing (where such concept is recognized under applicable Law) and authorized to do business under the Laws in each jurisdiction in which the property owned, leased or operated by it or the nature of the business conducted by it makes such approvals, qualification or licensing necessary, except where the failure to be so qualified or licensed or to have such power, authority or approvals or be in good standing has not had, and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

6.2 Power and Authority Relative to this Agreement.

(a) Each Pfizer Party has the requisite corporate or limited liability company power and authority to carry out the provisions of this Agreement and/or the other Transaction Agreements, as applicable. The execution, delivery and performance of this Agreement and the other Transaction Agreements, as applicable, by each Pfizer Party and the consummation of the Transactions have been duly and validly authorized by each Pfizer Party's board of directors (or similar governing body).

(b) This Agreement has been duly and validly executed and delivered by Pfizer and is enforceable against Pfizer in accordance with its terms, except as such enforcement may be subject to applicable bankruptcy, reorganization, insolvency, moratorium or other similar Laws affecting creditors' rights generally and the availability of equitable relief (the "Enforceability Exceptions").

(c) As of the Closing, each of the other Transaction Agreements to which a Pfizer Party is a party will have been duly and validly executed and delivered by such applicable Pfizer Party and will be enforceable against such Pfizer Party in accordance with its terms, subject to the Enforceability Exceptions.

6.3 Consents; No Violation.

(a) Other than as set forth on Schedule 6.3, no authorization, consent, Order, license, permit or approval of, or registration, declaration, notice or filing with, any Governmental Authority is necessary, under applicable Law, for the consummation by the Pfizer Parties of the Transactions other than such authorizations, consents, Orders, licenses, permits, approvals, registrations, declarations, notices and filings (i) as have already been

obtained or (ii) the failure of which to be obtained would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(b) The execution and delivery by the Pfizer Parties of this Agreement and the other Transaction Agreements, as applicable, does not, and the consummation of the Transactions and compliance with the provisions hereof will not, (i) result in any violation of, or default (with or without notice or lapse of time, or both) under, or give rise to a right of termination, cancellation, first offer, first refusal, modification or acceleration of any obligation or to the loss of a benefit under any Key Assigned Contract or other Assigned Contract binding upon any Pfizer Party by which or to which any of the Purchased Assets are bound or subject, or result in the creation of Liens, other than Permitted Liens, in each case, upon any of the Purchased Assets or the conduct of the Purchased Programs, (ii) conflict with or result in any violation of any provision of the respective Organizational Documents of any Pfizer Party or (iii) violate any applicable Laws to which any Pfizer Party is subject, except as, with respect to clause (i) or (iii), would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

6.4 Permits. Schedule 6.4 describes (a) each material Permit held by a Pfizer Party in connection with such Pfizer Party's operation of the Purchased Programs (the "Purchased Programs Permits"), and (b) the Governmental Authority responsible for issuing such Purchased Programs Permit. All Purchased Programs Permits are valid and in full force and effect, and are not subject to any administrative or judicial Proceeding that would reasonably be expected to result in any modification, termination or revocation thereof and, to the knowledge of the Pfizer Parties, no suspension or cancellation of any such Purchased Programs Permit is threatened by a Governmental Authority in writing. The Pfizer Parties are in compliance in all material respects with the terms and requirements of all Purchased Programs Permits.

6.5 Compliance with Laws.

(a) The Pfizer Parties are in compliance in all material respects with all Laws, including Regulatory Laws, and Governmental Approvals applicable to the conduct of the Purchased Programs as conducted as of the date of this Agreement, including the nonclinical and clinical testing, manufacture, storage, distribution, marketing, pricing, packaging, labeling and sale of the Products in the United States, as applicable. All such Governmental Approvals are valid and in full force and effect without any contingency, restriction or limitation other than which would immaterially impair the conduct of the Purchased Programs.

(b) The Pfizer Parties are in compliance in all material respects with all Orders of any Governmental Authority to which they are subject, including any corporate integrity agreement, including all programmatic, operational and reporting requirements, in each case, applicable to the Purchased Programs, the Purchased Assets or the Assumed Liabilities.

(c) Since January 1, 2016, neither the Pfizer Parties nor, to the knowledge of the Pfizer Parties, any employee or contractor of the Pfizer Parties, has made any voluntary or self-disclosure to any Governmental Authority regarding any potential non-compliance

in any material respect with any Governmental Approval, Orders of any Governmental Authority, or Law, in each case applicable to the Purchased Programs, the Purchased Assets or the Assumed Liabilities.

(d) Neither Pfizer nor any of its Affiliates, nor any of its or their respective officers or employees (i) has made an untrue statement of material fact or fraudulent statement to the FDA or any other Governmental Authority responsible for enforcement or oversight with respect to healthcare Laws with respect to the development of any Product, (ii) has failed to disclose a material fact required to be disclosed to the FDA or any other Governmental Authority responsible for enforcement or oversight with respect to healthcare Laws with respect to the development of any Product, or (iii) committed an act, made a statement, or failed to make a statement with respect to the development of any Product that, at the time such disclosure was made, would reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or any analogous laws or policies outside the United States.

(e) No Pfizer employee or, to Pfizer's knowledge, any agent who worked on the development or manufacture of any Product has committed any act, made any statement or failed to make any statement that would reasonably be expected to provide a basis for the FDA or any other Governmental Authority to invoke its policy with respect to "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto. No Pfizer employee or, to Pfizer's knowledge, any agent who worked on the development or manufacture of any Product has been convicted of any crime or engaged in any conduct that would reasonably be expected to result, or has resulted, in (i) debarment under 21 U.S.C. Section 335a or any similar state Law, or (ii) exclusion under 42 U.S.C. Section 1320a-7 or any similar state Law.

6.6 Absence of Certain Changes. Since December 31, 2017, (a) no event has occurred or arisen that has had, or would reasonably be expected to have, a Material Adverse Effect, (b) the Purchased Programs have been conducted in the ordinary course of business in all material respects and (c) except as set forth on the disclosure schedules attached hereto, there has not been any:

(i) Sale, lease or other disposition of any Purchased Asset, other than in the ordinary course of business, or the creation of any Lien on any Purchased Asset, except for Permitted Liens;

(ii) Termination of any Key Assigned Contract;

(iii) Increase by the Pfizer Parties of the salaries, bonuses or other compensation to any Prospective Employee, other than in the ordinary course of business;

(iv) Adoption of, amendment to or increase in the payments to or benefits under any Covered Benefit Plan in which any of the Prospective Employees participates, other than in the ordinary course of business; or

(v) Contract by Pfizer to do any of the foregoing.

6.7 Tax Matters.

(a) Each Pfizer Party has prepared and timely filed (taking into account any valid extension of time within which to file) all income Tax Returns and all other material Tax Returns required to be filed by it in respect of the Purchased Programs, the Purchased Assets, and the Transferred Employees, and all such Tax Returns are true, complete and accurate in all material respects. No extension of time within which to file any such Tax Returns that has not been filed has been requested or granted, other than such extensions filed in the ordinary course of business.

(b) Each Pfizer Party has timely paid all material amounts of all Taxes due, payable and owing by it (whether or not shown on any Tax Return), except for such Taxes for which adequate reserves have been established, in respect of the Purchased Programs, the Purchased Assets, and the Transferred Employees.

(c) Each Pfizer Party has complied in all material aspects with all applicable Laws relating to the payment, collection, withholding and remittance of material amounts of all Taxes (including information reporting requirements in respect thereof) in respect of the Purchased Programs, the Purchased Assets, and the Transferred Employees, including with respect to payments made to or received from any employee, independent contractor, creditor, customer, stockholder or other Third Party.

(d) None of the Pfizer Parties has waived or extended any statute of limitations with respect to material amounts of Taxes or agreed to any extensions of time with respect to a Tax assessment or deficiency which waiver or extension is still in effect, in each case in respect of any Purchased Program, Purchased Asset, or Transferred Employee.

(e) No deficiencies or proposed assessments for material amounts of Taxes in respect of the Purchased Programs, the Purchased Assets, or the Transferred Employees have been claimed, proposed or assessed by any Governmental Authority in writing except for deficiencies which have been fully satisfied by payment, settled or withdrawn.

(f) There are no audits, suits, examinations, investigations or other Proceedings pending or threatened in writing in respect of material amounts of any Taxes or material Tax matters in respect of any of the Purchased Programs, the Purchased Assets, or the Transferred Employees. None of the Pfizer Parties has received a written ruling from any Tax Authority in respect of any Purchased Program, Purchased Asset, or Transferred Employee. There are no Liens for Taxes on any of the Purchased Programs or Purchased Assets other than statutory liens for current Taxes not yet due and payable.

(g) None of the Pfizer Parties (i) is a party to any agreement or arrangement relating to the sharing, indemnification or allocation of any Tax or Tax asset (other than

(A) an agreement or arrangement solely between or among Pfizer, and/or any other Affiliate of Pfizer and (B) any Tax sharing, indemnification or allocation provisions in agreements entered into in the ordinary course of business and not primarily relating to Taxes) or (ii) has any Liability for Taxes of any person (other than the Pfizer and/or any other Affiliate of Pfizer) under Treasury Regulations Section 1.1502-6 (or any analogous or similar provision of state, local or foreign Law), as transferee, successor, by contract, or otherwise.

(h) None of the Pfizer Parties has participated in any "listed transaction" within the meaning of Treasury Regulations Section 1.6011-4(b)(2) (or any analogous or similar provision of state, local or foreign Law).

(i) None of the Purchased Assets is a "United States real property interest" within the meaning of Section 897(c)(1) of the Code and the Treasury Regulations thereunder other than Purchased Assets that are owned and transferred by Pfizer Parties that are not "foreign persons" within the meaning of Section 1445 of the Code (and each such Pfizer Party has delivered a duly executed non-foreign affidavit in accordance with Section 4.2(j)).

(j) No claim has been made by a Tax Authority in writing in a jurisdiction where a Pfizer Party does not file Tax Returns in respect of any Purchased Program, Purchased Asset, or Transferred Employee, that such Pfizer Party is or may subject to taxation by that jurisdiction in respect of such Purchased Program, Purchased Asset, or Transferred Employee.

(k) Neither the execution of this Agreement nor the consummation of the transactions contemplated hereby, either alone or in conjunction with any other event (whether contingent or otherwise) will, with respect to any Prospective Employee, result in the payment of any "parachute payment" (within the meaning of Section 280G of the Code) that is subject to the imposition of an excise Tax under Section 4999 of the Code or that would not be deductible by reason of Section 280G of the Code.

Notwithstanding any other provision of this Agreement, (i) the representations and warranties contained in this Section 6.7 constitute the sole and exclusive representations and warranties of the Pfizer Parties in this ARTICLE 6 relating to any Taxes or Tax Returns and (ii) nothing in this Agreement shall be construed as providing a representation or warranty with respect to the existence, amount, expiration date or limitations on (or availability of) any Tax attribute (including methods of accounting) of the Pfizer Parties for taxable periods (or portions thereof) beginning after the Closing Date.

6.8 Prospective Employees; Employee Benefits.

(a) The Pfizer Parties have provided to NewCo an accurate and complete list as of the Effective Date of: (i) the job title, full or part-time status, business unit, base compensation, target bonus percentage, fringe benefits, eligibility for equity, hire date, status as exempt or non-exempt (under applicable overtime regulations), and location of all current employees who NewCo will be obligated to offer employment to pursuant to

Article 10 (the "Prospective Employees"). As of the Effective Date, no Prospective Employee is on a leave of absence of any kind. As of the date hereof, no Prospective Employee has given notice to any of the Pfizer Parties of such employee's termination of employment or request for a leave of absence. To the knowledge of the Pfizer Parties, no Prospective Employee intends to terminate his or her employment with any of the Pfizer Parties or request or take a leave of absence prior to the Effective Date, or intends to terminate his or her employment with NewCo within six (6) months following the Effective Date.

(b) The Pfizer Parties are currently, and for the past three (3) years, have been, in material compliance with all applicable Laws respecting employment, discrimination in employment, terms and conditions of employment, wages, hours and occupational safety and health with respect to the Prospective Employees. There are no Proceedings pending or, to the knowledge of the Pfizer Parties, threatened, between any of the Pfizer Parties and any of the Prospective Employees before any Governmental Authority. To the knowledge of the Pfizer Parties, no Prospective Employee is in material violation of any (i) employment, non-disclosure, confidentiality or consulting agreement with any of the Pfizer Parties, or (ii) non-competition agreement, non-solicitation agreement, non-disclosure agreement or similar restrictive covenant with a former employer relating to the right of any such Person to be employed by or provide services to the Pfizer Parties because of the nature of the business conducted or presently proposed to be conducted by the Pfizer Parties.

(c) No Prospective Employee is represented by a labor union or other employee representative body, and, to the knowledge of the Pfizer Parties, there are no activities or proceedings filed by any labor union or other employee representative body as of the date hereof to organize any of the Prospective Employees.

(d) Schedule 6.8(d) contains an accurate and complete list of all Pfizer Benefit Plans (i)(A) under which any Prospective Employee or any beneficiary thereof participates and (B) where, pursuant to ARTICLE 10 hereof, NewCo is either agreeing to provide similar benefits under a NewCo benefit plan or assume any costs arising under any such Pfizer Benefit Plan; or (ii) under which NewCo or any of its Affiliates would reasonably be expected to have any material Liability (each such plan, a "Covered Benefit Plan"). With respect to each Covered Benefit Plan in which any Prospective Employee currently participates, the Pfizer Parties have made available to NewCo complete and accurate copies of the following: (i) in the case of any Covered Benefit Plan that is a severance plan (including the Pfizer Separation Plan), the plan document and all amendments thereto; (ii) in the case of any Covered Benefit Plan not identified in clause (i) a summary of the material terms thereof or a copy of the most recent summary plan description; and (iii) if applicable, the most recent determination or opinion letter received from the IRS. No Covered Benefit Plan is maintained, sponsored, contributed to, or required to be contributed to by the Pfizer Parties primarily for the benefit of employees outside of the United States.

(e) Each Covered Benefit Plan has been maintained, funded and administered in compliance with its own terms and in compliance in all material respects with the

provisions of applicable Laws, including ERISA and the Code. No Covered Benefit Plan which is a defined benefit plan had, as of the most recent measurement date, an "adjusted funding target attainment percentage," as defined in Section 436 of the Code, that was less than 80%. No Covered Benefit Plan has an "accumulated funding deficiency," whether or not waived, or is subject to a lien for unpaid contributions under Section 303(k) of ERISA or Section 430(k) of the Code.

(f) Each Covered Benefit Plan that is intended to qualify under Section 401(a) of the Code is subject to a favorable determination or opinion letter from the IRS and, to the knowledge of the Pfizer Parties, no act or omission has occurred that would reasonably be expected to adversely affect the qualified status of any such Covered Benefit Plan.

(g) Other than as set forth on Schedule 6.8(g), no Prospective Employee participates in any Covered Benefit Plan that is: (i) a "multiemployer plan" within the meaning of Section 3(37) or Section 4001(a)(4) of ERISA; or (ii) a benefit plan that is subject to Title IV of ERISA or the funding requirements of Section 302 of ERISA or Section 412 of the Code.

(h) Other than as set forth on Schedule 6.8(h) or as provided in ARTICLE 10, neither the execution of this Agreement nor the consummation of the transactions contemplated hereby, either alone or in conjunction with any other event (whether contingent or otherwise) will, with respect to any Prospective Employee: (i) result in any payment or benefit becoming payable, or required to be provided, by any of the Pfizer Parties to any such individual (other than payment of earned and unpaid wages, accrued vacation or paid time off in connection with the termination of any Transferred Employee by a Pfizer Party in connection with the Closing); (ii) result in the forgiveness of any indebtedness of any such individual; or (iii) increase the amount of any benefit or compensation otherwise payable or required to be provided, by any of the Pfizer Parties to any such individual; or (iv) result in the acceleration of the vesting or timing of payment of any compensation or benefits payable by any of the Pfizer Parties to or in respect of any such individual.

(i) Other than the Prospective Employees, there are no employees of any of the Pfizer Parties, and there are no employees of any of the Pfizer Parties who are employed outside of the United States, who are wholly or mainly assigned to the Purchased Programs or dedicate a material percentage of his or her services to the Purchased Programs.

(j) Notwithstanding any other provision of this Agreement, the representations and warranties contained in Section 6.6(c)(iv), Section 6.7, this Section 6.8, Section 6.9(k)-(l) and Section 6.13(e) constitute the sole and exclusive representations and warranties relating to employees and employee benefit plans.

6.9 Intellectual Property.

(a) With respect to the Pfizer Assigned IP Rights, Schedule 6.9 sets forth, in each case as of the date hereof, an accurate and complete list of all U.S. and foreign: (i) Patents including the patent number or application serial number for each jurisdiction in

which the Patent has been filed, the date filed or issued; (ii) applications and registrations for Trademarks, including the application serial number or registration number, for each country, province and state; (iii) domain names; and (iv) registered Copyrights applications and registrations, including the number and date of registration for each country, province and state, in which a Copyright has been registered (clauses (i) through (iv), collectively the "Purchased Programs Registered Intellectual Property").

(b) No exclusive licenses of any Pfizer Assigned IP Rights, any Group 3 Pfizer IP Rights, or, to Pfizer's knowledge, no exclusive licenses of any Key Assigned Contract Patent, are granted by Pfizer Parties to Third Parties.

(c) The issued patents included in the Pfizer Assigned IP Rights and the Group 3 Pfizer IP Rights and to Pfizer's knowledge, in the Key Assigned Contract Patents, are in effect and subsisting.

(d) Immediately prior to the Closing Date, the Pfizer Parties will be (i) the sole and exclusive owner of the Pfizer Assigned IP Rights and the Group 3 Pfizer IP Rights, or (ii) the holder of a valid right or exclusive license to use the Pfizer Assigned IP Rights, which right or license may be assigned to NewCo hereunder without the consent of any Third Party or, if such consent is required, such consent will have been received prior to the Closing Date.

(e) The Pfizer Assigned IP Rights, the Group 3 Pfizer IP Rights and, to Pfizer's knowledge, the Key Assigned Contract Patents, are free and clear of any Liens, other than Permitted Liens.

(f) To Pfizer's knowledge, no person has infringed or is infringing any Pfizer Assigned IP Rights, Group 3 Pfizer IP Rights or Key Assigned Contract Patents, or has otherwise misappropriated or is otherwise misappropriating any Know-How within the Pfizer Assigned IP Rights or Group 3 Pfizer IP Rights.

(g) To Pfizer's knowledge, there are no claims pending or threatened by the Pfizer Parties against any Person, nor have the Pfizer Parties sent any written notice to any Person, regarding actual or potential infringement, dilution, misappropriation or other unauthorized use of any Pfizer Assigned IP Rights, Key Assigned Contract Patents or Group 3 Pfizer IP Rights.

(h) As of the Closing Date, to Pfizer's knowledge, (i) there are no adverse Third Party actions or claims pending against the Pfizer Parties by any Person in any court, arbitration or by or before any Governmental Authority or, to Pfizer's knowledge, any written adverse Third Party allegations, in any such case to the effect that the manufacture, use, promotion, marketing or sale of the Products constitutes an infringement or misappropriation of the intellectual property rights of such Person, and (ii) none of the Pfizer Assigned IP Rights or Group 3 Pfizer IP Rights or any Key Assigned Contract Patent is involved in any litigation or inventorship challenge, reissue, interference, reexamination, *inter partes* review, opposition, cancellation proceeding, or other post-grant proceeding.

(i) Each of the Patents within the Pfizer Assigned IP Rights, Key Assigned Contract Patents, and Group 3 Pfizer IP Rights properly identifies, to Pfizer's knowledge, each and every inventor of the claims thereof as determined in accordance with the law of the Territory in which such Patents with the Pfizer Assigned IP Rights, Key Assigned Contract Patents or Group 3 Pfizer IP Rights is issued or pending.

(j) To Pfizer's knowledge, all material prior art of which the Pfizer Parties were aware during the pendency of any application currently in substantive prosecution relating to any issued patent in the Pfizer Assigned IP Rights, Key Assigned Contract Patents or Group 3 Pfizer IP Rights owned by a Pfizer Party was properly filed with the patent authorities in the territory in which such application was pending. For all Pfizer Assigned IP Rights, Group 3 Pfizer IP Rights and, to Pfizer's knowledge, the Key Assigned Contract Patents, the Pfizer Parties have met their duty of candor as and if required under 37 C.F.R. 1.56 and complied with analogous Law outside the United States requiring disclosure of references.

(k) Each current and former employee and individual contractor of the Pfizer Parties who is or was involved, to Pfizer's knowledge, in the creation or development of any Pfizer Assigned IP Rights or Group 3 Pfizer IP Rights owned by a Pfizer Party has executed and delivered (and to the Pfizer Parties' knowledge, is in compliance with) an employment or consulting agreement containing nondisclosure, assignment, and non-solicitation provisions.

(l) To Pfizer's knowledge, none of the Prospective Employees is obligated under any agreement, commitment, judgment, decree or order that would materially conflict with the Purchased Programs as conducted. The Pfizer Parties are not using, and, to Pfizer's knowledge, it will not be necessary to use, in connection with the Purchased Programs (i) any inventions of any of their past or present employees or individual contractors made prior to or outside the scope of their employment or consulting agreement by the Pfizer Parties that have not been assigned, licensed or otherwise transferred to a Pfizer Party or (ii) any confidential information or trade secret of any former employer of any such employee or contractors that has not been assigned, licensed or otherwise transferred to a Pfizer Party.

6.10 Purchased Assets.

(a) The Pfizer Parties are the sole and exclusive owners of and have good and valid title to, or valid and subsisting leasehold interests in, all of the Purchased Assets constituting tangible personal property other than Permitted Liens. The Pfizer Parties have all requisite corporate power and authority to conduct and carry on the Purchased Programs as they are now being conducted.

(b) The Purchased Assets, the Intellectual Property Rights licensed pursuant to the Key Assigned Contracts and the Group 3 Pfizer IP Rights, together with any of the rights and licenses granted or provided to NewCo pursuant to the Patent and Know-How License Agreement and the services to be provided under the Transition Services Agreement, as well as the transactions contemplated hereby and thereby, constitute in the

aggregate all the assets necessary to conduct the Purchased Programs in substantially the same manner in all material respects as conducted as of the Effective Date.

6.11 Investigations; Litigation. Since January 1, 2016 (a) there have been no material Proceedings relating to potential breaches, misappropriations or other violations of Law pending, alleged or, to the knowledge of Pfizer, threatened with respect to any Pfizer Party and (b) there have been no material Orders of any Governmental Authority imposed upon any Pfizer Party, in each case with respect to the Purchased Programs or the Transactions.

6.12 Inventory. The Purchased Inventory consists of a quality and quantity usable in the ordinary course of business consistent with past practice except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect and (a) are not excessive in light of the normal operating requirements of the Purchased Programs and (b) are adequate for the conduct of the Purchased Programs in substantially the same manner in all material respects as conducted as of the Effective Date.

6.13 Assigned Contracts.

(a) The Pfizer Parties have made available to NewCo prior to the date of this Agreement a complete, legible and correct copy of each Assigned Contract as in effect on the date of this Agreement. None of the Pfizer Parties is in material breach of or default under the terms of any Assigned Contract and, to the knowledge of the Pfizer Parties, no other party to an Assigned Contract is in material breach of or default under the terms of any Assigned Contract, and there is no event occurring as a direct or reasonably foreseeable result of any Pfizer Party's action or inaction or, to the knowledge of any Pfizer Party, through the action or inaction of any Third Party that with notice or the lapse of time or both would constitute a material breach of or default under the terms of any Assigned Contract. Each Assigned Contract is a legal, valid and binding obligation of the Pfizer Party that is party thereto and, to the knowledge of the Pfizer Parties, of each other party thereto, and is in full force and effect, subject to the Enforceability Exceptions.

(b) Except as set forth in Schedule 6.13(b), no approval, consent or waiver of any Person is needed to continue any Assigned Contract in full force and effect following the consummation of the Transactions.

(c) None of the Pfizer Parties has received written notice from any Person since January 1, 2017 regarding any actual or alleged violation or breach of, or default under, any of the Assigned Contracts or stating that such Person intends to terminate, cancel or make any material change to any Assigned Contract, in each case that would be material to the conduct of the Purchased Programs taken as a whole. Other than as contemplated herein in connection with the Transactions, there are no pending renegotiations or amendments of any of the Assigned Contracts that would be material to the conduct of the Purchased Programs taken as a whole.

(d) The Purchased Programs as conducted by the Pfizer Parties as of the Effective Date do not rely upon or use rights under any Contract that has expired or been terminated that would be material to the Purchased Programs taken as a whole.

(e) The Pfizer Parties are not a party to, bound by or subject to any Contract exclusively relating to the Purchased Programs or the Purchased Assets that are material to the Purchased Programs taken as a whole, except for (i) the Assigned Contracts, (ii) any Contract for employment of Prospective Employees or Covered Benefit Plan, (iii) any Contract relating to the use or ownership of any real property and (iv) those Contracts described on Schedule 6.13(e).

6.14 Finders or Brokers. Other than Centerview Partners LLC, no Pfizer Party has retained any broker or finder or incurred any Liability for any brokerage fees, commissions or finders fees with respect to this Agreement or the Transactions.

6.15 Accredited Investor. For purposes of the issuance of the Equity Consideration at Closing, Pfizer represents that it is an "accredited investor" as such term is defined in Rule 501 under the Securities Act of 1933.

6.16 No Other Representations and Warranties. Except for the representations and warranties contained in this ARTICLE 6 (including the related portions of the disclosure schedules attached hereto), the General Assignment and Bill of Sale, the Patent Assignment and Section 7 of the Patent and Know-How License Agreement, neither Pfizer nor any other Person has made or makes any other express or implied representation or warranty, either written or oral, on behalf of Pfizer, including any representation or warranty as to the accuracy or completeness of any information regarding the Purchased Programs and the Purchased Assets furnished or made available to NewCo and its Representatives or as to the future revenue, profitability or success of the Purchased Programs.

ARTICLE 7

REPRESENTATIONS AND WARRANTIES OF NEWCO

Subject to the terms of this Agreement and except as set forth in the corresponding sections or subsections of the disclosure schedules attached hereto, NewCo represents and warrants to Pfizer as of the date of this Agreement as follows:

7.1 Organization.

(a) NewCo is a corporation duly organized, validly existing and in good standing under the Laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as now conducted and as presently proposed to be conducted. Except as set forth on Schedule 7.1(a), NewCo is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a material adverse effect on NewCo's ability to consummate the Transactions.

(b) NewCo has made available to Pfizer prior to the date of this Agreement a true and complete copy of its certificate of incorporation and bylaws that are currently in effect (together, the "Initial NewCo Organizational Documents"). Prior to the Closing, NewCo shall have filed the Restated Certificate with the Delaware Secretary of State and amended and restated its bylaws (the "Restated Bylaws") and at the Closing and immediately after the Closing, the Restated Certificate and the Restated Bylaws (together,

the "Post-Closing NewCo Organizational Documents") shall be in full force and effect and NewCo shall not be in violation of their provisions.

7.2 Capitalization.

(a) Immediately prior to the Closing, the authorized capital of NewCo shall consist, of:

(i) 20,000,000 shares of Common Stock, 5,000,000 shares of which are issued and outstanding immediately prior to the Closing. All of the outstanding shares of Common Stock have been duly authorized, are fully paid and non-assessable and were issued in compliance with all applicable federal and state securities laws. NewCo holds no Common Stock in its treasury.

(ii) 11,743,987 shares of Class A Preferred Stock, par value $0.001, of which: (A) 7,557,990 shares have been designated Series A Preferred Stock; and (B) 4,185,997 shares have been designated Series A-1 Preferred Stock, none of which shall be issued and outstanding immediately prior to the Closing. The rights, privileges and preferences of the Equity Consideration are as stated in the Restated Certificate and as provided by the Delaware General Corporation Law. NewCo holds no Preferred Stock in its treasury.

(b) NewCo has reserved 1,000,000 shares of Common Stock for issuance to officers, directors, employees and consultants of NewCo pursuant to its 2017 Equity Incentive Plan duly adopted by NewCo's board of directors and approved by NewCo's stockholders (the "Stock Plan"), all of which remain available for issuance to officers, directors, employees and consultants pursuant to the Stock Plan. NewCo has furnished to Pfizer complete and accurate copies of the Stock Plan and forms of agreements to be used thereunder. Promptly following the Closing, the NewCo's board of directors shall amend the Stock Plan to provide for a share reserve equal to 10% of the fully diluted capitalization of NewCo (including the 1,000,000 shares of Common Stock reserved for issuance pursuant to this Section 7.2(b)) as of the Closing.

(c) Schedule 7.2(c) sets forth the capitalization of NewCo immediately following the Closing including the number of shares of the following, if any: (i) issued and outstanding Common Stock, including, with respect to restricted Common Stock, vesting schedule and repurchase price; (ii) granted stock options, including vesting schedule and exercise price; (iii) shares of Common Stock reserved for future award grants under the Stock Plan; (iv) each series of Preferred Stock; and (v) warrants or stock purchase rights, if any. Except for (A) the conversion privileges of the Preferred Stock to be issued under the Preferred Stock Purchase Agreement, (B) the issuance of Preferred Stock pursuant to the Preferred Stock Purchase Agreement, (C) the rights provided in Section 4 of the Investors' Rights Agreement, and (D) the securities and rights described in Schedule 7.2(c), as of the Closing, there will be no outstanding options, warrants, rights (including conversion or preemptive rights and rights of first refusal or similar rights) or agreements, orally or in writing, to purchase or acquire from NewCo any shares of Common Stock or Preferred Stock, or any securities convertible into or exchangeable for shares of Common

Stock or Preferred Stock. As of the Closing, all outstanding shares of the Common Stock and all shares of Common Stock underlying outstanding options will be subject to (i) a right of first refusal in favor of NewCo first, and the holders of the Class A Preferred Stock second, upon any proposed transfer (other than transfers for estate planning purposes); and (ii) a lock-up or market standoff agreement of not less than 180 days following NewCo's initial public offering pursuant to a registration statement filed with the Securities and Exchange Commission under the Securities Act of 1933.

(d) As of the Closing, none of NewCo's stock purchase agreements or stock option documents will contain a provision for acceleration of vesting (or lapse of a repurchase right) or other changes in the vesting provisions or other terms of such agreement or understanding upon the occurrence of any event or combination of events, including without limitation in the case where the Stock Plan is not assumed in an acquisition. NewCo has never adjusted or amended the exercise price of any stock options previously awarded, whether through amendment, cancellation, replacement grant, repricing, or any other means. NewCo has no obligation (contingent or otherwise) to purchase or redeem any of its capital stock.

(e) 409A. NewCo believes in good faith that any "nonqualified deferred compensation plan" (as such term is defined under Section 409A(d)(1) of the Code and the guidance thereunder) under which NewCo makes, is obligated to make or promises to make, payments (each, a "409A Plan") complies in all material respects, in both form and operation, with the requirements of Section 409A of the Code and the guidance thereunder. To the knowledge of NewCo, no payment to be made under any 409A Plan is, or will be, subject to the penalties of Section 409A(a)(1) of the Code.

7.3 Subsidiaries. NewCo does not currently own or control, directly or indirectly, any interest in any other corporation, partnership, trust, joint venture, limited liability company, association or other business entity. NewCo is not a participant in any joint venture, partnership or similar arrangement.

7.4 Power and Authority Relative to this Agreement. All corporate action required to be taken by the NewCo's Board of Directors and stockholders in order to authorize NewCo to enter into this Agreement and the Transaction Agreements, and to issue the Equity Consideration at the Closing and the Common Stock issuable upon conversion of the Equity Consideration, has been taken. All action on the part of the officers of the NewCo necessary for the execution and delivery of this Agreement and the Transaction Agreements, the performance of all obligations of NewCo under this Agreement and the Transaction Agreements to be performed as of the Closing, and the issuance and delivery of the Equity Consideration has been taken. This Agreement and the Transaction Agreements, when executed and delivered by NewCo, shall constitute valid and legally binding obligations of NewCo, enforceable against NewCo in accordance with their respective terms, except as such enforcement may be subject to the Enforceability Exceptions.

7.5 No Consent. Other than as set forth on Schedule 7.5, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state or local Governmental Authority is required on the part of NewCo in connection with the consummation by NewCo of the Transactions, except for (i) the filing of the Restated

Certificate, which will have been filed as of the Closing and (ii) filings pursuant to Regulation D of the Securities Act and applicable state securities laws, which will be made in a timely manner. The execution and delivery by NewCo of this Agreement and the other Transaction Agreements, as applicable, does not, and the consummation of the Transactions and compliance with the provisions hereof will not result in a violation or default of any provisions of the Initial NewCo Organizational Documents or the Post-Closing NewCo Organizational Documents.

7.6 Investigations; Litigation. There is no claim, action, suit, proceeding, arbitration, complaint, charge or investigation pending or to NewCo's knowledge, currently threatened: (i) against NewCo or any officer, director, Key Employee or Founder of NewCo; (ii) that questions the validity of this Agreement or the Transaction Agreements or the right of NewCo to enter into them, or to consummate the transactions contemplated by this Agreement or the Transaction Agreements; or (iii) to NewCo's knowledge, that would reasonably be expected to have, either individually or in the aggregate, a material adverse effect on NewCo's ability to consummate the Transactions. Neither NewCo nor, to NewCo's knowledge, any of its officers, directors, Key Employees or Founders is a party or is named as subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality (in the case of officers, directors, Key Employees or Founders such as would affect NewCo). There is no action, suit, proceeding or investigation by NewCo pending or which NewCo intends to initiate. The foregoing includes, without limitation, actions, suits, proceedings or investigations pending or threatened in writing (or any basis therefor known to NewCo) involving the prior employment of any of the NewCo's employees, their services provided in connection with NewCo's business, any information or techniques allegedly proprietary to any of their former employers or their obligations under any agreements with prior employers.

7.7 Finders or Brokers. NewCo has not retained any broker or finder or incurred any Liability for any brokerage fees, commissions or finders fees with respect to this Agreement or the Transactions.

7.8 Solvency. Immediately after giving effect to the Transactions, NewCo shall be solvent and shall: (a) be able to pay its debts as they become due; and (b) have adequate capital to carry on its business. No transfer of property is being made and no obligation is being incurred in connection with the transactions contemplated hereby with the intent to hinder, delay or defraud either present or future creditors of Pfizer or NewCo. In connection with the Transactions, NewCo has not incurred, nor plans to incur, debts beyond its ability to pay as they become absolute and matured.

7.9 Funding. NewCo hereby represents and warrants that (i) on or before the Effective Date, NewCo shall have entered into the equity commitment letters with each of the Other Investors, which are attached hereto as Exhibit G (such letters, the "Equity Commitment Letters"), and pursuant to which the Other Investors have collectively committed to provide an aggregate of two hundred sixty-five million dollars ($265,000,000) of funding to NewCo on the terms and subject to the conditions set forth in the Equity Commitment Letters (the "Financing"), and (ii) that none of the Equity Commitment Letters has been amended, modified, terminated or withdrawn and that each of the Equity Commitment Letters is in full force and effect.

7.10 Valid Issuance of Shares. The Class A Preferred Stock, when issued, sold and delivered in accordance with the terms and for the consideration set forth in this Agreement, will be validly issued, fully paid and non-assessable and free of restrictions on transfer other than restrictions on transfer under the Restated Certificate, the Restated Bylaws or the Financing Agreements, applicable state and federal securities laws and liens or encumbrances created by or imposed by a purchaser under the Preferred Stock Purchase Agreement. Assuming the accuracy of the representations of Pfizer in Section 4 of the Preferred Stock Purchase Agreement and subject to the filings described in the Voting Agreement, the Class A Preferred Stock will be issued in compliance with all applicable federal and state securities laws. The Common Stock issuable upon conversion of the Class A Preferred Stock has been duly reserved for issuance, and upon issuance in accordance with the terms of the Restated Certificate, will be validly issued, fully paid and non-assessable and free of restrictions on transfer other than restrictions on transfer under the Restated Certificate, the Restated Bylaws or the Financing Agreements, applicable federal and state securities laws and liens or encumbrances created by or imposed by a purchaser under the Preferred Stock Purchase Agreement. Based in part upon the representations of Pfizer in Section 4 of the Preferred Stock Purchase Agreement and in the Voting Agreement, the Common Stock issuable upon conversion of the Class A Preferred Stock will be issued in compliance with all applicable federal and state securities laws.

7.11 Compliance with Other Instruments. NewCo is not in violation or default: (i) of any provisions of the Initial NewCo Organizational Documents, (ii) of any instrument, judgment, order, writ or decree, (iii) under any note, indenture or mortgage, or (iv) under any lease, agreement, contract or purchase order to which it is a party or by which it is bound that is required to be listed on the disclosure schedules attached hereto, or (v) to NewCo's knowledge, of any provision of federal or state statute, rule or regulation applicable to NewCo. The execution, delivery and performance of the Transaction Agreements and the consummation of the transactions contemplated by the Transaction Agreements will not result in any such violation or be in conflict with or constitute, with or without the passage of time and giving of notice, either: (i) a default under any such provision, instrument, judgment, order, writ, decree, contract or agreement; or (ii) an event which results in the creation of any lien, charge or encumbrance upon any assets of NewCo or the suspension, revocation, forfeiture, or nonrenewal of any material permit or license applicable to NewCo.

7.12 Agreements; Actions.

(a) Except for the Transaction Agreements and this Agreement, there are no agreements, understandings, instruments, contracts or proposed transactions to which NewCo is a party or by which it is bound that involve: (i) obligations (contingent or otherwise) of, or payments to, NewCo in excess of $50,000, (ii) the license of any patent, copyright, trademark, trade secret or other proprietary right to or from NewCo, (iii) the grant of rights to manufacture, produce, assemble, license, market, or sell its products to any other Person that limit NewCo's exclusive right to develop, manufacture, assemble, distribute, market or sell its products, (iv) indemnification by NewCo with respect to infringements of proprietary rights, or (v) any other material restriction on the operation of NewCo's business.

(b) NewCo has not: (i) declared or paid any dividends, or authorized or made any distribution upon or with respect to any class or series of its capital stock, (ii) incurred any indebtedness for money borrowed or incurred any other liabilities individually in excess of $50,000 or in excess of $100,000 in the aggregate, (iii) made any loans or advances to any Person, other than ordinary advances for travel expenses, or (iv) sold, exchanged or otherwise disposed of any of its assets or rights, other than the sale of its inventory in the ordinary course of business. For the purposes of (a) and (b) of this Section 7.12, all indebtedness, liabilities, agreements, understandings, instruments, contracts and proposed transactions involving the same Person (including Persons that NewCo has reason to believe are affiliated with each other) shall be aggregated for the purpose of meeting the individual minimum dollar amounts of such subsection.

(c) NewCo is not a guarantor or indemnitor of any indebtedness of any other Person.

7.13 Certain Transactions.

(a) Other than: (i) standard employee benefits generally made available to all employees, (ii) standard director and officer indemnification agreements approved by NewCo's board of directors, and (iii) the purchase of shares of NewCo's capital stock and the issuance of options to purchase shares of NewCo's Common Stock, in each instance, approved in the written minutes or written consents of NewCo's board of directors (previously provided to Pfizer and the Other Investors or their counsel), there are no agreements, understandings or proposed transactions between NewCo and any of its officers, directors, consultants, Founders or Key Employees, or any Affiliate thereof.

(b) NewCo is not indebted, directly or indirectly, to any of its directors, officers, Founders or employees or to their respective spouses or children or to any Affiliate of any of the foregoing, other than in connection with expenses or advances of expenses incurred in the ordinary course of business or employee relocation expenses and for other customary employee benefits made generally available to all employees. None of NewCo's directors, officers, Founders or employees, or any members of their immediate families, or any Affiliate of the foregoing are, directly or indirectly, indebted to NewCo or have any: (i) material commercial, industrial, banking, consulting, legal, accounting, charitable or familial relationship with any of NewCo's customers, suppliers, service providers, joint venture partners, licensees and competitors; (ii) direct or indirect ownership interest in any firm or corporation with which NewCo is affiliated or with which NewCo has a business relationship, or any firm or corporation which competes with NewCo except that directors, officers, employees or stockholders of NewCo may own stock in (but not exceeding 2% of the outstanding capital stock of) publicly traded companies that may compete with NewCo; or (iii) financial interest in any contract with NewCo.

7.14 Rights of Registration and Voting Rights. Except as provided in the Investors' Rights Agreement, to be entered into prior to or at the Closing, NewCo is not under any obligation to register under the Securities Act of 1933 any of its currently outstanding securities or any securities issuable upon exercise or conversion of its currently outstanding securities. To NewCo's knowledge, except as contemplated in the Equity Commitment Letters or the Voting Agreement,

to be entered into prior to or at the Closing, no stockholder of NewCo has entered into any agreements with respect to the voting of capital shares of NewCo.

7.15 Material Liabilities. NewCo has no liability or obligation, absolute or contingent (individually or in the aggregate), except: (i) obligations and liabilities incurred after the date of incorporation in the ordinary course of business that are not material, individually or in the aggregate, and (ii) obligations under contracts made in the ordinary course of business that would not be required to be reflected in financial statements prepared in accordance with GAAP. NewCo maintains and will continue to maintain a standard system of accounting established and administered in accordance with GAAP.

7.16 Changes. Since the date of incorporation there has not been:

(a) any damage, destruction or loss, whether or not covered by insurance, that would have a Material Adverse Effect;

(b) any waiver or compromise by NewCo of a valuable right or of a material debt owed to it;

(c) any satisfaction or discharge of any lien, claim, or encumbrance or payment of any obligation by NewCo, except in the ordinary course of business and the satisfaction or discharge of which would not have a Material Adverse Effect;

(d) any material change to a material contract or agreement by which NewCo or any of its assets is bound or subject;

(e) any material change in any compensation arrangement or agreement with any employee, officer, director or stockholder;

(f) any resignation or termination of employment of any officer or Key Employee of NewCo;

(g) any mortgage, pledge, transfer of a security interest in, or lien, created by NewCo, with respect to any of its material properties or assets, except liens for taxes not yet due or payable and liens that arise in the ordinary course of business and do not materially impair NewCo's ownership or use of such property or assets;

(h) any loans or guarantees made by NewCo to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(i) any declaration, setting aside or payment or other distribution in respect of any of NewCo's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by NewCo;

(j) any sale, assignment or transfer of any NewCo Intellectual Property that could reasonably be expected to result in a Material Adverse Effect;

(k) any other event or condition of any character, other than events affecting the economy of NewCo's industry generally, that could reasonably be expected to result in a Material Adverse Effect; or

(l) any arrangement or commitment by NewCo to do any of the things described in this Section 7.16.

7.17 Employee Matters.

(a) As of the date hereof, NewCo employs three full-time employees and no part-time employees and engages no consultants or independent contractors. Schedule 7.17(a) sets forth a detailed description of all compensation, including salary, bonus, severance obligations and deferred compensation paid or payable for each officer, employee, consultant and independent contractor of NewCo who received annualized compensation in excess of $100,000 for the fiscal year ended December 31, 2017 or is anticipated to receive annualized compensation in excess of that amount for the fiscal year ending December 31, 2018.

(b) None of its employees is obligated under any contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any court or administrative agency, that would materially interfere with such employee's ability to promote the interest of NewCo or that would conflict with NewCo's business. Neither the execution or delivery of the Transaction Agreements, nor the carrying on of NewCo's business by the employees of NewCo, nor the conduct of NewCo's business as now conducted and as presently proposed to be conducted, will, to NewCo's knowledge, conflict with or result in a breach of the terms, conditions, or provisions of, or constitute a default under, any contract, covenant or instrument under which any such employee is now obligated.

(c) NewCo is not delinquent in payments to any of its employees, consultants, or independent contractors for any wages, salaries, commissions, bonuses, or other direct compensation for any service performed for it to the date hereof or amounts required to be reimbursed to such employees, consultants or independent contractors. NewCo has complied in all material respects with all applicable state and federal equal employment opportunity laws and with other laws related to employment, including those related to wages, hours, worker classification and collective bargaining. NewCo has withheld and paid to the appropriate governmental entity or is holding for payment not yet due to such governmental entity all amounts required to be withheld from employees of NewCo and is not liable for any arrears of wages, taxes, penalties or other sums for failure to comply with any of the foregoing.

(d) To NewCo's knowledge, no Key Employee intends to terminate employment with NewCo or is otherwise likely to become unavailable to continue as a Key Employee. NewCo does not have a present intention to terminate the employment of any of the foregoing. The employment of each employee of NewCo is terminable at the will of NewCo. Except as set forth in Schedule 7.17(d) or as required by law, upon termination of the employment of any such employees, no severance or other payments will become due.

Except as set forth in Schedule 7.17(d), NewCo has no policy, practice, plan or program of paying severance pay or any form of severance compensation in connection with the termination of employment services.

(e) NewCo has not made any representations regarding equity incentives to any officer, employee, director or consultant that are inconsistent with the share amounts and terms set forth in the minutes of meetings of NewCo's board of directors.

(f) Schedule 7.17(f) of the Disclosure Schedule sets forth each employee benefit plan maintained, established or sponsored by NewCo, or which NewCo participates in or contributes to, which is subject to ERISA. NewCo has made all required contributions and has no liability to any such employee benefit plan, other than liability for health plan continuation coverage described in Part 6 of Title I(B) of ERISA, and has complied in all material respects with all applicable laws for any such employee benefit plan.

(g) To NewCo's knowledge, none of the Key Employees, Founders or directors of NewCo has been: (i) subject to voluntary or involuntary petition under the federal bankruptcy laws or any state insolvency law or the appointment of a receiver, fiscal agent or similar officer by a court for his or her business or property; (ii) convicted in a criminal proceeding or named as a subject of a pending criminal proceeding (excluding traffic violations and other minor offenses); (iii) subject to any order, judgment or decree (not subsequently reversed, suspended, or vacated) of any court of competent jurisdiction permanently or temporarily enjoining him or her from engaging, or otherwise imposing limits or conditions on his or her engagement in any securities, investment advisory, banking, insurance, or other type of business or acting as an officer or director of a public company; or (iv) found by a court of competent jurisdiction in a civil action or by the United States Securities and Exchange Commission or the Commodity Futures Trading Commission to have violated any federal or state securities, commodities, or unfair trade practices law, which such judgment or finding has not been subsequently reversed, suspended, or vacated.

7.18 Tax Returns and Payments. There are no federal, state, county, local or foreign taxes due and payable by NewCo which have not been timely paid. There are no accrued and unpaid federal, state, county, local or foreign taxes of NewCo which are due, whether or not assessed or disputed. There have been no examinations or audits of any tax returns or reports by any applicable federal, state, local or foreign governmental agency. NewCo has duly and timely filed all federal, state, county, local and foreign tax returns required to have been filed by it and there are in effect no waivers of applicable statutes of limitations with respect to taxes for any year.

7.19 Insurance. NewCo has in full force and effect insurance policies concerning such casualties as would be reasonable and customary for companies like NewCo with extended coverage, sufficient in amount (subject to reasonable deductions) to allow it to replace any of its properties that might be damaged or destroyed.

7.20 Employee Agreements. Each current and former employee, consultant and officer of NewCo has executed an agreement with NewCo regarding confidentiality and proprietary information substantially in the form or forms delivered to the counsel for Pfizer and the Other

Investors (the "Confidential Information Agreements"). No current or former Key Employee has excluded works or inventions from his or her assignment of inventions pursuant to such Key Employee's Confidential Information Agreement. NewCo is not aware that any of its Key Employees is in violation of any agreement covered by this Section 7.20.

7.21 Permits. Except as set forth on Schedule 7.21, NewCo has all franchises, permits, licenses and any similar authority necessary for the conduct of its business, the lack of which could reasonably be expected to have a Material Adverse Effect. NewCo is not in default in any material respect under any of such franchises, permits, licenses or other similar authority.

7.22 Corporate Documents. The Restated Certificate and the Restated Bylaws are in the form provided to Pfizer and the Other Investors. The copy of the minute books of NewCo provided to Pfizer and the Other Investors contains minutes of all meetings of directors and stockholders and all actions by written consent without a meeting by the directors and stockholders since the date of incorporation and accurately reflects in all material respects all actions by the directors (and any committee of directors) and stockholders with respect to all transactions referred to in such minutes.

7.23 Foreign Corrupt Practices Act. Neither NewCo nor any of its directors, officers, employees or agents have, directly or indirectly, made, offered, promised or authorized any payment or gift of any money or anything of value to or for the benefit of any "foreign official" (as such term is defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA")), foreign political party or official thereof or candidate for foreign political office for the purpose of: (i) influencing any official act or decision of such official, party or candidate, (ii) inducing such official, party or candidate to use his, her or its influence to affect any act or decision of a foreign governmental authority, or (iii) securing any improper advantage, in the case of (i), (ii) and (iii) above in order to assist NewCo or any of its affiliates in obtaining or retaining business for or with, or directing business to, any person. Neither NewCo nor any of its directors, officers, employees or agents have made or authorized any bribe, rebate, payoff, influence payment, kickback or other unlawful payment of funds or received or retained any funds in violation of any law, rule or regulation. NewCo further represents that it has maintained, and has caused each of its affiliates to maintain, systems of internal controls (including, but not limited to, accounting systems, purchasing systems and billing systems) and written policies to ensure compliance with the FCPA or any other applicable anti-bribery or anti-corruption law, and to ensure that all books and records of NewCo accurately and fairly reflect, in reasonable detail, all transactions and dispositions of funds and assets. Neither NewCo nor, to NewCo's knowledge, any of its officers, directors or employees are the subject of any allegation, voluntary disclosure, investigation, prosecution or other enforcement action related to the FCPA or any other anti-corruption law.

7.24 Data Privacy. In connection with its collection, storage, transfer (including, without limitation, any transfer across national borders) and/or use of any personally identifiable information from any individuals, including, without limitation, any customers, prospective customers, employees and/or other third parties (collectively "Personal Information"), NewCo is and has been in compliance in all material respects with all applicable laws in all relevant jurisdictions, NewCo's privacy policies and the requirements of any contract or codes of conduct to which NewCo is a party. NewCo has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal

Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. To the extent NewCo maintains or transmits protected health information, as defined under 45 C.F.R. § 160.103, NewCo is in compliance with the applicable requirements of the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, including all rules and regulations promulgated thereunder. NewCo is and has been in compliance in all material respects with all laws relating to data loss, theft and breach of security notification obligations.

7.25 Non-Reliance. Except for the representations and warranties contained in ARTICLE 6 of this Agreement (including the related portions of the disclosure schedules attached hereto), the General Assignment and Bill of Sale, the Patent Assignment, and Section 7 of the Patent and Know-How License Agreement, neither Pfizer nor any of its agents, employees or representatives have made, nor are any of them making any representation or warranty, written or oral, express or implied, in respect of the Purchased Programs and the Purchased Assets, including any representations and warranties about the accuracy or completeness of any information or documents previously provided, and any such other representations and warranties are hereby expressly disclaimed. NewCo expressly acknowledges and agrees that neither NewCo nor any of NewCo's agents, employees or representatives is relying on any other representation or warranty of Pfizer or any of its agents, employees or representatives, including regarding the accuracy or completeness of any such other representations and warranties or the omission of any material information, whether express or implied.

ARTICLE 8

PRE-CLOSING COVENANTS

8.1 Conduct of the Purchased Programs Prior to Closing.

(a) From the date of this Agreement until the Closing, except as otherwise permitted by this Agreement, set forth in Schedule 8.1, consented to by NewCo in writing (which consent shall not be unreasonably withheld or delayed) or directed, directly or indirectly, by NewCo, Pfizer agrees to use (and to cause each Pfizer Party to use) commercially reasonable efforts to:

(i) maintain in effect all Pfizer Assigned IP Rights and Governmental Approvals and applications and registrations included in the Pfizer Assigned IP Rights and Governmental Approvals in the ordinary course of business consistent with past practice;

(ii) maintain all Purchased Inventory and physical Purchased Assets in its present repair, order and condition in the ordinary course of business consistent with past practice, except for depletion and ordinary wear and tear;

(iii) perform its obligations in all material respects under the Assigned Contracts;

(iv) maintain and perform material obligations under Governmental Approvals and materially comply with all applicable Laws relating the Purchased Programs and the Purchased Assets;

(v) keep in full force and effect all material rights relating to the Purchased Programs; and

(vi) continue to operate, conduct, further develop and advance the Purchased Programs in the ordinary course of business, consistent with past practices.

(b) From the date of this Agreement until the Closing (or, with respect to clause (ix), the Employee Transfer Date), except as otherwise permitted by this Agreement, set forth in Schedule 8.1, consented to by NewCo in writing (which consent shall not be unreasonably withheld or delayed) or directed, directly or indirectly, by NewCo, Pfizer will not (and Pfizer will cause each of its Affiliates not to):

(i) pledge, sell, lease, transfer, license (exclusive or non-exclusive), assign, impair, dispose of or otherwise make subject to a Lien (other than any Permitted Liens) any Purchased Asset outside of the ordinary course of business consistent with past practice, other than the sale of Purchased Inventory or obsolete, worn-out or excess equipment or assets in the ordinary course of business consistent with past practice;

(ii) cancel or waive any material claims or rights that relate to the Purchased Assets or commence, settle, or agree to settle any Proceeding with any Governmental Authority or other Person relating to the Purchased Programs or any Purchased Asset or any Assumed Liability;

(iii) transfer, assign or grant any license (exclusive or non-exclusive) or sublicense of any rights under or with respect to any Pfizer Assigned IP Rights or Group 3 Pfizer IP Rights other than non-exclusive licenses in the ordinary course of business consistent with past practice;

(iv) change, amend or otherwise modify, or waive any material claims or rights under, or terminate any Assigned Contract that has a value, payment or other obligations in excess of $[***] individually or $[***] in the aggregate;

(v) enter into any Contract in connection with the Purchased Programs with an obligation or value in excess of $[***] individually or $[***] in the aggregate;

(vi) make any write down in the value of the Purchased Inventory and physical Purchased Assets, except as required by applicable Law or GAAP;

(vii) abandon or permit the lapse of, as applicable, any Pfizer Assigned IP Rights to the extent that Pfizer or any of its Affiliates controls prosecution and maintenance of such Pfizer Assigned IP Rights;

(viii) take any action related to the Purchased Programs which would adversely affect, or impede or impair, the ability of the parties hereto, to consummate the Transactions;

(ix) hire or terminate the employment of any Prospective Employee (other than for cause), increase any Prospective Employee's salary or benefits or alter any Prospective Employee's responsibilities (other than, in each case, (A) annual salary increases in the ordinary course of business or (B) increases in benefits under any Covered Benefit Plan in the ordinary course of business or (C) increases required by Law or the terms of a Covered Benefit Plan); or

(x) agree, whether in writing or otherwise, to do any of the foregoing.

8.2 Access to Information. From the date of this Agreement until the Closing or the earlier termination of this Agreement pursuant to its terms, Pfizer and its Affiliates shall (a) permit NewCo and its Representatives to have reasonable access to all books, records (including Tax records), contracts and documents exclusively pertaining to the Purchased Programs or the Purchased Assets and (b) furnish NewCo with all financial, operating and other data and information related exclusively to the Purchased Programs (including copies thereof) as NewCo may reasonably request; *provided, however*, that Pfizer shall not be required to permit any inspection or other access, or to disclose any information that in the reasonable judgment of Pfizer would: (i) result in the disclosure of any Trade Secrets, (ii) violate any obligation of Pfizer with respect to confidentiality entered into prior to the date of this Agreement, (iii) violate or result in the loss or material impairment of any information subject to the attorney-client privilege or the attorney work product doctrine, (iv) cause competitive harm to any Pfizer Party, (v) violate any Law or (vi) result in disclosure of the Consolidated Returns. Any such access will be provided or conducted during normal business hours upon reasonable advance notice to Pfizer, under the reasonable supervision of Pfizer's personnel and in such a manner as not to interfere with the normal operations of Pfizer and its Affiliates. All requests by NewCo for access pursuant to this Section 8.2 shall be submitted or directed exclusively to such individual or individuals as Pfizer may designate in writing from time to time (including in response to NewCo's request). Prior to the Closing, without the prior written consent of Pfizer, which will not be unreasonably withheld or delayed, none of NewCo or any of its Affiliates shall contact any employees of, suppliers to, or any other Person with a material business relationship with Pfizer or its Affiliates regarding the Purchased Programs. NewCo shall, and shall cause its Affiliates to, abide by the terms of the Confidential Disclosure Agreement with respect to any access or information provided pursuant to this Section 8.2 or otherwise, in accordance with the terms of such Confidential Disclosure Agreement.

8.3 Commercially Reasonable Efforts. Subject to the terms and conditions of this Agreement, from the date of this Agreement to the Closing, or the earlier termination of this Agreement pursuant to its terms, each party hereto shall cooperate with the other party hereto and use (and shall cause their respective Affiliates to use) their respective commercially reasonable

efforts to promptly take, or cause to be taken, all actions, and do, or cause to be done, all things, necessary, proper or advisable to cause the conditions to Closing set forth in ARTICLE 11 to be satisfied (but not waived) as promptly as practicable. In furtherance and not in limitation of the covenants of the parties contained in this Section 8.3, each of the parties hereto shall use its reasonable best efforts to resolve such objections, if any, as may be asserted by a Governmental Authority in any jurisdiction in which information on consultation obligations are required by applicable Laws to consummate the Transactions.

8.4 Consents. Without limiting the provisions of Section 8.3, on or prior to the Closing Date, each of the Pfizer Parties shall use its respective commercially reasonable efforts to obtain all Consents and make and deliver all filings and notices listed on Schedule 8.4(a), and NewCo shall use commercially reasonable efforts to obtain all Consents and make and deliver all filings and notices listed on Schedule 8.4(b), *provided*, *however*, that nothing in this Section 8.4 shall require any of the Pfizer Parties or any of their Affiliates to modify any of its respective rights in a manner adverse to any of the Pfizer Parties or any of their Affiliates or to pay any fee or other payment, or incur any Liability, cost or out-of-pocket expense in connection with the efforts set forth in this Section 8.4, with any such Liabilities, costs or out-of-pocket expenses to be borne by NewCo.

8.5 Exclusive Dealing.

(a) From the date of this Agreement until the earlier of (i) the termination of this Agreement pursuant to its terms or (ii) the Closing, the Pfizer Parties, the Pfizer Parties' Subsidiaries and their respective Representatives shall not, without the prior written consent of NewCo, directly or indirectly, (x) solicit, knowingly encourage or initiate any contact concerning the submission of any inquiry, proposal or offer from any entity or person (other than NewCo) or (y) participate in any discussions or negotiations or enter into any agreement with, or provide any additional non-public information to, any entity or person (other than NewCo), in each case relating to a sale of all or any material part of the Purchased Programs or Purchased Assets (whether by way of merger, purchase of capital stock, purchase of assets, granting of licenses or similar transaction or a sale of a Subsidiary of Pfizer that holds or owns all or any material part of the Purchased Programs or Purchased Assets).

(b) From the date of this Agreement until the Closing, the Pfizer Parties, their Affiliates and their respective Representatives shall cease all discussions with any Person (other than NewCo) regarding any of the matters covered by this Section 8.5, including terminating any such Person's access to the Pfizer Parties' electronic data room, and shall promptly cause their Representatives to request the return or destruction of all non-public information concerning the Purchased Programs and/or the Purchased Assets that has been furnished to any person or entity with whom a confidentiality agreement was entered into at any point within the 12-month period immediately prior to the Effective Date. The Pfizer Parties acknowledge and agree, for itself and each of the persons and entities referred to above, that any remedy at law for breach of the covenants of this Section 8.5 would be inadequate, and in addition to any other relief which may be available, NewCo will be entitled to temporary and permanent injunctive relief without the necessity of proving actual damages and without regard to the adequacy of any remedy at law.

8.6 Financing.

(a) NewCo and its Affiliates shall use their reasonable best efforts to obtain the Financing, including by using their reasonable best efforts to deliver all documents and instruments reasonably necessary to satisfy the conditions set forth in the Equity Commitment Letter and otherwise seeking to cause the conditions set forth in the Equity Commitment Letter to be fulfilled in accordance with its terms. If at any time it becomes likely (as determined in the reasonable judgment of NewCo) that NewCo and its Affiliates will be unable for any reason to consummate the Financing, NewCo and its Affiliates shall use their reasonable best efforts to seek alternative financing.

(b) NewCo and its Affiliates shall not amend, modify or change any of the conditions in the Equity Commitment Letter in a manner that would reasonably be expected to materially delay or prevent the Closing without the prior written consent of Pfizer, such consent not to be unreasonably withheld, conditioned or delayed, and, subject to the satisfaction of all the conditions to the Closing set forth in this Agreement, NewCo and its Affiliates shall draw down on the financing referred to in the Equity Commitment Letter when the conditions set forth in the Equity Commitment Letter are satisfied.

8.7 Pre-Closing Cooperation. From the date of this Agreement until the earlier of Closing or termination of this Agreement pursuant to Section 13.1, each party shall, and shall cause its Affiliates and their respective directors, officers, employees and other Representatives to, from time to time, at the reasonable request of the other party, cooperate with the other party and use reasonable best efforts to facilitate the transactions contemplated by the Transaction Agreements, provided, however, that any access or furnishing of information shall be conducted during normal business hours, under the supervision of the other party's personnel and in such a manner as not unreasonably to interfere with the normal operations of the other party. Notwithstanding anything to the contrary in this Agreement, the other party shall not be required to disclose any information to the requesting party or its Representatives if such disclosure would, in the other party's good faith determination, (i) jeopardize any attorney-client or other legal privilege or (ii) contravene any applicable Laws, fiduciary duty or binding agreement entered into prior to the date hereof.

8.8 Conduct of NewCo Prior to Closing. From the date of this Agreement until the Closing, except as consented to by Pfizer in writing, NewCo will not issue any Common Stock, Series A Preferred Stock or any other equity security of NewCo except as expressly contemplated by this Agreement or the Preferred Stock Purchase Agreement or amend or enter into any side letter or similar agreement with respect to, waive any provision of, or otherwise modify in any respect any of the Equity Commitment Letters.

ARTICLE 9

POST-CLOSING COVENANTS

9.1 Cooperation. After the Closing, upon the reasonable request of NewCo and at NewCo's expense for any costs or expense of Third Parties, Pfizer shall, and shall cause each other Pfizer Party to, (i) use reasonable best efforts during the Cooperation Period following the Closing to (a) execute and deliver any and all further materials, documents and instruments of conveyance, transfer or assignment as may reasonably be requested by NewCo to effect, record or verify the

transfer to and vesting in NewCo of such Pfizer Party's right, title and interest in and to the Purchased Assets, free and clear of all Liens other than the Permitted Liens, in accordance with the terms of this Agreement, (b) deliver physical possession of the Purchased Assets to NewCo, (c) cooperate with reasonable requests from NewCo to assist in an orderly transfer of supplier relationships involving the Purchased Programs to NewCo, and (ii) use commercially reasonable efforts to perform the post-Closing covenants set forth on Schedule 9.1; *provided*, *however*, that nothing in this Section 9.1 shall require any Pfizer Party or its Affiliates to modify any of its respective rights in a manner adverse to such party or any of their Affiliates or to pay any fee or other payment, or incur any Liability, cost or out-of-pocket expense in connection with the efforts set forth in this Section 9.1, with any such Liabilities, costs or out-of-pocket expenses to be borne by NewCo. After the Closing, each Pfizer Party shall promptly deliver to NewCo any mail, packages, orders, inquiries and other communications addressed to such Pfizer Party and to the extent relating to the Purchased Programs.

9.2 Return of Assets; Transfer of Purchased Assets.

(a) If, for any reason after the Closing, any asset is ultimately determined to be an Excluded Asset or NewCo is found to be in possession of any Excluded Asset or subject to an Excluded Liability, (i) NewCo shall return or transfer and convey (without further consideration) to the appropriate Pfizer Party, and such Pfizer Party shall accept or assume, as applicable, such asset or Excluded Liability; (ii) the appropriate Pfizer Party shall assume (without further consideration) any Liabilities associated with such assets or Excluded Liabilities; and (iii) NewCo and the appropriate Pfizer Party shall execute such documents or instruments of conveyance or assumption and take such further acts which are reasonably necessary or desirable to effect the transfer of such asset or Excluded Liability back to the Pfizer Party.

(b) In the event that any Purchased Asset or Assumed Liability is discovered by Pfizer or any of its Affiliates or identified to Pfizer in writing by NewCo at any time after the Closing Date, possession or ownership of which has not been transferred to, or assumed by (without further consideration), either NewCo or its Affiliates at such time, the Pfizer Parties shall promptly take such steps as may be required to transfer, or cause to be transferred, such Purchased Assets or Assumed Liabilities to NewCo, subject to Section 2.5 and otherwise in accordance with the terms of this Agreement, at no additional charge to NewCo or its Affiliates, and NewCo or its Affiliates shall accept such Purchased Assets or assume such Assumed Liabilities, as the case may be.

9.3 Records and Documents. For a period of [***] years after the Closing, at the other party's request, each party shall provide the other party and its Representatives with access to and the right to make copies of those records and documents to the extent related to the Purchased Programs (possession of which is retained by a Pfizer Party or transferred to NewCo, as applicable), as may be reasonably necessary in connection with any Third Party litigation, or the conduct of any audit or investigation by a Governmental Authority. Notwithstanding anything to the contrary in this Section 9.3, Pfizer or the Pfizer Parties, as applicable, shall provide to NewCo reasonable access to, and the right to make copies of, Tax Returns that relate primarily to the Purchased Programs or the Purchased Assets, and NewCo shall not have access or the right to

9.4 make copies of any other Tax Returns *provided*, that in no event shall Pfizer or the Pfizer Parties, as applicable, provide access to Consolidated Returns.

9.5 Bulk Sales Waiver. NewCo hereby waives compliance by each Pfizer Party with any applicable bulk sales Laws in connection with the Transactions.

9.6 Confidentiality.

(a) Definitions. "Confidential Information" shall mean: (a) all non-public or proprietary information (including Know-How) that is disclosed by or on behalf of a party (the "Disclosing Party") (or any of its Affiliates) to the other party (the "Receiving Party", each a "Party" for purposes of this Section 9.5) or any of its Representatives pursuant to or in connection with this Agreement or the Confidential Disclosure Agreement or the Patent and Know-How License Agreement (including the terms thereof); and (b) all other non-public or proprietary information (including Know-How) that is expressly deemed in this Agreement or the Patent and Know-How License Agreement to be Confidential Information, whether or not disclosed by or on behalf of a party (or any of its Affiliates) to the other party, any of its Affiliates or any of their respective employees, agents or contractors, in each case ((a) or (b)), without regard as to whether any of the foregoing is marked "confidential" or "proprietary," or in oral, written, graphic or electronic form. The terms of this Agreement shall be deemed to be both parties' Confidential Information. Pfizer's Confidential Information shall include all such information disclosed in connection with NewCo's due diligence investigation of the Purchased Programs, the Purchased Assets and the evaluation of the Transactions, including pursuant to Section 8.2; provided that, subject to the Patent and Know-How License Agreement, all Know-How (including unpublished patent applications) included in the Pfizer Assigned IP Rights, and all Confidential Information contained in or exclusively related to the Assigned Contracts, the Books and Records and the Other Assets shall, as between Pfizer and NewCo, be deemed to be NewCo's Confidential Information as of the Closing Date, such that NewCo shall be deemed to be the Disclosing Party with respect thereto, Pfizer shall be deemed to be the Receiving Party with respect thereto, and Section 9.6(b)(i) below shall not apply to such Confidential Information.

(b) Exclusions. Information shall not be deemed to be Confidential Information of the Disclosing Party to the extent that the Receiving Party can demonstrate:

(i) through competent evidence that such information is known by the Receiving Party at the time of its receipt who is not known by the Receiving Party to be under an obligation of confidentiality, and not through a prior disclosure by the Disclosing Party;

(ii) that such information is in the public domain before its receipt from the Disclosing Party, or thereafter enters the public domain through no breach of this Agreement by the Receiving Party;

(iii) that such information is subsequently disclosed to the Receiving Party by a Third Party who is not known by the Receiving Party to be under an obligation of confidentiality to the Disclosing Party; or

(iv) through competent evidence that such information is discovered or developed by or on behalf of the Receiving Party independently and without use of or reference to any Confidential Information received from the Disclosing Party.

(c) Duty of Confidence. Subject to the other provisions of this Section 9.5, for a period of [***] years after the Closing Date:

(i) The Receiving Party shall maintain in confidence and otherwise safeguard the Disclosing Party's Confidential Information in the same manner and with the same protections as the Receiving Party maintains its own confidential information, but in any event no less than reasonable efforts;

(ii) the Receiving Party may only use any such Confidential Information for the purposes of performing its obligations or exercising its rights under the Transaction Agreements;

(iii) the Receiving Party may only disclose the Disclosing Party's Confidential Information to its Affiliates (and, in the case of NewCo as the Receiving Party, its licensees and sublicensees) and its and their respective Representatives, in each case to the extent reasonably necessary for the purposes of performing its obligations or exercising its rights under this Agreement; provided that such Persons are bound by legally enforceable obligations to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(d) Authorized Disclosures. Notwithstanding the obligations set forth in this Section 9.6, the Receiving Party may disclose the Disclosing Party's Confidential Information to the extent:

(i) such disclosure is reasonably necessary: (A) to the Receiving Party's Representatives (including attorneys, independent accountants or financial advisors) for the sole purpose of enabling such Representatives to provide advice to such Receiving Party, provided that in each such case such recipients are bound by confidentiality and non-use obligations that are at least as restrictive as those contained in this Agreement; or (B) to actual or bona fide potential investors, potential acquirors, licensees or other financial, development or commercial partners solely for the purpose of evaluating or carrying out an actual or potential investment, acquisition or collaboration, provided that in each such case such recipients are bound by confidentiality and non-use obligations at least as restrictive as those contained in the Agreement;

(ii) such disclosure is to a Governmental Authority and necessary or desirable (A) to obtain or maintain INDs, Regulatory Approvals or Price Approval for any product (subject to the limitations of any license grant to the Receiving

(iii) Party related to the use of such Confidential Information), within the Territory, or (B) in order to respond to inquiries, requests or investigations by such Governmental Authority relating to Products or this Agreement;

(iv) such disclosure is required by Law, judicial or administrative process, provided that, except for disclosures governed by the last two sentences of Section 9.6(e) below, the Receiving Party, to the extent legally permitted, shall promptly inform the Disclosing Party of such required disclosure and provide the Disclosing Party an opportunity to challenge or limit the disclosure obligations, provided that Confidential Information that is disclosed pursuant to subsection (ii) above or this subsection (iii) shall remain otherwise subject to the confidentiality and non-use provisions of this Section 9.6 (provided that such disclosure is not a public disclosure), and the Receiving Party shall cooperate with and reasonably assist the Disclosing Party if the Disclosing Party seeks a protective order or other remedy in respect of any such disclosure. In any event, the Receiving Party shall furnish only that portion of the Confidential Information which, in the advice of the Receiving Party's legal counsel, is responsive to such requirement or request;

(v) such disclosure is reasonably necessary to exercise its right to prepare, file, prosecute, maintain and extend Patents in a manner consistent with the Patent and Know-How License Agreement, including any obligation to cooperate with the Disclosing Party therein; or

(vi) necessary in order to enforce its rights under the Agreement; or

(vii) in the case of Pfizer as the Receiving Party, with respect to Know-How in the Pfizer Assigned IP Rights which is other than that within the Group 1 Pfizer IP Rights, to the extent useful or necessary to exercise and enjoy the rights in and to such Transferred Pfizer Know-How granted to Pfizer under the Patent and Know-How License Agreement.

(e) SEC Filings and Other Disclosures. Either Party may disclose the terms of this Agreement and make any other public written disclosure regarding the existence of, or performance under, this Agreement, to the extent required, in the reasonable advice of such Party's legal counsel, to comply with (i) applicable Law, including the rules and regulations promulgated by the United States Securities and Exchange Commission or (ii) any equivalent Governmental Authority, securities exchange or securities regulator in any country in the Territory. Before disclosing this Agreement or any of the terms hereof pursuant to this Section 9.6(e), the parties will consult with one another on the terms of this Agreement to be redacted in making any such disclosure, with the Party making such disclosure providing reasonable advance notice, and giving consideration to the timely comments of the other Party. Further, if a Party discloses this Agreement or any of the terms hereof in accordance with this Section 9.6(e), such Party will, at its own expense, seek such confidential treatment of confidential portions of this Agreement and such other terms as it reasonably determines, giving consideration to the comments of the other Party pursuant to the preceding sentence.

9.7 Non-Solicitation of Employees.

(a) For a period of [***] after the Closing Date, without the prior written consent of Pfizer, NewCo shall not, and shall cause its Affiliates not to, solicit for employment or engagement or hire or engage as a consultant or independent contractor any of the employees, independent contractors or consultants of any Pfizer Party or any Affiliate of any Pfizer Party as of the Closing Date; *provided that* NewCo and its Affiliates shall not be restricted by this Section 9.7(a) from making any general solicitation for employees or public advertising of employment opportunities (including through the use of employment agencies) not specifically directed at any such persons and hiring persons who apply for employment as a direct result of such general solicitation or public advertising.

(b) For a period of [***] after the Closing Date, without the prior written consent of NewCo, Pfizer shall not, and shall cause its Affiliates not to, solicit for employment or engagement or hire or engage as a consultant or independent contractor any of the employees, independent contractors or consultants of NewCo as of the Closing Date; *provided that* Pfizer and its Affiliates shall not be restricted by this Section 9.7(b) from making any general solicitation for employees or public advertising of employment opportunities (including through the use of employment agencies) not specifically directed at any such persons and hiring persons who apply for employment as a direct result of such general solicitation or public advertising.

(c) It is the understanding of the parties that the scope of the covenants contained in Section 9.7 as to time and area covered, are reasonable and necessary to protect the goodwill, confidential information, rights and other legitimate interests of the Pfizer Parties. It is the parties' intention that these covenants be enforced to the greatest extent (but to no greater extent) in time, area, and degree of participation as is permitted by applicable Laws. The parties further agree that, in the event that any provision of Section 9.7 shall be determined judicially to be unenforceable by reason of its being extended over too great a time or too great a range of activities, such provision shall be deemed to be modified to permit its enforcement to the maximum extent permitted by Law. The parties further agree that (i) in addition and not in the alternative to any other remedies available to it, Pfizer shall be entitled to preliminary and permanent injunctive relief against any breach or threatened breach by NewCo or any of its Affiliates of any such covenants, without having to post bond, together with an award of its reasonable attorneys' fees incurred in enforcing its rights hereunder, (ii) the restricted period applicable to NewCo and its Affiliates shall be tolled, and shall not run, during the period of any breach by NewCo or its Affiliates of any such covenants, and (iii) no breach of any provision of this Agreement shall operate to extinguish NewCo's obligation to comply with this Section 9.7.

9.8 Worker Notification Laws Matters. Without limiting NewCo's obligations under Article 10 hereof, NewCo shall not, within ninety (90) days after the Employee Transfer Date, involuntarily or constructively terminate the employment (including by making such adverse changes to terms and conditions of employment that would constitute either such termination under any applicable Worker Notification Law) of more than forty (40) of the Transferred Employees or any other employees who work in the same facility, office or location as any of the Transferred

9.9 Employees. As of the Employee Transfer Date, the Pfizer Parties will provide NewCo with a list by date and location of the number of employees who work in a facility, office or location where any of the Prospective Employees will be based following the Employee Transfer Date and whose employment was involuntarily terminated by any of the Pfizer Parties within the ninety (90) days preceding the Employee Transfer Date.

9.10 [Reserved].

9.11 Reporting of Pfizer Financial Information. From and after the Effective Date, Pfizer shall (a) cooperate with NewCo or its Affiliates and their respective accountants and auditors by providing access to information, books, and records related to the Purchased Assets and Purchased Programs as NewCo may reasonably request in connection with the preparation by NewCo or its Affiliates of historical and pro forma financial statements related to the Purchased Assets and Purchased Programs as may be required to be included in any filing made by NewCo or any of its Affiliates under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, and the regulations promulgated thereunder, including Regulation S-X and (b) without limiting the foregoing, shall provide NewCo with such information as is required for NewCo or its Affiliates to prepare audited "carve out" financial statements related to the Purchased Assets and Purchased Programs, for the two (2) fiscal years prior to the Effective Date (or such shorter period as agreed to by NewCo) and information requested by NewCo and reasonably necessary to prepare any applicable pro forma financial information required to be filed by NewCo with the United States Securities and Exchange Commission. Such cooperation shall include, as applicable, (i) the signing of management representation letters to the extent required in connection with any such audit performed by NewCo's auditors, (ii) providing NewCo or its Affiliates and their respective accountants and auditors with access to management representation letters (specifically limited to portions thereof that are directly related to the Purchased Assets) and (iii) directing Pfizer's accountants, auditors, and counsel to reasonably cooperate with NewCo or its Affiliates and its accountants, auditors, and counsel in connection with the preparation and audit of any financial information to be provided under this Section 9.11 (Reporting of Pfizer Financial Information), *provided*, *however,* that nothing herein shall require Pfizer to make available to NewCo or its Affiliates or their respective accountants and auditors (i) management representation letters provided by Pfizer to Pfizer's accountants and auditors that do not relate to the Purchased Assets, (ii) any communications between Pfizer and its accountants and auditors, (iii) any information prior to June 17, 2014 or following the Closing Date, (iv) any information related to valuation analyses performed by Pfizer or its Affiliates or their respective accountants, auditors or consultants or (v) any information other than historical financial information stored in Pfizer's electronic financial recording systems in the ordinary course of business. NewCo will be responsible for all costs and expenses incurred by Pfizer or its Affiliates in connection with the generation of financial information as set forth herein, including personnel-, facility- and equipment-related costs and expenses, professional fees, external "carve out" audit fees, consents, and any other fees or expenses, whether out-of-pocket or otherwise, associated with amendments and/or revisions required to support NewCo's or its Affiliates' United States Securities and Exchange Commission disclosure obligations. Notwithstanding anything to the contrary in this Agreement, in no event shall Pfizer or the Pfizer Parties, as applicable, provide access to Consolidated Returns.

ARTICLE 10

EMPLOYEES

10.1 Employees and Employee Benefits.

(a) Not later than five (5) Business Days prior to the anticipated Employee Transfer Date, NewCo shall offer, or cause one of its Affiliates to offer, employment to each Prospective Employee who is then employed by a Pfizer Party, including each Prospective Employee who is then on a leave under a Pfizer Party's short-term or long-term disability plan or under the U.S. federal Family and Medical Leave Act or leave under any other U.S. federal or state Law or other approved leave of absence (other than an unpaid personal leave) (each, an "Inactive Employee"), commencing on the Employee Transfer Date (or, in the case of any Inactive Employee, on the date provided below) in accordance with the terms of this Section 10.1, including Section 10.1(b). NewCo will provide Pfizer with a copy of the form of offer of employment at least five (5) Business Days in advance of its distribution to any Prospective Employee and will consider in good faith any comments that Pfizer may have on such form. Each Prospective Employee who is offered and accepts employment with NewCo or one of its Affiliates shall be referred to in this Agreement as a "Transferred Employee". With respect to any Inactive Employee who accepts an offer of employment, such Inactive Employee shall become a Transferred Employee as of the date such Inactive Employee has been cleared for, and presents himself or herself to NewCo for active employment on or prior to the six (6) month anniversary of the Employee Transfer Date (or such longer period as required by applicable Law).

(b) NewCo shall provide, or shall cause an Affiliate of NewCo to provide to each Transferred Employee, and the terms of each offer of employment shall provide for, for a period of one (1) year following the Employee Transfer Date (the "Continuation Period") (i) an annual base salary or base wage rate, target annual bonus, commission rate and severance benefits, in each case, that are no less favorable than the Transferred Employee's annual base salary or base wage rate, target annual bonus, commission rate and severance benefits (except as provided in the last sentence of Section 10.1(g) and Section 10.1(i)) as of immediately prior to the Employee Transfer Date and (ii) other employee benefits (excluding equity-based compensation, defined benefits pursuant to qualified and nonqualified retirement plans, nonqualified deferred compensation plans, retiree medical benefits and other retiree health and welfare arrangements and the "retirement savings contribution" under the Pfizer Savings Plan) that are, in aggregate, materially comparable to those provided under a Covered Benefit Plan disclosed on Schedule 6.8(d) to the Transferred Employee as of immediately prior to the Employee Transfer Date.

(c) For each Prospective Employee that is not a Transferred Employee, the Pfizer Parties may elect to terminate the employment of each Prospective Employee effective as of the Employee Transfer Date (or in the case of any Prospective Employee who is then on a leave of absence, the date such Prospective Employee returns to active employment), and shall take all actions reasonably necessary to cause each Prospective Employee to cease active participation under all Pfizer Benefit Plans as of the Employee

Transfer Date (or in the case of any Prospective Employee who is on a leave of absence as contemplated hereby, the date such Prospective Employee returns to active employment), or such other date as is required under the terms of the relevant Pfizer Benefit Plan or applicable Law.

(d) Pfizer shall be solely responsible for, and shall pay at the time or times due or required by applicable Law, all obligations or Liabilities, including, without limitation, hourly pay, commission, bonus, salary, accrued vacation or paid time-off, fringe benefits, pension or profit sharing benefits, or severance payments and benefits or other termination pay under the Pfizer Benefit Plans or applicable Law, arising out of or relating to the termination of the employment of the Prospective Employees by the Pfizer Parties.

(e) Pfizer and its Affiliates shall retain responsibility for and continue to pay all expenses and benefits under the Pfizer Savings Plan and all medical, dental, health, hospital, life insurance and disability expenses and benefits with respect to claims incurred under the Pfizer Benefit Plans prior to the Closing Date by Prospective Employees and their eligible beneficiaries, as determined under the terms of the applicable Pfizer Benefit Plan. Pfizer and its Affiliates shall remain solely responsible for all workers compensation claims of any Prospective Employee to the extent arising out of conditions having a date of injury prior to the Closing Date. NewCo shall have responsibility for workers compensation claims of Transferred Employees to the extent arising out of conditions having a date of injury on or after the Closing Date. Pfizer and its Affiliates also shall be solely responsible for satisfying the continuation coverage requirements of Section 4980B of the Code for all individuals who are "M&A qualified beneficiaries" as such term is defined in Treasury Regulations Section 54.4980B-9. NewCo shall be responsible for providing such continuation coverage in respect of any Transferred Employee or qualified beneficiary of a Transferred Employee, in either case, who incurs a qualifying event after the Closing Date.

(f) On and following the Employee Transfer Date, each employee benefit plan sponsored by NewCo or any Affiliate of NewCo in which any Transferred Employee is eligible to participate shall credit each such Transferred Employee with his or her service with a Pfizer Party or any Affiliate of a Pfizer Party for all purposes (other than for purposes of equity-based compensation or benefit accrual under any qualified or nonqualified retirement plan) to the extent such service was credited under the corresponding Pfizer Benefit Plan in which such Transferred Employee participated prior to the Employee Transfer Date (if there is a comparable NewCo benefit plan); *provided that* (i) such credit shall be conditioned on receipt by NewCo of evidence of such service (e.g., payroll or plan records), and (ii) such recognition of service shall not operate to duplicate any benefits with respect to any Transferred Employee. Without limiting the generality of the foregoing, on and following the Employee Transfer Date, with respect to any group health plan under which any Transferred Employee is eligible to receive benefits from NewCo or any Affiliate of NewCo, NewCo will, or will cause the applicable Affiliate of NewCo to, (x) use commercially reasonable efforts to waive or cause the insurance carrier or professional employer organization plan sponsor to waive any pre-existing condition or actively-at-work requirements or limitations and eligibility waiting periods (to the extent such requirements or limitations or waiting periods did not apply to the Transferred

Employee and his or her eligible dependents under a comparable Pfizer Benefit Plan as of immediately prior to the Employee Transfer Date), and (y) give the Transferred Employee credit, for the plan year in which the Employee Transfer Date occurs, toward any applicable deductibles, co-insurance and annual out-of-pocket limits for expenses actually incurred during the plan year in which the Employee Transfer Date occurs as if such amounts had been paid under such group health plan, subject to any restrictions imposed by the professional employer organization plan sponsor.

(g) NewCo (or an Affiliate of NewCo) shall make available to Transferred Employees within a reasonable time following the Employee Transfer Date (but in no event more than ninety (90) days) participation in a cash or deferred arrangement, as described in Section 401(k) of the Code (the "NewCo 401(k) Plan"), which permits Transferred Employees to roll over their account balances from the Pfizer Savings Plan, without regard to eligibility and waiting periods. NewCo will use commercially reasonable efforts to cause the third party plan administrator for the NewCo 401(k) Plan to permit Transferred Employees to roll over any outstanding participant loans into the NewCo 401(k) Plan. In the event that rollover of an outstanding participant loan is not possible prior to the deadline for repayment of the loan, NewCo agrees to provide a Transferred Employee with a bridge loan (subject to similar loan terms under such Transferred Employee's existing loan) to the extent necessary to avoid an early distribution penalty tax. Notwithstanding the foregoing, neither Section 10.1(b) nor Section 10.1(g) shall be interpreted to require NewCo to provide or maintain any specific investment alternative (including the Pfizer stock funds) as an investment alternative in the NewCo 401(k) Plan, or to guarantee any distribution alternative provided for in the Pfizer Savings Plan.

(h) On or within a reasonable time following the Employee Transfer Date, the Pfizer Parties shall pay to each Transferred Employee a prorated portion of such individual's annual target bonus for 2018. On or within a reasonable time following December 31, 2018, NewCo shall pay to each Transferred Employee who remains employed as of December 31, 2018 an annual bonus for 2018, which bonus shall be no less than a prorated portion of such individual's annual target bonus for 2018. The prorated bonuses described in this Section 10.1(h) shall be prorated based on the number of days during 2018 during which the Transferred Employee was (i) employed by the Pfizer Parties prior to the Closing Date, for the prorated bonuses payable by the Pfizer Parties or (ii) for the prorated bonuses payable by NewCo, by the Pfizer Parties and NewCo on and after the Closing Date.

(i) With respect to any Transferred Employee whose employment is terminated during the Continuation Period by NewCo and such termination qualifies as either a "Performance-Related Termination" or "Involuntary Termination" that would be eligible for severance benefits under Section 3.1 of the Pfizer Separation Plan, NewCo shall provide (i) salary continuation severance benefits to such Transferred Employee which are at least as favorable as those that would have been payable to such Transferred Employee in respect of a termination of employment under the Pfizer Separation Plan; and (ii) in the case of an Involuntary Termination, company-paid COBRA premiums for the "Severance Pay Duration Period" (as such term is defined in the Pfizer Separation Plan).

(j) The parties shall cooperate with each other to give effect to the provisions set forth in this Section 10.1. Without limiting the foregoing, in order to secure an orderly and effective transition of the employee benefit arrangements for Transferred Employees and their respective beneficiaries and dependents, the Pfizer Parties and NewCo shall cooperate, both before and after each of the Closing and the Employee Transfer Date, and subject to applicable Laws, regarding the exchange of information related to the Transferred Employees, including employment records and benefits information.

10.2 No Benefit to Employees Intended. Nothing contained in this Agreement, express or implied, is intended to confer upon any Person not a party hereto any right, benefit or remedy of any nature whatsoever, including any right to employment or continued employment for any period of time by reason of this Agreement, or any right to a particular term or condition of employment. Notwithstanding anything to the contrary contained in this Agreement, no provision of this Agreement is intended to, or does, constitute the establishment of, or an amendment to, any employee benefit plan.

ARTICLE 11

CONDITIONS TO CLOSING

11.1 Conditions to NewCo's Obligation to Close. The obligations of NewCo to consummate the Transactions shall be subject to the satisfaction, on or prior to the Closing Date, of each of the following conditions, any of which may be waived by NewCo in writing:

(a) Representations, Warranties and Covenants. (i) The representations and warranties of Pfizer in this Agreement, other than the representations and warranties contained in Section 6.1 (Organization), Section 6.2 (Power and Authority Relative to this Agreement) or Section 6.14 (Finders or Brokers) (collectively, the "Pfizer Fundamental Representations") shall be true and correct in all respects as of the Closing Date (or, to the extent such representations and warranties speak as of a specific date or time, they shall be true in all respects as of such date or time), interpreted without giving effect to the words "Material Adverse Effect," "materially" or "material" or to any qualifications based on such terms, except for such inaccuracies under such representations and warranties which, taken together in their entirety, would not reasonably be expected to result in a Material Adverse Effect; (ii) the Pfizer Fundamental Representations shall be true and correct in all respects as of the Closing (or, to the extent such representations and warranties speak as of a specific date or time, they shall be true in all respects as of such date or time); and (iii) the Pfizer Parties shall have performed, in all material respects, all covenants and obligations in this Agreement required to be performed by any of the Pfizer Parties on or prior to the Closing.

(b) No Material Adverse Effect. Since the date of this Agreement, there shall not have occurred and be continuing any event, change or effect that has had, individually or in the aggregate, a Material Adverse Effect.

(c) Consents. All approvals, consents and waivers listed on Schedule 11.1(c) shall have been received, and executed counterparts thereof shall have been delivered to NewCo at or prior to the Closing.

(d) Deliveries. The Pfizer Parties shall have delivered to NewCo all of the documents, agreements and other items set forth in Section 4.2.

11.2 Conditions to Pfizer's Obligation to Close. The obligations of the Pfizer Parties to consummate the Transactions shall be subject to the satisfaction, on or prior to the Closing Date, of each of the following conditions, any of which may be waived by Pfizer in writing:

(a) Representations, Warranties and Covenants. (i) The representations and warranties of NewCo in this Agreement, other than the representations and warranties contained Section 7.1 (Organization), Section 7.2 (Capitalization), Section 7.4 (Power and Authority Relative to this Agreement) or Section 7.7 (Finders or Brokers) (collectively, the "NewCo Fundamental Representations") shall be true and correct in all respects as of the Closing Date (or, to the extent such representations and warranties speak as of a specific date or time, they shall be true in all respects as of such date or time), interpreted without giving effect to the words "Material Adverse Effect," "materially" or "material" or to any qualifications based on such terms, except for such inaccuracies under such representations and warranties which, taken together in their entirety, would not reasonably be expected to result in a material adverse effect on NewCo's ability to consummate the Transactions; and (ii) the NewCo Fundamental Representations shall be true and correct in all respects as of the Closing (or, to the extent such representations and warranties speak as of a specific date or time, they shall be true in all respects as of such date or time); and (iii) NewCo and the Other Investors shall have performed, in all material respects, all covenants and obligations in this Agreement required to be performed by any of NewCo and the Other Investors on or prior to the Closing.

(b) Deliveries. NewCo shall have delivered to Pfizer all of the documents, agreements and other items set forth in Section 4.3.

(c) Receipt of Funds. Simultaneous with the Closing and in accordance with the terms and conditions of the Equity Commitment Letters, NewCo shall receive immediately available funds in the full amount of each Other Investor's cash portion of the purchase price due at the Closing (as defined in the Preferred Stock Purchase Agreement) for the shares of Class A Preferred Stock being purchased pursuant to the Preferred Stock Purchase Agreement as set forth opposite such Other Investor's name in the "Purchase Price Due at Closing" column on Exhibit A thereto.

11.3 Conditions to Obligations of Each Party to Close. The respective obligations of each party to this Agreement to consummate the Transactions shall be subject to the satisfaction, on or prior to the Closing Date, of each of the following conditions, which may be waived by mutual consent of Pfizer and NewCo, in writing:

(a) No Legal Impediments to Closing. There shall not be in effect any Order issued by any Governmental Authority preventing the consummation of the Transactions or that makes the consummation of the Transactions illegal.

ARTICLE 12

TAX MATTERS

12.1 Allocation of Consideration. Following the Closing Date, Pfizer shall prepare a proposed allocation of the applicable Consideration (for Tax purposes) among the Purchased Assets in accordance with Proposed Treasury Regulations Section 1.351-2(b). Pfizer and NewCo shall provide such cooperation and information to each other as the other may reasonably request to prepare and comment on the proposed allocation. To the extent NewCo disagrees with the proposed allocation, NewCo shall notify Pfizer in writing of any disagreement with the proposed allocation, and NewCo and Pfizer shall attempt in good faith to resolve the disagreement. If NewCo agrees with the proposed allocation prepared by Pfizer, or if NewCo and Pfizer resolve any disagreement regarding the proposed allocated, the parties shall report, act and file their respective Tax Returns in accordance with the allocation of Consideration as agreed to pursuant to this Section 12.1 and any adjustments thereto. In the event of any adjustment to Consideration, Pfizer and NewCo agree to cooperate in good faith to revise and amend the final allocation in accordance with the procedures set forth in this Section 12.1.

12.2 Intended Tax Treatment; Cooperation; Allocation of Taxes.

(a) It is intended that the transactions contemplated by this Agreement, taken together with the transactions contemplated by the Preferred Stock Purchase Agreement, shall be treated as an exchange described in Section 351 of the Code with "boot," and the parties hereto shall report the Transactions consistent with such Tax treatment on their income Tax Returns unless otherwise required by Law or pursuant to the good faith resolution of a Tax contest.

(b) NewCo and the Pfizer Parties agree to furnish or cause to be furnished to each other, upon request, as promptly as practicable, such information and assistance relating to the Purchased Programs, Purchased Assets, and the Assumed Liabilities (including reasonable access to Books and Records) as is reasonably necessary for the filing of all Tax Returns, the making of any election relating to Taxes, the preparation for any audit by any Tax Authority, and the prosecution or defense of any claim or Proceeding relating to any Tax; *provided*, *however*, that nothing in this Agreement shall require the Pfizer Parties to provide or otherwise make available to NewCo a copy of their Consolidated Return. NewCo and the Pfizer Parties agree to cooperate with each other in the conduct of any audit or other Proceeding relating to Taxes involving the Purchased Programs, the Purchased Assets or the Assumed Liabilities. NewCo agrees to cooperate with and provide the Pfizer Parties with financial information relating to the Purchased Programs, Purchased Assets, and the Assumed Liabilities at Closing as needed to enable Pfizer Parties to comply with GAAP (including any information necessary for the conduct of a third-party valuation).

(c) The applicable Pfizer Party shall be responsible for and shall pay any Excluded Taxes. In respect of Purchased Assets or in connection with the conduct of the Purchased Programs, NewCo shall be responsible for and shall pay any Taxes arising or resulting from or in connection with the conduct of the Purchased Programs or the ownership of any of the Purchased Assets, in each case attributable to any Post-Closing Tax Period. Taxes described in the first two sentences of this Section 12.2(c) and Transfer Taxes shall be timely paid, and all applicable filings, reports and returns shall be filed, as provided by applicable Law. The paying party shall be entitled to reimbursement from the non-paying party in accordance with this Section 12.2(c) or Section 12.2(e), as applicable. Upon payment of any such Tax, the paying party shall present a statement to the non-paying party setting forth the amount of reimbursement to which the paying party is entitled under this Section 12.2(c) or Section 12.2(e), as applicable, together with supporting evidence as is reasonably necessary to calculate the amount to be reimbursed. If within ten (10) calendar days after receipt of such a statement, the non-paying party notifies the paying party in writing that such amount is not reasonable, the parties will negotiate in good faith to resolve such dispute. If the parties fail to resolve such dispute within thirty (30) calendar days, then within five (5) days after the end of such 30-day period they shall choose a "big four" independent accounting firm mutually acceptable to NewCo and Pfizer (the "Tax Referee") and the Tax Referee shall as promptly as practicable determine whether the amount of reimbursement was reasonable and, if not reasonable, shall appropriately revise it. If the non-paying party does not respond to the statement within ten (10) calendar days, or upon resolution of the disputed items, the amount of reimbursement (as such may have been adjusted) shall be binding on the paying and non-paying parties. The non-paying party shall make the reimbursement promptly but in no event later than ten (10) calendar days after the presentation of such statement if undisputed, or if disputed, after final determination by the Tax Referee. Any payment not made within such time shall bear interest from the due date for such payment until, but excluding, the date of payment at a rate per annum equal to [***]. Such interest shall be payable at the same time as the payment to which it relates and shall be calculated daily on the basis of a year of 365 days and the actual number of days elapsed, without compounding.

(d) All Transfer Taxes incurred in connection with the Transactions shall be borne by NewCo (provided, for the avoidance of doubt, that the Pfizer Parties shall indirectly bear a share of such Transfer Taxes by reason of their ownership interest in NewCo). The appropriate party will prepare and file all necessary Tax Returns and other documentation with respect to Transfer Taxes and, if required by applicable Laws, the other party will (and will cause its Affiliates to) join in the execution of any such Tax Returns and other documentation. To the extent permitted pursuant to applicable Law, the Pfizer Parties and NewCo will use Commercially Reasonable Efforts to minimize or avoid Transfer Taxes, if any, arising out of the transactions contemplated by this Agreement.

(e) In the case of any Tax period that includes (but does not end on) the Closing Date (a "Straddle Period"), the amount of Excluded Taxes with respect to the Purchased Programs or the Purchased Assets for a Straddle Period that are, in each case based upon or measured by net income or gain that relate to a Pre-Closing Tax Period will be

(f) determined based on an interim closing of the books as of the close of business on the Closing Date; *provided*, *however*, that exemptions, allowances or deductions that are calculated on an annual basis (such as deductions for depreciation and real estate taxes) will be apportioned between the Pre-Closing Tax Period and the Post-Closing Tax Period on a daily basis. The amount of Excluded Taxes with respect to the Purchased Assets or the Purchased Programs for a Straddle Period that are not based upon or measured by net income or gain (other than Transfer Taxes) that relate to a Pre-Closing Tax Period will be deemed to be the amount of such Tax for the entire taxable period multiplied by a fraction, the numerator of which is the number of days in the Pre-Closing Tax Period and the denominator of which is the number of days in such Straddle Period. Notwithstanding the forgoing, items attributable to any action taken by NewCo on the Closing Date after the Closing that is neither expressly contemplated by this Agreement nor in the ordinary course of business will not be attributable to a Pre-Closing Tax Period.

12.3 Tax Contests.

(a) NewCo and the Pfizer Parties agree to cooperate and to cause their Subsidiaries to cooperate with each other to the extent reasonably required after the Closing Date in connection with any Proceedings conducted by Tax Authorities relating to any Taxes with respect to or in relation to any Purchased Asset (each a "Tax Contest"). NewCo and the Pfizer Parties shall provide timely written notices to each other of any Tax Contest relating to the Purchased Assets for taxable periods for which any other party hereto may have a responsibility under this Agreement, or otherwise; *provided that* failure to so notify the other party will not relieve any party of liability that it may have under this Agreement except to the extent the other party is actually prejudiced by such failure. Such notice shall include a copy of the relevant portion of any correspondence received from the relevant Tax Authority and describe in reasonable detail the nature of such Tax Contest.

(b) The Pfizer Parties shall, at their expense, have the right to conduct and control in good faith the defense of any Tax Contest for (i) a Straddle Period with respect to so much of such Tax Contest that could reasonably be expected to affect the Pfizer Parties' Tax Liability, rights to refunds or indemnification obligations under this Agreement or (ii) a Pre-Closing Tax Period; *provided*, *however* that with respect to any such Tax Contest described in clause (i) that could reasonably be expected to affect NewCo's Tax Liability, rights to refunds or indemnification obligations under this Agreement (and that does not relate to a Consolidated Return): (i) NewCo shall have the right to participate in all such Tax Contests, which will include participation in meetings with Tax Authorities and review and comment on written submissions to Tax Authorities, and (ii) the Pfizer Parties shall not settle such Tax Contest without the prior written consent of NewCo, which consent will not be unreasonably withheld, conditioned or delayed. For the avoidance of doubt, the Pfizer Parties shall have the exclusive right to control all matters relating to a Consolidated Return. Notwithstanding anything herein to the contrary, no party hereto shall have the right to conduct and control the defense of, or have participation rights with respect to, any Tax Contest with respect to income Tax Returns of the other party (or its Affiliates).

(c) This Section 12.3 shall govern the control of Tax Contests, rather than Section 14.4.

ARTICLE 13

TERMINATION

13.1 Termination of Agreement. This Agreement may be terminated and the Transactions may be abandoned at any time prior to the Closing:

(a) by the mutual written consent of NewCo and Pfizer;

(b) by NewCo, if (i) Pfizer is in breach of any provision of this Agreement such that the condition to Closing set forth in Section 11.1(a) would not be satisfied as of the time of such breach, and such breach shall not have been cured within thirty (30) days of receipt by such party of written notice from NewCo of such breach and (ii) NewCo is not, on the date of termination, in breach of any provision of this Agreement such that the conditions to Closing set forth in Section 11.2(a) would not be satisfied as of the Closing;

(c) by Pfizer, if (i) NewCo is in breach of any provision of this Agreement such that the condition to Closing set forth in Section 11.2(a) would not be satisfied as of the time of such breach, and such breach shall not have been cured within thirty (30) days of receipt by such party of written notice from Pfizer of such breach and (ii) Pfizer is not, on the date of termination, in breach of any provision of this Agreement such that the conditions to Closing set forth in Section 11.1(a) would not be satisfied as of the Closing;

(d) by either NewCo or Pfizer, if the Closing has not occurred on or prior to May 1, 2018 (the "Drop-Dead Date") for any reason; *provided, however*, that the rights to terminate this Agreement under this Section 13.1(d) shall not be available to any party whose breach of any covenants or agreements contained in this Agreement has been the cause of, or resulted in, the failure of the Closing Date to occur on or before the Drop-Dead Date; and

(e) by either NewCo or Pfizer, if there shall be any final non-appealable Order that permanently enjoins or otherwise prohibits consummation of the Transactions such that the condition to Closing set forth in Section 11.3(a) would not be satisfied as of the Closing; *provided, however*, that the rights to terminate this Agreement under this Section 13.1(e) shall not be available to any party whose breach of any covenants or agreements contained in this Agreement has been the cause of, or resulted in, the Order.

Any party desiring to terminate this Agreement shall give written notice of such termination to the other parties.

13.2 Effect of Termination. If this Agreement is terminated in accordance with Section 13.1, all obligations of the parties hereunder shall terminate, except for the obligations set forth in this ARTICLE 13 (Termination), Sections 9.6 (Confidentiality), 15.1 (Expenses), 15.5 (Governing Law), and 15.6 (Jurisdiction; Waiver of Jury Trial); *provided, however*, that nothing herein shall relieve any party from Liability for any willful breach of this Agreement or fraud.

ARTICLE 14

INDEMNIFICATION

14.1 Indemnification by Pfizer. Subject to the limitations set forth in this ARTICLE 14, from and after the Closing, Pfizer shall indemnify, defend and hold harmless NewCo and its officers, directors, agents, employees, shareholders and Affiliates (collectively, the "NewCo Indemnified Persons") from and against any and all Damages imposed on, or indirectly incurred by, without duplication, such NewCo Indemnified Person (collectively, "NewCo Damages") arising out of, relating to or resulting from (a) any breach of or inaccuracy in a representation or warranty of any Pfizer Party contained in this Agreement, as of the Closing Date; (b) any breach of a covenant of a Pfizer Party contained in this Agreement or breach of the terms and conditions of the Patent and Know-How License Agreement, including any practice of Intellectual Property Rights by Pfizer, its licensees or sublicensees outside of the scope of the licenses granted to Pfizer under the Patent and Know-How License Agreement; and (c) any Excluded Liability.

14.2 Indemnification by NewCo. Subject to the limitations set forth in this ARTICLE 14, from and after the Closing, NewCo shall indemnify, defend and hold harmless the Pfizer Parties and their respective officers, directors, agents, employees and Affiliates (collectively, the "Pfizer Indemnified Persons") from and against any and all Damages (collectively, "Pfizer Damages") arising out of, relating to or resulting from (a) any breach of or inaccuracy in a representation or warranty of NewCo contained in this Agreement; (b) any breach of a covenant of NewCo or any of its Affiliates contained in this Agreement or breach of the terms and conditions of the Patent and Know-How License Agreement, including any practice of Intellectual Property Rights by NewCo or its Sublicensees outside of the scope of the licenses granted to NewCo under the Patent and Know-How License Agreement; (c) any Assumed Liability; and (d) Taxes of NewCo for all Post-Closing Tax Periods; provided that the payment by NewCo shall equal the amount of Pfizer Damages multiplied by the Pfizer Damages Fraction. "Pfizer Damages Fraction" shall mean a fraction whose numerator is one and whose denominator is equal to one minus the fraction of the shares of Equity Consideration held by the Pfizer Parties and their Affiliates at the time when such Pfizer Damages are due and payable (excluding all shares of Class A Preferred Stock that were purchased by the Pfizer Parties pursuant to the Preferred Stock Purchase Agreement), calculated assuming the conversion of all outstanding shares Class A Preferred Stock at the then applicable conversion rate.

14.3 Time for Claims. No claim may be made or suit instituted seeking indemnification pursuant to Sections 14.1(a) or 14.2(a) unless a written notice describing such claim in reasonable detail in light of the circumstances then known to the Indemnitee is provided to the Indemnitor prior to the eighteen (18) month anniversary of the Closing Date; *provided, however*, that claims arising out of, relating to or resulting from a breach of or inaccuracy in (a) any of the Pfizer Fundamental Representations or the NewCo Fundamental Representations may be made until the third (3rd) anniversary of the Closing Date and (b) Section 6.7 (Tax Matters) may be made until thirty (30) days after expiration of applicable statutes of limitations. Claims for indemnification pursuant to any other provision of Section 14.1 or Section 14.2 are not subject to the limitations set forth in this Section 14.3.

14.4 Procedures for Indemnification. Except as otherwise provided in Section 12.3, promptly after receipt by a party entitled to indemnification under Sections 14.1 or 14.2 or any other provision of this Agreement (the "Indemnitee") of written notice of the assertion or the commencement of any Proceeding with respect to any matter referred to in Sections 14.1 or 14.2 or in any other applicable provision of this Agreement, the Indemnitee shall give written notice describing such claim or Proceeding in reasonable detail in light of the circumstances then known to the Indemnitee to the party obligated to indemnify Indemnitee (the "Indemnitor"), and thereafter shall keep the Indemnitor reasonably informed with respect thereto; *provided*, *however*, that failure of the Indemnitee to keep the Indemnitor reasonably informed as provided herein shall not relieve the Indemnitor of its obligations hereunder except to the extent that the Indemnitor is prejudiced thereby. If any Proceeding is commenced against any Indemnitee by a Third Party, the Indemnitor shall be entitled to participate in such Proceeding and assume the defense thereof at the Indemnitor's sole expense; *provided*, *however*, that the Indemnitor shall not have the right to assume the defense of any Proceeding if (a) the Indemnitee shall have one or more legal or equitable defenses available to it which are different from or in addition to those available to the Indemnitor, and, in the reasonable opinion of outside counsel to the Indemnitee, counsel for the Indemnitor could not adequately represent the interests of the Indemnitee because such interests would be in conflict with those of the Indemnitor; (b) such Proceeding is reasonably likely to have a material adverse effect on any other matter beyond the scope or limits of the indemnification obligation of the Indemnitor; or (c) the Indemnitor shall not have assumed the defense of the Proceeding in a timely fashion (but in any event within thirty (30) days of notice of such Proceeding). If the Indemnitor, shall assume the defense of any Proceeding, the Indemnitee shall be entitled to participate in any Proceeding at its expense, and the Indemnitor shall not settle such Proceeding unless the settlement shall include as an unconditional term thereof the giving by the claimant or the plaintiff of a full and unconditional release of the Indemnitee, from all Liability with respect to the matters that are subject to such Proceeding, or otherwise shall have been approved by the Indemnitee, such approval not to be unreasonably withheld, conditioned or delayed.

14.5 Limitations on Indemnification.

(a) Notwithstanding anything herein to the contrary, Pfizer shall not be obligated to indemnify any NewCo Indemnified Person under Section 14.1: (i) unless the aggregate of all NewCo Damages exceeds $[***] (the "Deductible"), in which case the NewCo Indemnified Persons shall be entitled to recover all NewCo Damages only to the extent such NewCo Damages exceed the Deductible or (ii) to the extent that the aggregate of all NewCo Damages exceeds $[***] (the "Cap"); *provided*, *however*, the Cap and Deductible shall not apply to nor count towards any Pfizer indemnification obligation (A) arising out of, relating to or resulting from fraud by any Pfizer Party, or arising out of, relating to or resulting under Sections 14.1(b) or (c) or (B) arising out of, relating to or resulting from a breach of or inaccuracy in any Pfizer Fundamental Representation.

(b) Notwithstanding anything herein to the contrary, NewCo shall not be obligated to indemnify any Pfizer Indemnified Person under Section 14.2: (i) unless the aggregate of all Pfizer Damages exceeds the Deductible, in which case the Pfizer Indemnified Persons shall be entitled to recover all Pfizer Damages only to the extent such

[***] = CONFIDENTIAL TREATMENT REQUESTED

(c) Pfizer Damages exceed the Deductible, which Pfizer Damages shall not be counted against the Deductible, or (ii) to the extent that the aggregate of all Pfizer Damages exceeds the Cap; *provided*, *however*, that the Cap and the Deductible shall not apply to nor count towards any NewCo indemnification obligation (A) arising out of, relating to or resulting from fraud by NewCo or arising out of, relating to or resulting under Sections 14.2(b), (c) or (d), or (B) arising out of, relating to or resulting from a breach of or inaccuracy in any NewCo Fundamental Representation.

(d) All indemnification payments under this Agreement shall be treated as adjustments to the Consideration for all Tax purposes unless Laws require otherwise.

(e) LIMITATION OF LIABILITY, DISCLAIMER OF CERTAIN DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR ANY SPECIAL, PUNITIVE, EXEMPLARY OR NOT REASONABLY FORESEEABLE DAMAGES OR ANY LOSS OF REVENUE OR PROFITS OR DIMINUTION IN VALUE OR SPECULATIVE DAMAGES THAT ARISE OUT OF OR RELATE TO THIS AGREEMENT OR THE PATENT AND KNOW-HOW LICENSE AGREEMENT OR THE PERFORMANCE OR BREACH HEREOF OR THEREOF; PROVIDED, HOWEVER, THAT THE FOREGOING SHALL NOT BE CONSTRUED TO PRECLUDE RECOVERY IN RESPECT OF ANY LOSS DIRECTLY INCURRED OR SUFFERED FROM THIRD PARTY CLAIMS.

14.6 Third Party Contributors. The amount of any and all Damages for which indemnification is provided pursuant to this ARTICLE 14 shall be net of any amounts actually received by the Indemnitee with respect to such Damages (i) under insurance policies after giving effect to any deductible, retention or equivalent loss rated premium adjustment and any costs or expenses incurred in recovering such insurance proceeds and (ii) otherwise from any Third Party (including any Tax Authority).

14.7 Duty to Mitigate. Each Indemnitee shall take, and shall cause its Affiliates to take, all reasonable steps to mitigate any Damages upon becoming aware of any event or circumstance that would reasonably be expected to, or does, give rise thereto, including incurring costs only to the minimum extent necessary to remedy the breach that gives rise to the Damages.

14.8 Satisfaction by Equity Consideration; Set-off. Pfizer, at its election (which election can be made in Pfizer's sole and absolute discretion, subject to Section 14.4), shall be permitted to satisfy Pfizer's indemnification obligations for NewCo Damages (a) by the cancellation of shares of Class A Preferred Stock owned by Pfizer (an "Equity Consideration Cancellation"), with such Equity Consideration Cancellation occurring such that $[***] of indemnified NewCo Damages shall be deemed satisfied for each share of Class A Preferred Stock cancelled; and/or (b) by setting off such amounts due against amounts payable to Pfizer pursuant to Sections 5.1(a), 5.1(b) or 5.1(c) (each of clauses (a) and (b) of this Section 14.8, the "Set-off"); or (c) any combination of clause (a) and (b). Notwithstanding anything to the contrary in this Section 14.8, any indemnification obligation of Pfizer for NewCo Damages arising out of, relating to or resulting from fraud, any Excluded Liability, Section 14.1(b) to the extent of a willful breach or any breach of or inaccuracy in any Pfizer Fundamental Representation shall be satisfied by Pfizer in cash, by

14.9 wire transfer of immediately available funds, to the applicable NewCo Indemnified Persons. Nothing in this Section 14.8 shall be construed to increase Pfizer's indemnification obligations beyond such indemnification obligations that are otherwise provided for in this ARTICLE 14.

14.10 Qualifications. For purposes of determining the amount of any Damages that are the subject matter of a claim for indemnification under this Agreement, each representation and warranty in this Agreement will be read without regard and without giving effect to the term "material," "Material Adverse Effect" or "material adverse effect" or similar qualifiers (fully as if any such word or phrase were deleted from such representation and warranty).

14.11 Remedies Exclusive.

(a) Except as set forth in Section 14.11(b), the parties hereto expressly agree that from and after the Closing (i) the provisions of this ARTICLE 14 shall be the exclusive remedy for all claims of breach or indemnification pursuant to this Agreement and the Patent and Know-How License Agreement and (ii) in furtherance of the foregoing, each party hereby waives, to the fullest extent permitted by Law, any and all rights, claims and causes of action for any breach of any representation, warranty, covenant or agreement set forth herein or otherwise relating to the subject matter of this Agreement it may have against the other party hereto and their Affiliates and each of their respective Representatives arising under or based upon any Law, except pursuant to the indemnification provisions set forth in this ARTICLE 14.

(b) The limitations set forth in Section 14.11(a) shall not apply to (i) claims of fraud that are proven and upon which a judgment entered in the involved Proceeding is expressly based, (ii) claims brought by NewCo arising from a Pfizer Party's willful breach of Section 9.5, (iii) claims brought by a Pfizer Party arising from NewCo's breach of its payment obligations under Sections 5.1(a), 5.1(b) or 5.1(c), or NewCo's material breach of any of its obligations under Sections 5.2(b)(i) or 5.2(b)(ii) or (iv) claims to equitable relief to which any Person shall be entitled pursuant to Section 15.13; *provided*, *that*, for the avoidance of doubt, in the case of clauses (i), (ii), (iii) and (iv), the parties hereto shall have all remedies available under this Agreement or otherwise at Law without giving effect to any of the limitations or waivers contained herein, except, with respect to clause (iii), for the limitations in Section 14.5(d).

14.12 Remedies Cumulative. The rights of the NewCo Indemnified Persons and Pfizer Indemnified Persons under this ARTICLE 14 are cumulative, and each NewCo Indemnified Person and Pfizer Indemnified Person will have the right in any particular circumstance, in its sole discretion, to enforce any provision of this ARTICLE 14 without regard to the availability of a remedy under any other provision of this ARTICLE 14.

ARTICLE 15

MISCELLANEOUS PROVISIONS

15.1 Expenses. Whether or not the Transactions are consummated, unless otherwise indicated expressly herein, each party shall pay its own costs and expenses in connection with this Agreement and the Transactions, including the fees and expenses of its advisers, accountants and legal counsel.

15.2 Entire Agreement. This Agreement, including the exhibits and disclosure schedules specifically referred to herein, the Transaction Agreements and the Confidential Disclosure Agreement constitute the entire agreement between and among the parties hereto with regard to the subject matter hereof, and supersede all prior agreements and understandings with regard to such subject matter. In the event of any inconsistency between the statements in this Agreement and those in the exhibits and disclosure schedules specifically referred to herein or in any other Transaction Agreements or the Confidential Disclosure Agreement (other than an exception expressly set forth as such in the disclosure schedules) the statements in this Agreement will control.

15.3 Amendment, Waivers and Consents. This Agreement shall not be changed or modified, in whole or in part, except by supplemental agreement or amendment signed by the parties. Any party may waive compliance by any other party with any of the covenants or conditions of this Agreement, but no waiver shall be binding unless executed in writing by the party making the waiver. No waiver of any provision of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Any consent under this Agreement shall be in writing and shall be effective only to the extent specifically set forth in such writing.

15.4 Successors and Assigns. This Agreement shall bind and inure to the benefit of the parties hereto and their respective successors and permitted assigns, *provided*, *however*, that no party hereto may assign any right or obligation hereunder without the prior written consent of all other parties hereto. Notwithstanding the foregoing, (a) Pfizer may assign this Agreement or all of its rights or obligations hereunder to any other Pfizer Party or their wholly owned Affiliates without NewCo's prior written consent (but with notice to NewCo and provided that no such assignment shall relieve Pfizer of its obligations hereunder), *provided that* (i) any such assignment does not impose additional Taxes or costs on NewCo (or its Affiliates) or otherwise materially delay or impede Closing, and (ii) the assignee promptly provides NewCo with such documentation as may be prescribed by applicable Law or reasonably requested by NewCo to determine NewCo's Tax withholding and reporting obligations in respect of payments to such assignee under this Agreement; and (b) NewCo may assign this Agreement to, (i) after Closing, any financing source as collateral, (ii) after Closing, any purchaser or licensor of substantially all of the assets of NewCo; or (iii) after Closing, the surviving entity in any merger, consolidation, share exchange or reorganization involving NewCo, in each case of clause (i), (ii) or (iii), only to the extent otherwise expressly authorized pursuant to the terms of the Investors' Rights Agreement and the Restated Certificate. Any permitted assignee shall assume all assigned obligations of its assignor under this Agreement.

15.5 Governing Law. The rights and obligations of the parties shall be governed by, and this Agreement shall be interpreted, construed and enforced in accordance with, the Laws of the State of Delaware, excluding its conflict of laws rules to the extent such rules would apply the Law of another jurisdiction.

15.6 Jurisdiction; Waiver of Jury Trial.

(a) Any judicial Proceeding brought against any of the parties to this Agreement or any dispute arising out of this Agreement or related hereto shall be brought in the courts of the State of Delaware, or in the United States District Court for the District of Delaware, and, by execution and delivery of this Agreement, each of the parties to this Agreement accepts the exclusive jurisdiction of such courts, and irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement. The foregoing consents to jurisdiction shall not constitute general consents to service of process in the State of Delaware for any purpose except as provided above and shall not be deemed to confer rights on any Person other than the parties to this Agreement. Each of the parties to this Agreement agrees that service of any process, summons, notice or document by U.S. mail to such party's address for notice hereunder shall be effective service of process for any Proceeding in Delaware with respect to any matters for which it has submitted to jurisdiction pursuant to this Section 15.6(a).

(b) EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, EQUITY OR OTHERWISE) ARISING OUT OF OR RELATING TO OR IN CONNECTION WITH THIS AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF OR THEREOF. EACH PARTY HERETO (I) CONSENTS TO TRIAL WITHOUT A JURY OF ANY SUCH PROCEEDINGS, (II) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF THE OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (III) ACKNOWLEDGES THAT IT AND THE OTHER PARTY HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 15.6(b).

15.7 Rules of Construction. The parties acknowledge that each party has read and negotiated the language used in this Agreement. The parties agree that, because each party participated in negotiating and drafting this Agreement, no rule of construction shall apply to this Agreement which construes ambiguous language in favor of or against any party by reason of that party's role in drafting this Agreement.

15.8 Severability. If any provision of this Agreement, as applied to either party or to any circumstance, is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision.

15.9 Exhibits and Schedules. All exhibits and disclosure schedules attached hereto shall be deemed to be a part of this Agreement and are fully incorporated in this Agreement by this reference.

15.10 Notices. Unless otherwise expressly provided herein, all notices, requests, demands, claims and other communications required or permitted to be delivered, given or otherwise provided for hereunder shall be in writing. All such written notices shall be sent in the manner indicated below to the applicable address, facsimile number or electronic mail address, and will be deemed effective as indicated below:

(a) if sent by personal delivery or by courier, upon delivery;

(b) if sent by facsimile transmission, upon the sender's receipt of confirmation of good transmission;

(c) if sent by electronic mail, upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement); or

(d) if sent by certified or registered mail or the equivalent (return receipt requested), upon delivery or attempted delivery;

provided, *however*, that in any such case, if delivered later than 5:00 p.m. (New York time) on any Business Day, delivery will be deemed to occur on the next Business Day.

If to NewCo at:

689 5th Avenue, 12th Floor
New York, NY 10022
Attention: Secretary
Email:
Phone:
Fax:

With copies (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attention: Barbara Kosacz
Email: bkosacz@cooley.com
Fax: 650-849-7400

If to any of the Pfizer Parties at:

Pfizer Inc.
235 East 42nd Street
New York, NY 10017
Attention: Executive Vice President and General Counsel
Email:

With copies (which shall not constitute notice) to:

Ropes & Gray LLP
Prudential Tower
800 Boylston Street
Boston, MA 02199
Attention: Paul Kinsella
Email: Paul.Kinsella@ropesgray.com
Fax: 617-235-0822

or to such other address, facsimile number or electronic mail address as each party may designate for itself by notice given in accordance with this paragraph.

15.11 Rights of Parties. Nothing in this Agreement, whether express or implied, other than the rights of the NewCo Indemnified Persons and Pfizer Indemnified Persons pursuant to ARTICLE 14 is intended to confer any rights or remedies under or by reason of this Agreement on any persons other than the parties to it and their respective successors and permitted assigns, nor is anything in this Agreement intended to relieve or discharge the Liability of any third person to any party to this Agreement, nor shall any provision give any third person any right of subrogation or action over or against any party to this Agreement.

15.12 Public Announcements. No public announcement or disclosure (including any general announcement to employees, customers or suppliers) will be made by any party with respect to the subject matter of this Agreement, the Transactions or the Transaction Agreements without the prior written consent of Pfizer and NewCo; *provided that*, the provisions of this Section 15.12 shall not prohibit (a) NewCo from making public announcements or other disclosures after Closing regarding Products and related programs in the ordinary course of business or to comply with securities laws, (b) any disclosure required by any applicable Laws (in which case the disclosing party will provide the other parties with the opportunity to review and comment in advance of such disclosure) or (c) any disclosure made in connection with the enforcement of any right or remedy relating to this Agreement or any Transaction Agreement or the Transactions. NewCo further agrees that it will not, and it will cause each of its Affiliates to, not without the prior written consent of Pfizer, use in advertising, publicity or otherwise the name of Pfizer or any partner or employee of Pfizer, nor any trade name, trademark, trade device, service mark, symbol or any abbreviation, contraction or simulation thereof owned by Pfizer or any of its Affiliates.

15.13 Specific Performance. Notwithstanding anything in Section 14.10 to the contrary, the parties hereto agree that irreparable damage would occur and that the parties would not have any adequate remedy at Law in the event that the obligations of the parties to effect, on the terms and conditions set forth herein, the Closing and the other covenants and agreements set forth in this Agreement, including ARTICLE 3, ARTICLE 4, ARTICLE 5, ARTICLE 8 and ARTICLE 9, were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent such (and only such) actual or threatened breaches of this Agreement and to enforce specifically (without proof of actual Damages or harm, and not subject to any requirement for the securing or posting of any bond in connection therewith) such terms and provisions of this Agreement, this being in addition to any other remedy to which they are entitled at law or in equity, including money Damages.

15.14 Counterparts. This Agreement may be signed in any number of counterparts, including electronic scan copies thereof delivered by electronic mail, each of which shall be deemed an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

[Signature Pages Follow]

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed on its behalf by their respective officers thereunto duly authorized all as of the date first written above

PFIZER INC.

By: /s/ G. Mikael Dolsten
Name: G. Mikael Dolsten
Title: President, Worldwide, Research & Development

[Signature Page to Asset Contribution Agreement]

ALLOGENE THERAPEUTICS, INC.

By: /s/ Joshua A Kazam
Name: Joshua A Kazam
Title: President

[Signature Page to Asset Contribution Agreement]

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated August 10, 2018 (except for the fifth paragraph of Note 1, as to which the date is October 1, 2018), in Amendment No. 2 to the Registration Statement (Form S-1 No. 333-227333) and related Prospectus of Allogene Therapeutics, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Redwood City, California
October 2, 2018