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As submitted to the Securities and Exchange Commission confidentially on February 12, 2021.
This Amendment No. 1 to the draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Instil Bio, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2836**	**83-2072195**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

3963 Maple Avenue, Suite 350
Dallas, TX 75219
(972) 499-3350
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Bronson Crouch
Chief Executive Officer
Instil Bio, Inc.

3963 Maple Avenue, Suite 350
Dallas, TX 75219
(972) 499-3350
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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New York, New York 10022
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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, please 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, 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	☒	Smaller reporting company	☒
		Emerging growth company	☒

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	**Proposed Maximum Aggregate Offering Price(1)**	**Amount of Registration Fee(2)**
Common Stock, $0.000001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the offering price of additional shares that the underwriters have the option to purchase.
(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

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 which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the 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. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION
DATED , 2021

Shares

Instil Bio, Inc.

COMMON STOCK

Instil Bio, Inc. is offering shares of common stock. This is our initial public offering and no public market exists for our common stock. We anticipate that the initial public offering price will be between $ and $ per share.

We have applied to list our common stock on The Nasdaq Global Market under the trading symbol "TIL."

We are an "emerging growth company" as defined under U.S. federal securities laws and, as such, will be subject to reduced public company reporting requirements for this prospectus and future filings. See "Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company." Investing in our common stock involves risks. See "Risk Factors" beginning on page 14 of this prospectus.

	Per Share	***Total***
Initial Public Offering Price	*$*	*$*
Underwriting Discounts and Commissions (1)	*$*	*$*
Proceeds, before expenses, to us	*$*	*$*

(1) We refer you to "Underwriters" for additional information regarding total underwriter compensation.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock against payment in New York, New York on or about , 2021.

Joint Book-Running Managers

MORGAN STANLEY *JEFFERIES* *COWEN*

Lead Manager

TRUIST SECURITIES

The date of this prospectus is , 2021

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

For investors outside of 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 the United States. Persons outside of 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 of the United States.

All trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert their rights thereto.

Presentation of Financial Information

Pursuant to the applicable provisions of the Fixing America's Surface Transportation Act, we are omitting our condensed financial statements as of and for the nine months ended September 30, 2020. While the financial information for the nine months ended September 30, 2020 is otherwise required by Regulation S-X, we reasonably believe that it will not be required to be included in the Form S-1 filing at the time of the contemplated offering. We intend to amend the registration statement to include all financial information required by Regulation S-X at the date of such amendment before distributing a preliminary prospectus to investors.

PROSPECTUS SUMMARY

This summary highlights, and is qualified in its entirety by, information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes appearing elsewhere in this prospectus, before making an investment decision. As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," "the company," "Instil" and "Instil Bio" refer to Instil Bio, Inc.

Overview

We are a clinical-stage biopharmaceutical company focused on developing an innovative cell therapy pipeline of autologous tumor infiltrating lymphocyte, or TIL, therapies for the treatment of patients with cancer. We have assembled an accomplished team with a successful track record in the development, manufacture, regulatory approval and commercialization of multiple cell therapies. Using our optimized and scalable manufacturing process, we are advancing our lead TIL product candidate, ITIL-168, for the treatment of advanced melanoma. Based on the clinical results from a compassionate use program with a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process, we plan to submit an investigational new drug application, or IND, to the U.S. Food and Drug Administration, or the FDA, and, if authorized to proceed, initiate a Phase 2 trial in , which we believe could support a BLA submission in . We plan to initiate Phase 1 trials of ITIL-168 in additional indications with significant unmet medical need, including cutaneous squamous cell carcinoma, non-small cell lung cancer, head and neck cancer and cervical cancer, in . ITIL-168 will be manufactured in our company-operated in-house manufacturing facilities for both our clinical trials and commercial sale, if approved.

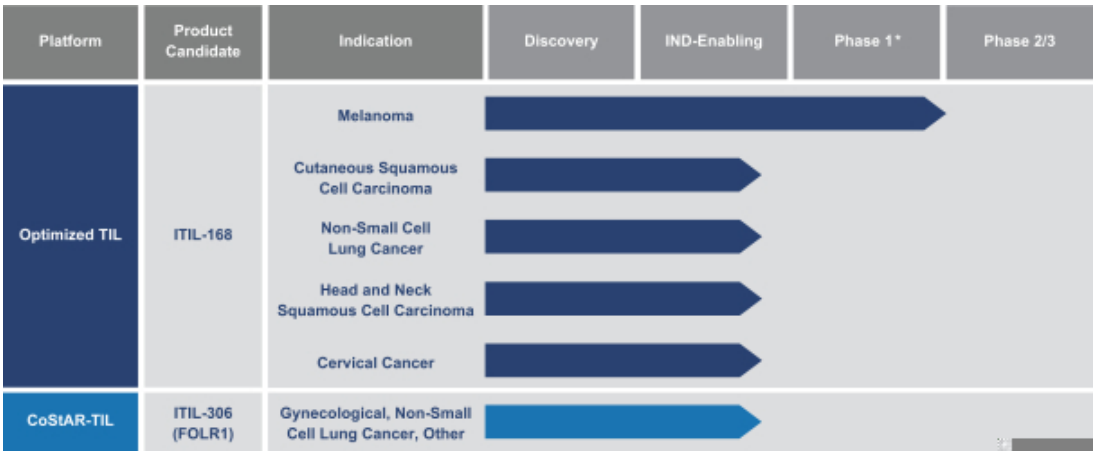
We are also developing a novel class of genetically engineered TIL therapies using our Co-Stimulatory Antigen Receptor, or CoStAR, platform. These modified TILs still rely on their native, patient-specific T cell receptors, or TCRs, to bind to tumor neoantigens, but have been enhanced to express novel CoStAR molecules, which bind to shared tumor-associated antigens and provide potent costimulation to T cells within the microenvironment. We believe that the ability of CoStAR to augment the activation of TILs upon native TCR-mediated recognition of tumor neoantigens has the potential to bring TIL therapy to patients with cancer types that have been historically resistant to immunotherapy. We anticipate submitting an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .

We believe the critical advantage of TIL therapy over other cell therapies relates to the intrinsic and diverse anti-tumor reactivity of TILs. Unlike most cell therapies in development for solid tumors, which only recognize a single target antigen shared across a diverse patient population, TILs are polyclonal and therefore have the ability to recognize the broad set of antigens unique to each patient. This comprehensive polyclonality helps overcome a major limitation of cell therapies, such as CAR-Ts and TCR-Ts, by providing the requisite diversity to match the marked heterogeneity of solid tumors.

By leveraging our team's experience, we are executing on our plan to efficiently launch in-house capabilities of manufacturing, process development, clinical operations, regulatory strategy and research and development. We have created a robust, reproducible process to generate well-characterized and commercially viable TIL product candidates that we believe will provide patients with long-term therapeutic benefit.

Our Pipeline

We are building an innovative pipeline of optimized TIL product candidates, including both unmodified and genetically engineered TILs, for the treatment of patients with cancer. We own worldwide rights to all our product candidates. Our current pipeline is summarized in the diagram below.



* For ITIL-168 in melanoma, we believe that the compassionate use program satisfies the requirements for a Phase 1 clinical trial. Based on the clinical results from the compassionate use program and our discussions with the FDA, we plan to submit an IND and, if authorized to proceed, initiate a Phase 2 trial.

Our Strengths

Our goal is to become the leader in the design, manufacture and delivery of TIL therapies to patients with cancer. We believe the following strengths will enable us to achieve this goal:

- **Highly experienced team**. Our senior management team and a large fraction of our operational staff have extensive experience in cell therapy, with many having participated in the design and execution of the clinical development, manufacture and regulatory approval of Yescarta and Tecartus at Kite Pharma/Gilead as well as the development of other clinical-stage cell therapy product candidates. In addition, our team and scientific advisors have a track record of successfully leading the technology discovery, process development, GMP manufacturing and clinical operations functions at other cell therapy companies.
- **Robust clinical development experience with TILs**. Members of our team have been generating and improving TIL therapy for over a decade, and a TIL product manufactured by us using a prior version of the ITIL-168 manufacturing process has been used in the treatment of patients with refractory melanoma through a compassionate use program at the Christie Hospital in Manchester, United Kingdom, which is the largest single site cancer center in Europe. In the 21 patients treated through the compassionate use program, we observed a complete remission, or CR, in four patients (19%) and a partial remission, or PR, in 10 patients (48%), resulting in an overall remission rate, or ORR, of 67%. In addition, four patients reported stable disease, or SD, resulting in a disease control rate, or DCR, of 86%. Ten of the 21 patients have died from complications arising from disease progression. The results from the compassionate use program do not provide a guarantee that ITIL-168 will be deemed to be safe or effective for the treatment of melanoma or additional indications, and extensive clinical testing and regulatory approval will be required before ITIL-168 can be commercially marketed for the treatment of melanoma. Based on these results, together with our development and manufacturing expertise, we intend to transform TIL therapy into what we believe will be a scalable, convenient and effective option for patients with cancer.
- **Optimized and scalable manufacturing process**. We are developing a manufacturing process customized for autologous TIL therapies to maximize manufacturing success rate and potential for clinical efficacy beyond current practices. To ensure product quality and consistency, we have chosen to maintain full control of the entire manufacturing process, from the procurement of tumor samples through the shipping of the final product, without any outsourcing of core manufacturing process or

quality control testing steps. Our process includes the optimized cryopreservation of both the digested tumor at the beginning to preserve cell viability and potency and the final product at the end to provide increased shelf life. Importantly, our cryopreservation process also provides significant scheduling flexibility for physicians and patients.

- **Company-operated in-house manufacturing facilities.** We believe we are well positioned to execute on our clinical development plans and serve the U.S. and European markets with our existing and planned infrastructure. We have invested and plan to continue to invest in our manufacturing capabilities on two continents, with one facility in the United States in Tarzana, California and another in Manchester, United Kingdom. By controlling and operating our manufacturing facilities on two continents, we believe we have the unique ability to more efficiently implement continuous improvements into our operations and to readily provide therapies to patients across a broad geography. With the planned capacity across both of our facilities, we expect to have sufficient doses for all our planned clinical trials as well as to meet the initial commercial demand of ITIL-168, if approved.
- **Strong capitalization**. Since 2019, we have raised $380.7 million in net proceeds from leading global institutional investors. This funding has enabled us to assemble a team with experience across the entire spectrum of cell therapy development, including clinical development and operations, regulatory submissions, process engineering, quality analytics, manufacturing and strategic commercialization planning.

Background on TILs

Since the initial evidence of clinical benefit of TILs was demonstrated in 1988 by Steven A. Rosenberg, M.D., Ph.D. and his colleagues, experience in TIL therapy for melanoma and other tumors has expanded significantly over the last 30 years. A recently published meta-analysis of TIL therapy clinical trials reported an ORR of 41% and a CR rate of 12% in 410 heavily pretreated patients with metastatic melanoma. In the subset of patients for whom detailed follow-up was available, the CRs were found to be remarkably durable, with only one of 28 patients experiencing disease recurrence.

In addition to melanoma, TIL therapy has also demonstrated benefit in multiple other solid tumors, including non-small cell lung cancer, or NSCLC, head and neck squamous cell carcinoma, or HNSCC, and cervical cancer. However, despite these compelling clinical results, TIL therapy has largely been limited to the academic or compassionate use settings due to the lack of an industrialized and scalable process for the manufacture of these products.

We believe the key factors that are critical to the development of a patient-specific TIL-based therapy for the treatment of solid tumors include: (i) polyclonal recognition of tumor-specific antigens; (ii) optimized processing and manufacturing methods and (iii) the composition of the TIL population.

Our Manufacturing Process

Our manufacturing process comprises three distinct and serial stages: (i) tumor processing, which includes tissue harvesting and cryopreservation, (ii) TIL generation, which includes the outgrowth and rapid expansion phases, and (iii) final product processing, which includes formulation and cryopreservation. We believe our novel approach to these three stages provides us with key advantages compared to historical approaches, as summarized below.

	Historical Approach	Our Novel Approach	Our Potential Advantages
Tumor Processing	• Transport of fresh tumor for continuous manufacturing • Fresh tumor fragments as starting material	• Cryopreservation and shipment of digested tumor • Fully digested tumor suspension as starting material	• More TILs are liberated from the digested tumor tissue, increasing clonal diversity in the final product • Enhanced cell viability and potency • Flexible patient scheduling and efficient manufacturing capacity utilization
TIL Generation	• Seeding of tumor fragments in open multi-well plates • TIL culture in plates with manual perfusion • Expansion of T cells in a static flask with manual controls • Manual media feed based on cell counts	• Seeding of tumor digest in closed gas-permeable culture bags • Expansion of T cells in a suspended bioreactor with process controls • Constant automated perfusion	• Closed processing and automated controls increase manufacturing robustness • More opportunities for optimization on bioreactor platforms vs. traditional flasks
Final Product Processing	• Manual formulation • Shipment of fresh final product	• Automated formulation • Shipment of cryopreserved final product	• Increased shelf life • Scheduling flexibility for physicians and patients

We believe our optimized and scalable manufacturing process provides several additional key advantages, including:

- The ability to capture and preserve maximum health and diversity of each patient's TILs by completely digesting and immediately cryopreserving the tumor sample near the clinical site to ensure stability during transportation to one of our in-house manufacturing facilities;
- A limited number of manual processing steps and a functionally closed manufacturing process to increase process reliability and scalability; and
- Flexibility to coordinate fresh tissue harvest with manufacturing availability through cryopreservation of both the starting material as well as the final product.

These attributes give us confidence that we will be able to deliver TIL-based therapies at a level of robustness, quality, consistency and scale not previously achieved by other TIL-based approaches.

Our Product Candidates

ITIL-168

Our lead product candidate, ITIL-168, is an autologous TIL therapy that we are initially developing for the treatment of PD-1-inhibitor relapsed or refractory advanced melanoma. We are utilizing an optimized and scalable manufacturing process that we believe will differentiate the profile of ITIL-168 from other cell

therapies, including other TIL therapies. Our process for ITIL-168 begins with the complete digestion of the tumor tissue, which releases all TILs from the tumor microenvironment and enables cryopreservation of the digested tumor at the beginning of the process to preserve cell viability and potency. Additionally, we cryopreserve the final product to provide increased shelf life. Our cryopreservation process at both the beginning and end of the manufacturing process provides significant scheduling flexibility for physicians and patients.

We have generated preliminary safety and efficacy data in advanced melanoma in the context of a compassionate use program in the United Kingdom, using a TIL product that was produced with a prior version of the ITIL-168 manufacturing process. Twenty-one patients with stage IV metastatic cutaneous melanoma were treated in this compassionate use program between 2011 and 2019. Treatment led to an ORR of 67%, including four patients (19%) who achieved CR and ten patients (48%) who achieved PR. The DCR, which included patients with CR, PR or SD, was 86%. Of these 21 patients, 15 were followed up with CT and/or MRI at regular intervals in a manner consistent with standard RECIST 1.1 methodology, while the other six patients were followed with non- RECIST imaging modalities like PET/CT as well as clinical monitoring. Two of these six patients had developed melanoma that was unequivocally refractory to the BRAF inhibitor dabrafenib in combination with MEK inhibitor therapy immediately prior to TIL treatment but were continued on dabrafenib, with brief interruptions for tumor harvest and TIL infusion, to prevent the rapid disease progression that often accompanies abrupt dabrafenib discontinuation. Both patients developed durable responses following TIL treatment. One patient, who had also failed prior ipilimumab and PD-1 blockade, achieved a PR that lasted approximately 14 months from TIL infusion during which time dabrafenib was continued. The second patient was treated with dabrafenib for approximately three months following TIL infusion at which point the dabrafenib was stopped. This patient achieved a PR at approximately 12 months after TIL infusion that converted to a durable CR that was ongoing for over four years after TIL infusion at the time of data cutoff. Based on these clinical results and our discussions with the FDA, we plan to submit an IND for ITIL-168 and, if authorized to proceed, initiate a Phase 2 trial in . We believe this trial, if successful, could support a BLA submission in . Additionally, in , we intend to initiate Phase 1 trials of ITIL-168 in tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer.

ITIL-306

We are also developing genetically engineered TIL product candidates modified with CoStAR to augment the activation of TILs in the tumor microenvironment. In preclinical studies, CoStAR+ T cells demonstrated markedly increased activity as compared to normal T cells, including enhanced cytokine expression and proliferative capacity. CoStAR's modular architecture can be adapted to potentially target any cell surface antigen, which will allow us to develop additional CoStAR-TIL product candidates that enhance TIL function in multiple solid tumors.

Our lead CoStAR-TIL product candidate, ITIL-306, expresses a CoStAR molecule designed to recognize folate receptor alpha, or FOLR1, a tumor-associated antigen that is expressed on numerous solid tumors, including ovarian cancer, uterine cancer, NSCLC and renal cancer. We believe that ITIL-306 has the potential to increase anti-tumor activity due to its ability to improve proliferation and enhance cytokine secretion while retaining the specificity and polyclonality of TILs. We intend to submit an IND for ITIL-306 in and initiate a Phase 1 trial in to evaluate safety, feasibility and efficacy in multiple tumor types.

Additional CoStAR-TIL Programs

The modular nature of our CoStAR platform allows for multiple product candidates to be developed with minimal changes to the fundamental architecture of the molecule. We have generated a number of constructs containing antigen-binding domains directed against different tumor-associated antigens that are expressed by a wide variety of tumor types, including stomach, colorectal, pancreatic, breast and other cancers. We intend to select our next CoStAR-TIL product candidate for IND-enabling studies in .

Our Strategy

Our goal is to leverage our optimized and scalable manufacturing process to deliver innovative, life-saving TIL therapies to patients with cancer. In order to achieve this goal, our strategy involves the following key elements:

- **Develop and commercialize ITIL-168 in advanced melanoma.** We intend to file an IND and initiate a Phase 2 trial of ITIL-168 in patients with relapsed or refractory advanced melanoma in . Based on our discussions with the FDA and the clinical results generated through a compassionate use program using a TIL product that was produced with a prior version of the ITIL-168 manufacturing process, we are designing our Phase 2 trial to support a BLA submission in . We believe that our optimized and scalable manufacturing process for TIL therapies, coupled with our team's prior experience and success with developing and obtaining regulatory approval for multiple complex autologous cell therapies, will enable us to efficiently advance the development, manufacture and regulatory approval of ITIL-168.
- **Expand ITIL-168 into multiple solid tumors beyond melanoma.** In addition to melanoma, we intend to develop ITIL-168 in tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer. In , we plan to file an amendment to our IND for ITIL-168 and initiate a Phase 1 trial in patients with locally advanced or metastatic CSCC, an indication in which PD-1 blockade has demonstrated benefit but a significant unmet medical need still exists. In addition, in , we expect to file another amendment to our IND to initiate a multi-indication Phase 1 trial in patients with NSCLC, HNSCC and cervical cancer, tumor types where clinical proof of concept has been established for TIL therapy.
- **Leverage our experience with ITIL-168 to develop our CoStAR platform of engineered TIL therapies.** By enhancing the activity of TILs with our CoStAR molecules, we believe we will be able to demonstrate efficacy in tumor types that historically have been resistant to immunotherapy, including TILs. We have observed that TILs enhanced with CoStAR molecules demonstrated a markedly increased ability to respond to tumor cells *in vitro* as compared to normal T cells. Our preclinical studies have shown robust TCR- and CoStAR-dependent proliferation, as well as increased secretion of activating cytokines and decreased levels of immunosuppressive cytokines into the tumor microenvironment. By modulating the local immunological milieu, our CoStAR-TIL product candidates could recruit additional anti-tumor immune cells and reduce recruitment of suppressive cells. We leverage the optimized and scalable manufacturing process developed for ITIL-168 for our CoStAR-TIL product candidates, which will allow us to efficiently develop a portfolio of CoStAR-TIL pipeline candidates. We plan to assess the safety, feasibility and efficacy of CoStAR-TIL product candidates in several tumor types where TILs have not yet been systematically tested or response to TIL therapy has been poor. We intend to submit an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .
- **Enhance and expand our global manufacturing capabilities and capacity.** We have invested and plan to continue to invest in our manufacturing capabilities on two continents, with one facility in the United States in Tarzana, California and another in Manchester, United Kingdom. By , our clinical capacity is estimated to reach over 150 patient doses per year at our Manchester facility and is expected to expand to over 500 patient doses per year from both of our facilities combined by , which we believe will fully support the clinical development of our programs. With continued investments and buildout, we expect to have sufficient capacity to produce thousands of commercial patient doses per year beginning in , which we believe will be sufficient to meet the initial commercial demand for ITIL-168, if approved. While we believe we are well positioned to serve the U.S. and European markets with our existing and planned infrastructure, we intend to continue expanding our manufacturing network into additional regions, as needed.
- **Continuously improve and refine our manufacturing process and operations.** We plan to pursue process development efforts on two distinct but strategically aligned paths. The first path includes our

continuous improvement initiatives, which are designed to allow us to implement rapid design iterations that incrementally improve process efficiency, robustness and control. The second path includes our longer-term manufacturing innovation initiatives, where we will drive towards generational and disruptive changes to our manufacturing methods. For example, we plan to introduce automated bioprocessing equipment and eliminate select reagents from the manufacturing process to achieve shorter manufacturing times and reduce costs. We believe these improvements will continually reduce manufacturing and operational costs while preserving product quality, allowing us to potentially make our TIL therapies globally accessible.

Our History and Team

We were founded in August 2018, and in early 2019, we in-licensed our foundational TIL technology from Immetacyte Ltd. and subsequently raised our Series A round of funding from Curative Ventures. In March 2020, we acquired Immetacyte Ltd., which had been manufacturing a TIL product for the compassionate use program at the Christie Hospital in the United Kingdom from 2011 to 2019. Since our inception, we have raised an aggregate of approximately $ million of net proceeds from leading global institutional investors.

We have assembled a team of industry veterans with deep experience in conducting all phases of development, from early stage clinical trials through regulatory approval across multiple regions, as well as in the commercial manufacture and marketing of cell therapies. Our management team consists of entrepreneurs, physicians and scientists with prior experience at cell therapy and oncology companies such as Kite Pharma/Gilead, Amgen, Pfizer, Genentech and Johnson & Johnson, among others.

Risks Associated with Our Business

Our business 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 titled “Risk Factors” and include, among others:

- We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.
- We have a limited operating history and no history of commercializing products, which may make it difficult for an investor to evaluate the success of our business to date and to assess our future viability.
- Even if this offering is successful, we will need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.
- All of our product candidates are currently in clinical and preclinical development. If we are unable to successfully develop, receive regulatory approval for and commercialize our product candidates for the indications we seek, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.
- Because ITIL-168, as well as ITIL-306 and any future product candidates developed from our CoStAR platform, represent novel approaches to the treatment of disease, there are many uncertainties regarding the development, market acceptance, third-party reimbursement coverage and commercial potential of our product candidates.
- The regulatory approval processes of the FDA, EMA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable. If we are not able to obtain required regulatory approval for our product candidates, our business will be substantially harmed.
- Success in preclinical studies or earlier clinical trials, including our compassionate use program, may not be indicative of results in future clinical trials. Our product candidates may not have favorable results in later clinical trials, if any, or receive regulatory approval.

- Negative public opinion of TIL therapies and increased regulatory scrutiny of cell therapy using TILs may adversely impact the development or commercial success of our current and future product candidates.
- As an organization, we are preparing to conduct our first prospective clinical trial, have no experience in conducting clinical trials, and may be unable to do so for any product candidates we may develop, including ITIL-168. Further, the FDA, EMA or other foreign regulatory authorities may require us to obtain and submit additional nonclinical data supporting the comparability of ITIL-168 with the TIL product that was evaluated in the compassionate use program in the United Kingdom that was manufactured using a prior version of the ITIL-168 manufacturing process, or may not permit us to rely on the data from the compassionate use program to support the development of ITIL-168 at all, which could delay clinical development or marketing approval of ITIL-168.
- We may not be successful in our efforts to build a pipeline of additional product candidates.
- Our business and operations may be adversely affected by the evolving and ongoing COVID-19 global pandemic.
- Cell therapies are complex and difficult to manufacture. We could experience manufacturing problems that result in delays in the development or commercialization of our product candidates or otherwise harm our business.
- The affected populations for our product candidates may be smaller than we or third parties currently project, which may affect the addressable markets for 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.
- If we are unable to obtain or protect intellectual property rights related to any of our product candidates, we may not be able to compete effectively in our market.
- Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For so long as we remain an emerging growth company, we may take advantage of relief from certain reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- reduced obligations with respect to financial data, including only being required to present two years of audited financial statements, in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements and registration statements;
- exemptions from the requirements of holding non-binding advisory votes on executive compensation or golden parachute arrangements; and
- an exemption from compliance with the requirements of the Public Company Accounting Oversight Board regarding the communication of critical audit matters in the auditor’s report on financial statements.

We may take advantage of these provisions until the last day of the fiscal year ending after the fifth anniversary of this offering or such earlier time that we no longer qualify as an emerging growth company. We will cease to qualify as an emerging growth company on the date that is the earliest of: (i) December 31, 2026, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (iii) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (iv) the date on which we have issued more than $1.0 billion of non-convertible debt securities during the prior three-year period. We may choose to take advantage of some but not all of these reduced reporting burdens. We have taken advantage of certain reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different than you might obtain from other public companies in which you hold equity interests.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to take advantage of the extended transition period to comply with new or revised accounting standards and to adopt certain of the reduced disclosure requirements available to emerging growth companies. As a result of the accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies, which may make comparison of our financials to those of other public companies more difficult. As a result of these elections, the information that we provide in this prospectus may be different than the information you may receive from other public companies in which you hold equity interests. In addition, it is possible that some investors will find our common stock less attractive as a result of these elections, which may result in a less active trading market for our common stock and higher volatility in our share price.

We are also a "smaller reporting company," meaning that the market value of our shares held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our shares held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Corporate Information

We were incorporated under the laws of the State of Delaware in August of 2018. Our principal executive offices are located at 3963 Maple Avenue, Suite 350, Dallas, Texas 75219 and our telephone number is (972) 499-3350. Our website address is instilbio.com. The information contained on, or accessible through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained in, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock. We have included our website in this prospectus solely as an inactive textual reference.

THE OFFERING

Common stock offered by us	shares.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Option to purchase additional shares offered by us	We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of common stock.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million, or approximately $ million if the underwriters exercise in full their option to purchase up to additional shares of common stock, assuming an initial public offering price of $ per share, which is 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 currently intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, to and the remainder for working capital and other general corporate purposes. See the section titled “Use of Proceeds” beginning for additional information.
Risk factors	You should read the section titled “Risk Factors” for a discussion of factors you should consider carefully, together with all the other information included in this prospectus, before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	“TIL”

The number of shares of our common stock to be outstanding after this offering is based on shares of our common stock outstanding as of December 31, 2020, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock, into an aggregate of shares of common stock upon the closing of this offering, and excludes:

- shares of our common stock issuable upon the exercise of options under our 2018 Stock Incentive Plan, or the 2018 Plan, outstanding as of December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock issuable upon the exercise of options under the 2018 Plan granted subsequent to December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock reserved for future issuance under the 2018 Plan, which shares will cease to be available for issuance at the time our 2021 Equity Incentive Plan, or the 2021 Plan, becomes effective and will be added to, and become available for issuance under, the 2021 Plan;

- shares of our common stock reserved for future issuance under our 2021 Plan, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan, or the ESPP, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

Unless otherwise indicated, all information contained in this prospectus, including the number of shares of common stock that will be outstanding after this offering, assumes or gives effect to:

- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 74,350,596 shares of our common stock, which will occur upon the closing of this offering;
- a -for- stock split of our common stock effected on , 2021;
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws upon the closing of this offering;
- no exercise of the outstanding options referred to above after December 31, 2020; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

SUMMARY FINANCIAL DATA

The following tables set forth our summary financial data for the periods indicated. We have derived the statement of operations data for the years ended December 31, 2019 and 2020 and the balance sheet data as of December 31, 2020 from our audited financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

You should read the following summary financial data together with our financial statements and the related notes thereto included elsewhere in this prospectus and the sections of this prospectus titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." The summary financial data in this section are not intended to replace our financial statements and are qualified in their entirety by our financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,	
	2019	2020
	(in thousands, except per share data)	
Statement of Operations Data:		
Operating expenses:		
Research and development	$ 4,027	$
General and administrative	2,558	
Total operating expenses	6,585	
Loss from operations	(6,585)	
Interest income	68	
Other expense	(5)	
Net loss	$ (6,522)	$
Net loss per share, basic and diluted(1)	$ (0.66)	$
Shares used to compute net loss per share, basic and diluted(1)	9,872,144	
Pro forma net loss per share, basic and diluted(1)		$
Shares used to compute pro forma net loss per share, basic and diluted(1)		

(1) See Notes 2 and 9 to our financial statements included elsewhere in this prospectus for an explanation of the method used to calculate historical and pro forma net loss per share and historical and pro forma weighted average common shares outstanding.

	As of December 31, 2020		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$	$	$
Working capital(3)			
Total assets			
Convertible preferred stock			
Accumulated deficit			
Total stockholders' (deficit) equity			

(1) Gives effect to (i) the receipt of $52.5 million in aggregate net proceeds from the issuance and sale of our Series C convertible preferred stock during the first quarter of 2021 and (ii) the conversion of all of the outstanding shares of our convertible preferred stock into an aggregate of 74,350,596 shares of our common stock upon the closing of this offering, as if such conversion had occurred on December 31, 2020.

(2) Gives further effect to the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us. This pro forma as adjusted information is illustrative only and will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $ 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. Each increase or decrease of 1.0 million in the number of shares offered by us would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $ million, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

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

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes, before deciding whether to purchase shares of our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to our Financial Position and Capital Needs

We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

Since our inception, we have incurred significant net losses, and we expect to continue to incur significant expenses and operating losses for the foreseeable future. Our net losses were $6.5 million and $ million for the years ended December 31, 2019 and 2020, respectively. As of December 31, 2020, we had an accumulated deficit of $ million. We have financed our operations with $ million in net proceeds raised in our private placements of convertible preferred stock to date. We have no products approved for commercialization and have never generated any revenue from product sales.

All of our product candidates are still in clinical and preclinical testing. We expect to continue to incur significant expenses and operating losses over the next several years. We expect that it could be several years, if ever, before we have a commercialized product. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- conduct our planned clinical trials of ITIL-168 and ITIL-306, as well as initiate and complete additional clinical trials of future product candidates or current product candidates in new indications;
- continue to advance the preclinical and clinical development of our product candidates and our preclinical and discovery programs, including in our CoStAR platform;
- seek regulatory approval for any product candidates that successfully complete clinical trials;
- continue to develop our product candidate pipeline;
- scale up our clinical and regulatory capabilities;
- manufacture current good manufacturing practices, or cGMP, material for clinical trials or potential commercial sales at our manufacturing facilities;
- establish and validate a commercial-scale cGMP manufacturing facility;
- establish a commercialization infrastructure and scale up internal and external manufacturing and distribution capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- adapt our regulatory compliance efforts to incorporate requirements applicable to marketed products;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, manufacturing quality control, regulatory, manufacturing and scientific and administrative personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts; and
- incur additional legal, accounting and other expenses in operating as a public company.

To date, we have not generated any revenue from product sales. To become and remain profitable, we must succeed in developing and eventually commercializing product candidates that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, obtaining regulatory approval, and manufacturing, marketing and selling any product candidates for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We are only in the preliminary stages of most of these activities and all of our product candidates are in clinical or preclinical development. We may never succeed in these activities and, even if we do, may never generate any revenue or revenue that is significant enough to achieve profitability.

Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our development efforts, obtain product approvals, diversify our offerings or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We have a limited operating history and no history of commercializing products, which may make it difficult for an investor to evaluate the success of our business to date and to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history. We commenced operations in 2019, and our operations to date have been largely focused on organizing and staffing our company, business planning, raising capital, acquiring our technology and product candidates, acquiring our facilities in Tarzana, California, developing our manufacturing capabilities and developing our clinical and preclinical product candidates, including undertaking preclinical studies and conducting clinical trials. To date, we have not yet demonstrated our ability to successfully complete pivotal clinical trials, obtain regulatory approvals, manufacture a product on a commercial scale, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing products.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to develop commercial capabilities, and we may not be successful in doing so.

Even if this offering is successful, we will need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Our operations have consumed substantial amounts of cash since inception. Identifying and acquiring potential product candidates, conducting preclinical testing and clinical trials and developing manufacturing operations for our product candidates is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. We expect to continue to incur significant expenses and operating losses over the next several years as we conduct clinical trials of our product candidates, initiate future clinical trials of our product candidates, advance our preclinical programs, build our manufacturing capabilities, seek marketing approval for any product candidates that successfully complete clinical trials and advance any of our other product candidates we may develop or otherwise acquire. In addition, our product candidates, if approved, may not achieve commercial success. Our revenue, if any, will be derived from sales of products that we do not expect to be commercially available for a number of years, if at all. If we obtain marketing approval for any product candidates that we develop or otherwise acquire, we expect to incur significant commercialization expenses related to product sales, marketing, distribution and manufacturing. We also expect an increase in our expenses associated with creating additional infrastructure to support operations as a public company. Accordingly, we will need to obtain substantial additional funding in order to continue our operations.

As of December 31, 2020, we had cash and cash equivalents of $ million. We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital requirements through . This estimate is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect. We plan to use the net proceeds from this offering to . Advancing the development of our product candidates will require a significant amount of capital. The net proceeds from this offering, together with our existing cash and cash equivalents, will not be sufficient to fund any of our product candidates through regulatory approval. Changes may occur beyond our control that would cause us to consume our available capital before that time, including changes in and progress of our development activities, acquisitions of additional product candidates, and changes in regulation. Our future capital requirements will depend on many factors, including:

- the scope, progress, costs and results of discovery, preclinical development, laboratory testing and clinical trials for ITIL-168, ITIL-306 and future product candidates;
- the extent to which we develop, in-license or acquire other product candidates and technologies in our product candidate pipeline;
- the costs and timing of process development and manufacturing scale-up activities associated with our product candidates and other programs as we advance them through preclinical and clinical development;
- the number and development requirements of product candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our product candidates;
- our headcount growth and associated costs as we expand our research and development capabilities and establish a commercial infrastructure;
- the costs of establishing and maintaining our own commercial-scale cGMP manufacturing facility;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales, and distribution, for any of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval; and
- the costs of operating as a public company.

We will require additional capital to achieve our business objectives. Additional funds may not be available on a timely basis, on favorable terms, or at all, and such funds, if raised, may not be sufficient to enable us to continue to implement our long-term business strategy. Further, our ability to raise additional capital may be adversely impacted by potential worsening global economic conditions and the recent disruptions to and volatility in the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic. If we are unable to raise sufficient additional capital, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

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

Until such time, if ever, as we can generate substantial revenue, we may finance our cash needs through a combination of equity offerings, government or private party grants, debt financings and license and collaboration agreements. We do not currently have any other committed external source of funds. 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 of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams or product candidates, grant licenses on terms that may not be favorable to us or commit to future payment streams. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Risks Related to the Development of our Product Candidates

All of our product candidates are currently in clinical and preclinical development. If we are unable to successfully develop, receive regulatory approval for and commercialize our product candidates for the indications we seek, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.

We currently have no products approved for commercial sale, and all of our product candidates are currently in clinical and preclinical development. To date, we have clinical experience in the context of a compassionate use program at a single clinical site with a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process. However, as an organization, we are preparing to conduct our first prospective, multi-center clinical trial with centralized manufacturing, have not previously conducted any later stage or pivotal clinical trials, have limited experience in preparing, submitting and prosecuting regulatory filings and have not previously submitted a BLA for any product candidate. Each of our programs and product candidates will require additional preclinical and/or clinical development, regulatory approval, obtaining manufacturing supply, capacity and expertise, building a commercial organization or successfully outsourcing commercialization, substantial investment and significant marketing efforts before we generate any revenue from product sales. We do not have any products that are approved for commercial sale, and we may never be able to develop or commercialize marketable products.

Our ability to generate revenue from our product candidates, which we do not expect will occur for several years, if ever, will depend heavily on the successful development, regulatory approval and eventual commercialization of our product candidates. The success of ITIL-168, ITIL-306 or any other product candidates that we develop or otherwise may acquire will depend on several factors, including:

- timely and successful completion of preclinical studies and clinical trials;
- effective investigational new drug applications, or INDs, from the U.S. Food and Drug Administration, or the FDA, or comparable foreign applications that allow commencement of our planned clinical trials or future clinical trials for our product candidates;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- successful enrollment and completion of clinical trials, including under the FDA’s current Good Clinical Practices, or GCPs, and current Good Laboratory Practices;
- successful development of, or making arrangements with third-party manufacturers for, our commercial manufacturing processes for any of our product candidates that receive regulatory approval;
- receipt of timely marketing approvals from applicable regulatory authorities;

- launching commercial sales of products, if approved, whether alone or in collaboration with others;
- acceptance of the benefits and use of our products, including method of administration, if approved, by patients, the medical community and third-party payors, for their approved indications;
- the prevalence and severity of adverse events experienced with ITIL-168, ITIL-306 or any other product candidates;
- the availability, perceived advantages, cost, safety and efficacy of alternative therapies for any product candidate, and any indications for such product candidate, that we develop;
- our ability to produce ITIL-168, ITIL-306 or any other product candidates we develop on a commercial scale;
- obtaining and maintaining patent, trademark and trade secret protection and regulatory exclusivity for our product candidates and otherwise protecting our rights in our intellectual property portfolio;
- maintaining compliance with regulatory requirements, including cGMPs, and complying effectively with other procedures;
- obtaining and maintaining third-party coverage and adequate reimbursement and patients' willingness to pay out-of-pocket in the absence of such coverage and adequate reimbursement; and
- maintaining a continued acceptable safety, tolerability and efficacy profile of the products following approval.

If we are not successful with respect to one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize the product candidates we develop, which would materially harm our business. If we do not receive marketing approvals for any product candidate we develop, we may not be able to continue our operations.

Because ITIL-168, as well as ITIL-306 and any future product candidates developed from our CoStAR platform, represent novel approaches to the treatment of disease, there are many uncertainties regarding the development, market acceptance, third-party reimbursement coverage and commercial potential of our product candidates.

Human immunotherapy products are a new category of therapeutics, and to date, no TIL therapies have been approved by the FDA, EMA or other foreign regulatory authorities. Because this is a relatively new and expanding area of novel therapeutic interventions, there are many uncertainties related to development, marketing, reimbursement and the commercial potential for our product candidates. 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. The FDA may take longer than usual to come to a decision on any biologics license application, or BLA, that we submit and may ultimately determine that there is not enough data, information, or experience with our product candidates to support an approval decision. The FDA may also require that we conduct additional post-marketing studies or implement risk management programs, such as Risk Evaluation and Mitigation Strategies, or REMS, until more experience with our product candidates is obtained. Finally, after increased usage, we may find that our product candidates do not have the intended effect or have unanticipated side effects, potentially jeopardizing initial or continuing regulatory approval and commercial prospects.

The success of our business depends in part upon our ability to develop engineered TIL therapies using our CoStAR platform. The CoStAR platform is novel and we have not yet initiated or completed a clinical trial of any product candidate developed using the CoStAR platform. The platform may fail to deliver TIL therapies that are effective in the treatment of tumor types that have historically been resistant to immunotherapy. Even if we are able to identify and develop TIL therapies using the CoStAR platform, we cannot assure that such product candidates will achieve marketing approval to safely and effectively treat cancer.

If we uncover any previously unknown risks related to our CoStAR platform, or if we experience unanticipated problems or delays in developing our CoStAR product candidates, we may be unable to achieve our strategy of building a pipeline of TIL therapies.

We may also find that the manufacture of our product candidates is more difficult than anticipated, resulting in an inability to produce a sufficient amount of our product candidates for our clinical trials or, if approved, commercial supply. Moreover, because of the complexity and novelty of our manufacturing process, we may face difficulties in transferring the process from our facility in Manchester, United Kingdom to our new facility in Tarzana, California, which could hinder our ability to replicate our manufacturing to supply our clinical development or our commercial efforts.

There is no assurance that the approaches offered by our products will gain broad acceptance among doctors or patients or that governmental agencies or third-party medical insurers will be willing to provide reimbursement coverage for proposed product candidates. Since our current product candidates and any future product candidates will represent novel approaches to treating various conditions, it may be difficult, in any event, to accurately estimate the potential revenues from these product candidates. Accordingly, we may spend significant capital trying to obtain approval for product candidates that have an uncertain commercial market. The market for any products that we successfully develop will also depend on the cost of the product. We do not yet have sufficient information to reliably estimate what it will cost to commercially manufacture our current product candidates, and the actual cost to manufacture these products could materially and adversely affect the commercial viability of these products. Our goal is to reduce the cost of manufacturing and providing our product candidates. However, unless we can reduce those costs to an acceptable amount, we may never be able to develop a commercially viable product. If we do not successfully develop and commercialize products based upon our approach or find suitable and economical sources for materials used in the production of our products, we will not become profitable, which would materially and adversely affect the value of our common stock.

Our TIL therapies and our other therapies may be provided to patients in combination with other agents provided by third parties. The cost of such combination therapy may increase the overall cost of therapy and may result in issues regarding the allocation of reimbursements between our therapy and the other agents, all of which may affect our ability to obtain reimbursement coverage for the combination therapy from governmental or private third party medical insurers.

Preclinical studies and clinical trials are expensive, time-consuming, difficult to design and implement and involve an uncertain outcome. Further, we may encounter substantial delays in completing the development of our product candidates.

All of our product candidates are in clinical and preclinical development and their risk of failure is high. The clinical trials and manufacturing of our product candidates are, and the manufacturing and marketing of our products, if approved, will be, subject to extensive and rigorous review and regulation by numerous government authorities in the United States and in other countries where we intend to test and market our product candidates. Before obtaining regulatory approvals for the commercial sale of any of our product candidates, 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. In particular, because our product candidates are subject to regulation as biological products, we will need to demonstrate that they are safe, pure and potent for use in their target indications. Each product candidate must demonstrate an adequate risk versus benefit profile in its intended patient population and for its intended use.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. Failure can occur at any time during the clinical trial process. Even if our future clinical trials are completed as planned, we cannot be certain that their results will support the safety and effectiveness of our product candidates for their targeted indications or support continued clinical development of such product candidates. Our future clinical trial results may not be successful.

In addition, even if such trials are successfully completed, we cannot guarantee that the FDA, EMA or other foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. Moreover, results acceptable to support approval in one jurisdiction may be deemed inadequate by another regulatory authority to support regulatory approval in that other jurisdiction. To the extent that the results of the trials are not satisfactory to the FDA, EMA or other foreign regulatory authorities for support of a marketing application, we may be required to expend significant resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

To date, we have not completed any clinical trials required for the approval of our product candidates. We may experience delays in conducting any clinical trials and we do not know whether our clinical trials will begin on time, need to be redesigned, recruit and enroll patients on time or be completed on schedule, or at all. Clinical trials can be delayed suspended or terminated for a variety of reasons, including in connection with:

- inability to generate sufficient preclinical, toxicology, or other in vivo or in vitro data to support the initiation of clinical trials;
- 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 agreement with the FDA, EMA or other regulatory authorities as to the design or implementation of our clinical trials;
- obtaining regulatory authorization to commence a clinical trial;
- reaching an agreement on acceptable terms with clinical trial sites or prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- obtaining IRB approval at each trial site;
- recruiting suitable patients to participate in a clinical trial;
- having patients complete a clinical trial or return for post-treatment follow-up;
- inspections of clinical trial sites or operations by applicable regulatory authorities, or the imposition of a clinical hold;
- clinical sites, CROs or other third parties deviating from trial protocol or dropping out of a trial;
- failure to perform in accordance with the applicable regulatory requirements, including FDA's GCP requirements, or applicable regulatory requirements in other countries;
- addressing patient safety concerns that arise during the course of a trial, including occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- adding a sufficient number of clinical trial sites;
- manufacturing sufficient quantities of product candidate for use in clinical trials; or
- suspensions or terminations by IRBs of the institutions at which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities due to a number of factors, including those described above.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates or significantly increase the cost of such trials, including:

- we may experience changes in regulatory requirements or guidance, or receive feedback from regulatory authorities that requires us to modify the design of our clinical trials;

- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we or our investigators might have to suspend or terminate clinical trials of our product candidates for various reasons, including non-compliance with regulatory requirements, a finding that our product candidates have undesirable side effects or other unexpected characteristics, or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate and we may not have funds to cover the costs;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate;
- regulators may revise the requirements for approving our product candidates, or such requirements may not be as we anticipate; and
- any future collaborators that conduct clinical trials may face any of the above issues, and may conduct clinical trials in ways they view as advantageous to them but that are suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- incur unplanned costs;
- be delayed in obtaining marketing approval for our product candidates or not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain marketing approval for indications or patient populations that are not as broad as intended or desired;
- obtain marketing approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings or REMS;
- be subject to additional post-marketing testing requirements;
- be subject to changes in the way the product is administered; or
- have regulatory authorities withdraw or suspend their approval of the product or to impose restrictions on its distribution after obtaining marketing approval.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination 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 drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

All of our product candidates will require extensive clinical testing before we are prepared to submit a BLA or marketing authorization application, or MAA, for regulatory approval. We cannot predict with any certainty if or when we might complete the clinical development for our product candidates and submit a BLA or MAA for regulatory approval of any of our product candidates or whether any such BLA or MAA will be approved. We may also seek feedback from the FDA, EMA or other regulatory authorities on our clinical development program, and the FDA, EMA or such regulatory authorities may not provide such feedback on a timely basis, or such feedback may not be favorable, which could further delay our development programs.

We cannot predict with any certainty whether or when we might complete a given clinical trial. If we experience delays in the commencement or completion of our clinical trials, or if we terminate a clinical trial prior to completion, the commercial prospects of our product candidates could be harmed, and our ability to generate revenues from our product candidates may be delayed or lost. In addition, any delays in our clinical trials could increase our costs, slow down the development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition and results of operations. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

The regulatory approval processes of the FDA, EMA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable. If we are not able to obtain required regulatory approval for our product candidates, our business will be substantially harmed.

The time required to obtain approval or other marketing authorizations by the FDA, EMA and comparable foreign authorities is unpredictable, and it typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, and the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate, and it is possible that we may never obtain regulatory approval for any product candidates we may seek to develop in the future. Neither we nor any current or future collaborator is permitted to market any drug product candidates in the United States until we receive regulatory approval of a BLA from the FDA, and we cannot market it in the European Union until we receive approval for a MAA from the EMA, or other required regulatory approval in other countries. To date, we have had only limited discussions with the FDA, EMA and the Medicines and Healthcare products Regulatory Agency regarding clinical development programs or regulatory approval for any product candidate within the United States, European Union and United Kingdom, respectively. In addition, we have no discussions other comparable foreign authorities, regarding clinical development programs or regulatory approval for any product candidate outside of those jurisdictions.

Prior to obtaining approval to commercialize any drug product candidate in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA, EMA or other foreign regulatory agencies, that such product candidates are safe, pure and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe the preclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or after approval, or it may object to elements of our clinical development programs.

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 a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Of the large number of products in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval and marketing authorization process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval and marketing authorization to market our product candidates, which would significantly harm our business, financial condition, results of operations and prospects.

We have invested a significant portion of our time and financial resources in the development of our clinical and preclinical product candidates. Our business is dependent on our ability to successfully complete preclinical and clinical development of, obtain regulatory approval for, and, if approved, successfully commercialize ITIL-168, ITIL-306 and any future product candidates in a timely manner.

Even if we eventually complete clinical testing and receive approval of a BLA or foreign marketing application for ITIL-168, ITIL-306 or any future product candidates, the FDA, EMA or the applicable foreign regulatory agency may grant approval or other marketing authorization contingent on the performance of costly additional clinical trials, including post-marketing clinical trials. The FDA, EMA or the applicable foreign regulatory agency also may approve or authorize for marketing a product candidate for a more limited indication or patient population than we originally request, and the FDA, EMA or applicable foreign regulatory agency may not approve or authorize the labeling that we believe is necessary or desirable for the successful commercialization of a product candidate. Any delay in obtaining, or inability to obtain, applicable regulatory approval or other marketing authorization would delay or prevent commercialization of that product candidate and would materially adversely impact our business and prospects.

In addition, the FDA, EMA and other regulatory authorities may change their policies, issue additional regulations or revise existing regulations, or take other actions, which may prevent or delay approval of our future products under development on a timely basis. Such policy or regulatory changes could impose additional requirements upon us that could delay our ability to obtain approvals, increase the costs of compliance or restrict our ability to maintain any marketing authorizations we may have obtained.

Success in preclinical studies or earlier clinical trials, including the compassionate use program, may not be indicative of results in future clinical trials. Our product candidates may not have favorable results in later clinical trials, if any, or receive regulatory approval.

Success in preclinical testing and early clinical trials, including the compassionate use program, does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate. Preclinical tests and Phase 1 and Phase 2 clinical trials are primarily designed to test safety, to study pharmacokinetics and pharmacodynamics and to understand the side effects of product candidates at various doses and schedules. Success in preclinical or animal studies and early clinical trials does not ensure that later large-scale efficacy trials will be successful nor does it predict final

results. For example, we may be unable to identify suitable animal disease models for our product candidates, which could delay or frustrate our ability to proceed into clinical trials or obtain marketing approval. Our product candidates may fail to show the desired safety and efficacy in clinical development despite having progressed through preclinical studies and initial clinical trials.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, we may experience regulatory delays or rejections as a result of many factors, including changes in regulatory policy during the period of our product candidate development. Any such delays could negatively impact our business, financial condition, results of operations and prospects.

Interim, "top-line" and preliminary results from our clinical trials that we announce or publish from time to time may change as more 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 results from our clinical trials. Interim results 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. Preliminary or top-line results 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. Differences between preliminary, top-line or interim data and final data could significantly harm our business prospects and may cause the trading price of our common stock to fluctuate significantly. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the top-line results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated.

Further, others, including regulatory agencies may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular development program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed meaningful by you or others with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the interim, top-line or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, product candidates may be harmed, which could significantly harm our business prospects.

Our preclinical studies and clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates, or serious adverse or unacceptable side effects may be identified during the development of our product candidates, which could prevent, delay or limit the scope of regulatory approval of our product candidates, limit their commercialization, increase our costs or necessitate the abandonment or limitation of the development of some of our product candidates.

To obtain the requisite regulatory approvals for the commercial sale of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are safe, pure and potent for use in each target indication. These trials are expensive and time

consuming, and their outcomes are inherently uncertain. Failures can occur at any time during the development process. Preclinical studies and clinical trials often fail to demonstrate safety or efficacy of the product candidate studied for the target indication, and most product candidates that begin clinical trials are never approved.

We may fail to demonstrate with substantial evidence from adequate and well-controlled trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that our product candidates are safe and potent for their intended uses.

Possible adverse side effects that could occur with treatment with cell therapy products include thrombocytopenia, chills, anemia, pyrexia, febrile neutropenia, diarrhea, neutropenia, vomiting, hypotension, dyspnea, cytokine release syndrome and neurotoxicity. If our product candidates are associated with undesirable effects in preclinical studies or clinical trials or have characteristics that are unexpected, we may decide or be required to perform additional preclinical studies or to halt or delay further clinical development of our product candidates or to limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe, or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for the product candidate, if approved. These side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from personalized cell therapy, as with our TIL product candidates, are not normally encountered in the general patient population and by medical personnel. Further, patients in the United Kingdom have been treated under a compassionate use program with a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process. To the extent the experiences of patients being treated in this program are inconsistent with the results of our planned company-sponsored trials of ITIL-168, it may negatively affect perceptions of ITIL-168 or our business. In addition, the FDA, EMA or other foreign regulatory authorities may require us to obtain and submit additional nonclinical data supporting the comparability of our ITIL-168 product candidate with the TIL product evaluated in the compassionate use study in the United Kingdom, or may not permit us to rely on the data from the compassionate use program to support the development of ITIL-168 at all, which could delay clinical development or marketing approval of ITIL-168.

If any such adverse events occur, our clinical trials could be suspended or terminated. If we cannot demonstrate that any adverse events were not caused by the drug, the FDA, EMA or foreign regulatory authorities could order us to cease further development of, or deny approval of, our product candidates for any or all targeted indications. Even if we are able to demonstrate that all future serious adverse events are not product-related, such occurrences could affect patient recruitment or the ability of enrolled patients to complete the trial. Moreover, if we elect, or are required, to not initiate, delay, suspend or terminate any future clinical trial of any of our product candidates, the commercial prospects of such product candidates may be harmed and our ability to generate product revenues from any of these product candidates may be delayed or eliminated. Any of these occurrences may harm our ability to develop other product candidates, and may harm our business, financial condition and prospects significantly.

If our product candidates are associated with side effects in clinical trials or have characteristics that are unexpected, we may need to abandon their development or limit development to more narrow uses in which the side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. The FDA or an IRB may also require that we suspend, discontinue, or limit our clinical trials based on safety information, or that we conduct additional animal or human studies regarding the safety and efficacy of our product candidates which we have not planned or anticipated. Such findings could further result in regulatory authorities failing to provide marketing authorization for our product candidates or limiting the scope of the approved indication, if approved. Many product candidates that initially showed promise in early stage testing have later been found to cause side effects that prevented further development of the product candidate.

Additionally, if one or more of our product candidates receives marketing approval, and we or others identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may suspend, withdraw or limit approvals of such product, or seek an injunction against its manufacture or distribution;
- regulatory authorities may require additional warnings on the label;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients or other requirements subject to a REMS;
- we may be required to change the way a product is administered or conduct additional trials;
- we could be sued and held liable for harm caused to patients;
- we may decide to remove the product from the market;
- we may not be able to achieve or maintain third-party payor coverage and adequate reimbursement;
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties; and
- our reputation and physician or patient acceptance of our products may suffer.

There can be no assurance that we will resolve any issues related to any product-related adverse events to the satisfaction of the FDA or foreign regulatory agency in a timely manner or at all. Moreover, any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

Negative public opinion of TIL therapies and increased regulatory scrutiny of cell therapy using TILs may adversely impact the development or commercial success of our current and future product candidates.

The clinical and commercial success of our TIL therapies will depend in part on public acceptance of the use of cell therapy using TILs. Any adverse public attitudes about the use of TIL therapies may adversely impact our ability to enroll clinical trials. Moreover, our success will depend upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of product candidates we may develop in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

More restrictive government regulations or negative public opinion 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 any products once approved. Adverse events in our or others' clinical trials, even if not ultimately attributable to our product candidates, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our product candidates, stricter labeling requirements for those product candidates that are approved and a decrease in demand for any such product candidates, all of which would have a negative impact on our business and operations.

As an organization, we are preparing to conduct our first prospective clinical trial, have no experience in conducting clinical trials, and may be unable to do so for any product candidates we may develop, including ITIL-168.

We are early in our development efforts for our product candidates, and will need to successfully complete our ongoing and planned clinical trials, including pivotal clinical trials, in order to obtain FDA approval to market any of our product candidates. Carrying out clinical trials and the submission of a successful BLA is a

complicated process. As an organization, we are preparing to conduct our first prospective, multi-center clinical trial with centralized manufacturing, have no experience in conducting any clinical trials, have limited experience in preparing regulatory submissions and have not previously submitted a BLA for any product candidate. We have only previously treated patients with our TIL product in a compassionate use program. In addition, we have had limited interactions with the FDA and cannot be certain how many additional clinical trials of our product candidates will be required or how such trials should be designed. Consequently, we may be unable to successfully and efficiently execute and complete necessary clinical trials in a way that leads to BLA submission and approval of any product candidate. We may require more time and incur greater costs than our competitors and may not succeed in obtaining regulatory approvals of product candidates that we develop. Failure to commence or complete, or delays in, our planned clinical trials, could prevent us from or delay us in commercializing our product candidates.

We may experience delays or difficulties in the enrollment and/or retention of patients in clinical trials, which could delay or prevent our receipt of necessary regulatory approvals.

Successful and timely completion of clinical trials will require that we enroll a sufficient number of patients. Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors, including the size and nature of the patient population and competition for patients eligible for our clinical trials with competitors which may have ongoing clinical trials for product candidates that are under development to treat the same indications as one or more of our product candidates, or approved products for the conditions for which we are developing our product candidates.

Trials may be subject to delays as a result of patient enrollment taking longer than anticipated or patient withdrawal. We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or foreign regulatory authorities. We cannot predict how successful we will be at enrolling subjects in future clinical trials. Subject enrollment is affected by other factors including:

- the severity and difficulty of diagnosing the disease under investigation;
- the eligibility and exclusion criteria for the trial in question;
- the size of the patient population and process for identifying patients;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- the design of the trial protocol;
- the perceived risks and benefits of the product candidate in the trial, including relating to cell therapy approaches;
- the availability of competing commercially available therapies and other competing therapeutic candidates' clinical trials for the disease or condition under investigation;
- the willingness of patients to be enrolled in our clinical trials;
- the efforts to facilitate timely enrollment in clinical trials;
- potential disruptions caused by the COVID-19 pandemic, including difficulties in initiating clinical sites, enrolling and retaining participants, diversion of healthcare resources away from clinical trials, travel or quarantine policies that may be implemented, and other factors;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients for clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in these clinical trials may

result in increased development costs for our product candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing. Furthermore, we expect to rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and we will have limited influence over their performance.

Furthermore, even if we are able to enroll a sufficient number of patients for our clinical trials, we may have difficulty maintaining enrollment of such patients in our clinical trials.

We may seek orphan drug designation for some of our product candidates and we may be unsuccessful, or may be unable to maintain the benefits associated with orphan drug designation, including the potential for market exclusivity, for product candidates for which we obtain orphan drug designation.

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 product candidates. Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug or biologic intended to treat a rare disease or condition, defined as a patient population of fewer than 200,000 individuals in the United States, or a patient population of 200,000 or more in the United States where there is no reasonable expectation that the cost of developing and making available the drug or biologic will be recovered from sales in the United States. Orphan drug designation must be requested before submitting a biologics license application, or BLA. Although we may seek orphan drug designation for some or all of our product candidates, we may never receive such designations.

In the United States, orphan drug designation entitles a party to financial incentives such as tax advantages and user fee waivers. Opportunities for grant funding toward clinical trial costs may also be available for clinical trials of drugs or biologics for rare diseases, regardless of whether the drugs or biologics are designated for the orphan use.

In addition, if a drug or biologic with an orphan drug designation subsequently receives the first marketing approval for a particular active ingredient or principal molecular structural features for the indication for which it has such designation, the product is entitled to a seven year period of marketing exclusivity, which precludes the FDA from approving another marketing application for the same drug and indication for that time period, except in limited circumstances such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can ensure the availability of sufficient quantities of the orphan product to meet the needs of patients with the disease or condition for which the drug was designated. Even if we obtain orphan drug designation for a product candidate, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing biological products. If we seek orphan drug designation, we may be unsuccessful in obtaining such orphan drug designation for our product candidates. Even if we obtain orphan drug exclusivity for any of our product candidates, we may be unable to maintain the benefits associated with orphan drug designation, or such orphan drug exclusivity may not effectively protect those product candidates from competition because different drugs can be approved for the same condition, and orphan drug exclusivity does not prevent the FDA from approving the same or a different drug in another indication. Even after an orphan drug is granted orphan exclusivity and approved, the FDA can subsequently approve a later application for the same drug for the same condition before the expiration of the seven-year exclusivity period if the FDA concludes that the later drug is clinically superior in that it is shown to be safer in a substantial portion of the target populations, more effective or makes a major contribution to patient care. In addition, 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. Moreover, orphan-drug-exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or that we are unable to manufacture sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process.

Breakthrough therapy designation by the FDA for any product candidate may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that the product candidate will receive marketing approval.

We may, in the future, apply for breakthrough therapy designation, or the equivalent thereof in foreign jurisdictions (where available), for our product candidates. A breakthrough therapy is defined as a product candidate that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product candidate 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. Product candidates designated as breakthrough therapies by the FDA are also eligible for priority review if supported by clinical data at the time of the submission of the BLA.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe that 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 product candidates considered for approval under conventional FDA procedures and it would 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 candidate no longer meets the conditions for qualification or it may decide that the time period for FDA review or approval will not be shortened.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and management resources, we must focus on development programs and product candidates that we identify for specific indications. As such, we are currently primarily focused on the development of ITIL-168 for the treatment of PD-1-inhibitor-relapsed or refractory advanced melanoma. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications for these product candidates that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We plan to conduct and may in the future conduct additional clinical trials for our product candidates outside the United States, and the FDA and similar foreign regulatory authorities may not accept data from such trials conducted in locations outside of their jurisdiction.

We may in the future choose to conduct clinical trials outside the United States, including in Australia, Canada, Europe or other foreign jurisdictions. The acceptance of trial data from clinical trials conducted outside the United States by the FDA may be subject to certain conditions or may not be accepted at all. In cases where data from clinical trials conducted outside the United States are intended to serve as the sole basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the United States population and United States medical practice; (ii) the trials were performed by clinical investigators of recognized competence and (iii) the data may be considered valid without the need for an on-site inspection by the FDA or, if the FDA considers such an inspection to be

necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. Additionally, the FDA's clinical trial requirements, including sufficient size of patient populations and statistical powering, must be met. Many foreign regulatory bodies have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any similar foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the FDA or any similar foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval or clearance for commercialization in the applicable jurisdiction.

We may not be successful in our efforts to build a pipeline of additional product candidates.

We may not be able to continue to identify and develop new product candidates in addition to our current pipeline. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development. For example, product candidates may be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be successfully developed, much less receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our approach, we will not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed.

From time to time, we may estimate the timing of the accomplishment of various scientific, clinical, regulatory, manufacturing and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of preclinical studies and clinical trials and the submission of regulatory filings, including IND submissions. From time to time, we may publicly announce the expected timing of some of these milestones. All of these milestones are, and will be, based on a variety of assumptions. The actual timing of these milestones can vary significantly compared to our estimates, in some cases for reasons beyond our control. We may experience numerous unforeseen events during, or as a result of, any future clinical trials that we conduct that could delay or prevent our ability to receive marketing approval or commercialize our product candidates.

Our business and operations may be adversely affected by the evolving and ongoing COVID-19 global pandemic.

Our business and operations may be adversely affected by the effects of the recent and evolving COVID-19 virus, which was declared a global pandemic by the World Health Organization. The COVID-19 pandemic has resulted in travel and other restrictions in order to reduce the spread of the disease, including public health directives and orders in the United States and the European Union that, among other things and for various periods of time, directed individuals to shelter at their places of residence, directed businesses and governmental agencies to cease non-essential operations at physical locations, prohibited certain non-essential gatherings and events and ordered cessation of non-essential travel. Future remote work policies and similar government orders or other restrictions on the conduct of business operations related to the COVID-19 pandemic may negatively impact productivity and may disrupt our ongoing research and development activities and our clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. Further, such orders also may impact the availability or cost of materials, which would disrupt our supply chain and manufacturing efforts and could affect our ability to conduct ongoing and planned clinical trials and preparatory activities.

Although our planned clinical trials have not been impacted by the COVID-19 pandemic to date, we may experience related disruptions in the future that could severely impact our clinical trials, including:

- delays, difficulties or a suspension in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- interruptions in our ability to manufacture and deliver drug supply for trials;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- changes in local regulations as part of a response to the COVID-19 outbreak that may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- interruption of key clinical trial activities, such as clinical trial site monitoring, and the ability or willingness of subjects to travel to trial sites due to limitations on travel imposed or recommended by federal or state governments, employers and others;
- limitations in employee resources that would otherwise be focused on the conduct of our clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees; and
- refusal of the FDA to accept data from clinical trials in these affected geographies.

The spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, a widespread pandemic could result in significant disruption of global financial markets, reducing our ability to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock.

The global COVID-19 pandemic continues to rapidly evolve. The extent to which the COVID-19 pandemic impacts our business and operations, including our clinical development and regulatory efforts, will depend on future developments that are highly uncertain and cannot be predicted with confidence at the time of this prospectus, such as the ultimate geographic spread of the disease, the duration of the outbreak, the duration and effect of business disruptions and the short-term effects and ultimate effectiveness of the travel restrictions, quarantines, social distancing requirements and business closures in the United States and other countries to contain and treat the disease. Accordingly, we do not yet know the full extent of potential delays or impacts on our business, our clinical and regulatory activities, healthcare systems or the global economy as a whole. However, these impacts could adversely affect our business, financial condition, results of operations and growth prospects.

In addition, to the extent the ongoing COVID-19 pandemic adversely affects our business and results of operations, it may also have the effect of heightening many of the other risks and uncertainties described in this “Risk Factors” section.

The market opportunities for any current or future product candidate we develop, if approved, may be limited to those patients who are ineligible for established therapies or for whom prior therapies have failed, and may be small.

Any revenue we are able to generate in the future from product sales will be dependent, in part, upon the size of the market in the United States and any other jurisdiction for which we gain regulatory approval and have

commercial rights. If the markets or patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, even if approved.

Cancer therapies are sometimes characterized as first-line, second-line or third-line, and the FDA often approves new therapies initially only for third-line use. When cancer is detected early enough, first-line therapy, usually chemotherapy, immunotherapy, hormone therapy, surgery, radiation therapy or a combination of these, is sometimes adequate to cure the cancer or prolong life without a cure. Second- and third-line therapies are administered to patients when prior therapy is not effective. We may initially seek approval for ITIL-168, ITIL-306 and any other product candidates we develop as a therapy for patients who have received one or more prior treatments. If we do so, for those products that prove to be sufficiently beneficial, if any, we would expect to seek approval potentially as a first-line therapy, but there is no guarantee that any product candidate we develop, even if approved, would be approved for first-line therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

The number of patients who have the types of cancer we are targeting may turn out to be lower than expected. Additionally, the potentially addressable patient population for our current or future product candidates may be limited, if and when approved. Further, even if any of our product candidates are approved by the FDA or comparable foreign regulators, their approved indications may be limited to a subset of the indications that we targeted. Even if we obtain significant market share for any product candidate, if and when approved, if the potential target populations are small, we may never achieve profitability without obtaining marketing approval for additional indications, including to be used as first- or second-line therapy.

We may develop ITIL-168, ITIL-306 and future product candidates for use in combination with other therapies or third party product candidates, which exposes us to additional regulatory risks.

We may develop ITIL-168, ITIL-306 and future product candidates for use in combination with one or more currently approved cancer therapies. Even if any product candidate we develop were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risk that the FDA, EMA or comparable foreign regulatory authorities could revoke approval of the therapy used in combination with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with these existing therapies. This could result in our own products being removed from the market or being less successful commercially. Combination therapies are commonly used for the treatment of cancer, and we would be subject to similar risks if we develop any of our product candidates for use in combination with other drugs or for indications other than cancer.

We may also evaluate ITIL-168, ITIL-306 or any future product candidate in combination with one or more other third party product candidates that have not yet been approved for marketing by the FDA, EMA or comparable foreign regulatory authorities. If so, we will not be able to market and sell ITIL-168, ITIL-306 or any product candidate we develop in combination with any such unapproved cancer therapies that do not ultimately obtain marketing approval.

If the FDA or comparable foreign regulatory authorities do not approve these other biological products or revoke their approval of, or if safety, efficacy, manufacturing or supply issues arise with, the biologics we choose to evaluate in combination with ITIL-168, ITIL-306 or any product candidate we develop, we may be unable to obtain approval of or market any such product candidate.

The United Kingdom's withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

Following the result of a referendum in 2016, the United Kingdom left the European Union on January 31, 2020, commonly referred to as Brexit. Pursuant to the formal withdrawal arrangements agreed to by the United Kingdom and the European Union, as of January 1, 2021, the United Kingdom is no longer subject to the

transition period, or the Transition Period, during which European Union rules continued to apply. Negotiations between the United Kingdom and the European Union are expected to continue in relation to the customs and trading relationship between the United Kingdom and the European Union following the expiry of the Transition Period.

We have significant operations in the United Kingdom. Further, since a significant proportion of the regulatory framework in the United Kingdom is applicable to our business and our product candidates is derived from European Union directives and regulations, Brexit, following the Transition Period, could materially impact the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our product candidates in the United Kingdom or the European Union. For example, as a result of the uncertainty surrounding Brexit, the EMA relocated to Amsterdam from London. Following the Transition Period, the United Kingdom will no longer be covered by the centralized procedures for obtaining European Union-wide marketing authorizations from the EMA and, unless a specific agreement is entered into, a separate process for authorization of drug products will be required in the United Kingdom, the potential process for which is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in the United Kingdom or the European Union and limit our ability to generate revenue and achieve and sustain profitability. In addition, we may be required to pay taxes or duties or be subjected to other hurdles in connection with the importation of our product candidates into the European Union, or we may incur expenses in establishing a manufacturing facility in the European Union in order to circumvent such hurdles. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the United Kingdom or the European Union for our product candidates, or incur significant additional expenses to operate our business, which could significantly and materially harm or delay our ability to generate revenues or achieve profitability of our business. Any further changes in international trade, tariff and import/export regulations as a result of Brexit or otherwise may impose unexpected duty costs or other non-tariff barriers on us. These developments, or the perception that any of them could occur, may significantly reduce global trade and, in particular, trade between the impacted nations and the United Kingdom. It is also possible that Brexit may negatively affect our ability to attract and retain employees, particularly those from the European Union.

Risks Related to the Manufacturing of our Product Candidates

Cell therapies are complex and difficult to manufacture. We could experience manufacturing problems that result in delays in the development or commercialization of our product candidates or otherwise harm our business.

The manufacture of cell therapy products is technically complex and necessitates substantial expertise and capital investment. Production difficulties caused by unforeseen events may delay the availability of material for our clinical studies.

The manufacturers of pharmaceutical products must comply with strictly enforced cGMP requirements, state and federal regulations, as well as foreign requirements when applicable. Any failure of us or our contract manufacturing organizations to adhere to or document compliance to such regulatory requirements could lead to a delay or interruption in the availability of our program materials for clinical trials or enforcement action from the FDA, EMA or foreign regulatory authorities. If we or our manufacturers were to fail to comply with the FDA, EMA or other regulatory authority, it could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates. Our potential future dependence upon others for the manufacture of our product candidates may also adversely affect our future profit margins and our ability to commercialize any product candidates that receive regulatory approval on a timely and competitive basis.

Biological products are inherently difficult to manufacture. Our program materials are manufactured using technically complex processes requiring specialized equipment and facilities, highly specific raw materials, cells, and reagents, and other production constraints. Our production process requires a number of highly specific raw materials, cells and reagents with limited suppliers. Even though we aim to have backup supplies of raw materials, cells and reagents whenever possible, we cannot be certain they will be sufficient if our primary sources are unavailable. A shortage of a critical raw material, cell line, or reagent, or a technical issue during manufacturing may lead to delays in clinical development or commercialization plans. Any changes in the manufacturing of components of the raw materials we use could result in unanticipated or unfavorable effects in our manufacturing processes, resulting in delays.

Delays or failures in the manufacture of cell therapies (whether by us, any collaborator or our third party contract manufacturers) can result in a patient being unable to receive their cell therapy or a requirement to re-manufacture which itself then causes delays in manufacture for other patients. Any delay or failure or inability to manufacture on a timely basis can adversely affect a patient's outcomes and delay the timelines for our clinical trials. Such delays or failure or inability to manufacture can result from:

- a failure in the manufacturing process itself, for example by an error in manufacturing process (whether by us or our third party CMO), equipment or reagent failure, failure in any step of the manufacturing process, failure to maintain a GMP environment or failure in quality systems applicable to manufacture, sterility failures, contamination during process;
- product loss or failure due to logistical issues associated with the collection of a patient's tumor or other samples, shipping that material to analytical laboratories, and shipping the final product back to the location using cold chain distribution where it will be administered to the patient, manufacturing issues associated with the differences in patient starting materials, inconsistency in cell growth and variability in product characteristics;
- a lack of reliability or reproducibility in the manufacturing process itself leading to variability in end manufacture of cell therapy, which may lead to regulatory authorities placing a hold on a clinical trial or requesting further information on the process which could in turn result in delays to the clinical trials;
- variations in patient starting material or apheresis product resulting in less product than expected or product that is not viable, or that cannot be used to successfully manufacture a cell therapy;
- product loss or failure due to logistical issues including issues associated with the differences between patients' white blood cells or characteristics, interruptions to process, contamination, failure to supply patient apheresis material within required timescales (for example, as a result of an import or export hold-up) or supplier error;
- inability to obtain viral vector manufacturing slots from CMOs or to have enough manufacturing slots to manufacture cell therapies for patients as and when those patients require manufacture;
- inability to procure starting materials or to manufacture starting materials;
- loss of or close-down of any manufacturing facility used in the manufacture of our cell therapies, or the inability to find alternative manufacturing capability in a timely fashion;
- loss or contamination of patient starting material, requiring the starting material to be obtained again from the patient or the manufacturing process to be re-started; and
- a requirement to modify or make changes to any manufacturing process, which may also require comparability testing that delays our ability to make the required modifications or perform any required comparability testing in a timely fashion, require further regulatory approval or require successful tech transfer to CMOs to continue manufacturing.

Our product candidates are biologics and the manufacture of our product candidates is complex and we may encounter difficulties in production, particularly with respect to process development or scaling-out of our manufacturing capabilities. If we encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or any approved products could be delayed or stopped.

All entities involved in the preparation of therapeutics for clinical trials or commercial sale, including our existing contract manufacturers for components our product candidates, are subject to extensive regulation. Components of a finished therapeutic product approved for commercial sale or used in late-stage clinical trials in the European Union must be manufactured in accordance with cGMP. These regulations govern manufacturing processes and procedures (including record keeping) and the implementation and operation of quality systems to control and assure the quality of investigational products and products approved for sale. Poor control of production processes can lead to the introduction of adventitious agents or other contaminants, or to inadvertent changes in the properties or stability of our product candidates that may not be detectable in final product testing. We or our contract manufacturers must supply all necessary documentation in support of a BLA or MAA on a timely basis. Our facilities and quality systems and the facilities and quality systems of some or all of our third-party contractors must pass a pre-approval inspection for compliance with the applicable regulations as a condition of regulatory approval of our product candidates or any of our other potential products. In addition, the regulatory authorities may, at any time, audit or inspect a manufacturing facility involved with the preparation of our product candidates or our other potential products or the associated quality systems for compliance with the regulations applicable to the activities being conducted, and they could put a hold on one or more of our clinical trials if the facilities of our contract development and manufacturing organizations do not pass such audit or inspections. If these facilities do not pass a pre-approval plant inspection, FDA approval of the products will not be granted.

The regulatory authorities also may, at any time following approval of a product for sale, inspect or audit our manufacturing facilities or those of our third-party contractors. If any such inspection or audit identifies a failure to comply with applicable regulations or if a violation of our product specifications or applicable regulations occurs independent of such an inspection or audit, we or the relevant regulatory authority may require remedial measures that may be costly and/or time-consuming for us or a third party to implement and that may include the temporary or permanent suspension of a clinical trial or commercial sales or the temporary or permanent closure of a facility. Any such remedial measures imposed upon us or third parties with whom we contract could harm our business. If we or any of our third-party manufacturers fail to maintain regulatory compliance, the FDA can impose regulatory sanctions including, among other things, refusal to approve a pending application for a new drug product or biologic product, or revocation of a pre-existing approval. As a result, our business, financial condition and results of operations may be harmed. Additionally, if supply from one approved manufacturer is interrupted, there could be a significant disruption in commercial supply. An alternative manufacturer would need to be qualified through a BLA and/or MAA supplement which could result in further delay. The regulatory agencies may also require additional studies if a new manufacturer is relied upon for commercial production. Switching manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines.

These factors could cause the delay of clinical trials, regulatory submissions, required approvals or commercialization of our product candidates, cause us to incur higher costs and prevent us from commercializing our products successfully, if approved. Furthermore, if our suppliers fail to meet contractual requirements, and we are unable to secure one or more replacement suppliers capable of production at a substantially equivalent cost, our clinical trials may be delayed or we could lose potential revenue.

Although we are in the process of transferring the current manufacturing process of ITIL-168 from our manufacturing facility in Manchester, United Kingdom and establishing our manufacturing facility in Tarzana, California, we may utilize third parties if needed to manufacture our product candidates. Therefore, we are subject to the risk that such third parties may not perform satisfactorily.

Although we expect that our manufacturing facility will be the primary source of clinical and commercial supply for ITIL-168 and future product candidates, if approved, we may continue to rely on outside vendors for

at least a portion of the manufacturing process and intend to evaluate potential third-party manufacturing capabilities if necessary to meet further clinical and commercial demand. In the event that we engage third-party manufacturers and they do not successfully carry out their contractual duties, meet expected deadlines or manufacture our product candidates in accordance with regulatory requirements or if there are disagreements between us and any third-party manufacturer, we may be delayed in producing sufficient clinical and commercial supply of our product candidates. In such instances, we may need to locate an appropriate replacement third-party relationship, which may not be readily available or on acceptable terms, which would cause additional delay or increased expense and would thereby have a material adverse effect on our business, financial condition, results of operations and prospects.

Reliance on third-party providers may expose us to more risk than if we were to manufacture product candidates ourselves. The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our BLA to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs for the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. In addition, any failure to achieve and maintain compliance with these laws, regulations and standards could subject us to the risk that we may have to suspend the manufacturing of our product candidates or that obtained approvals could be revoked, which would adversely affect our business and reputation. Furthermore, third-party providers may breach existing agreements they have with us because of factors beyond our control. They may also terminate or refuse to renew their agreement because of their own financial difficulties or business priorities, at a time that is costly or otherwise inconvenient for us. If we were unable to find adequate replacement or another acceptable solution in time, our clinical trials could be delayed or our commercial activities could be harmed.

We have initiated a technology transfer of the current manufacturing process of ITIL-168 from our manufacturing facility in Manchester, United Kingdom to our new manufacturing facility in Tarzana, California, and we intend to utilize material manufactured in our new manufacturing facility in our future clinical trials of ITIL-168. This technology transfer process is still underway, and to date, we have not successfully produced a batch of ITIL-168. We will need to perform analytical and other animal or cell-based tests to demonstrate that materials produced by our new manufacturing facility, or any other third-party manufacturer that we engage, is comparable in all respects, including potency, to the product produced by our Manchester manufacturing facility and utilized in prior clinical and preclinical studies of ITIL-168. There is no assurance that we, or any other future third-party manufacturer that we engage, will be successful in producing ITIL-168, that any such product will pass the required comparability testing, or that any materials produced by us or any other third-party manufacturer that we engage will have the same effect in patients that we have observed to date with respect to materials produced by our Manchester manufacturing facility. Once the technology transfer is complete, we believe that our manufacturing network will have sufficient capacity to meet demand for ITIL-168 for our future U.S. clinical trials. Although we have identified additional third-party cGMP-compliant manufacturers that we believe we will be able to contract with in order to provide additional sources of such materials, there is a risk that if supplies are interrupted or result in poor yield or quality, it would materially harm our business. In addition, we may change our manufacturing process for ITIL-168, which could cause delays in production as we and our third-party manufacturers seek to improve and streamline the process.

In addition, we do not currently have long-term supply or manufacturing arrangements in place for the production of ITIL-168. Although we intend to establish multiple sources for long-term supply, including our

own commercial-scale cGMP-compliant manufacturing facility and one or more third-party manufacturers, if the cell therapy industry were to grow, we may encounter increasing competition for the raw materials and consumables necessary for the production of ITIL-168. Furthermore, demand for third-party cGMP manufacturing facilities may grow at a faster rate than existing manufacturing capacity, which could disrupt our ability to find and retain third-party manufacturers capable of producing sufficient quantities of ITIL-168 for future clinical trials or to meet initial commercial demand in the U.S. In addition to our own manufacturing facilities, we currently rely, and expect to continue to rely, on additional third parties to manufacture ingredients of our product candidates and to perform quality testing. Even following our establishment of our own cGMP-compliant manufacturing capabilities, we intend to maintain third-party manufacturers for these ingredients, as well as to serve as additional sources of our product candidates, which will expose us to risks including:

- reduced control for certain aspects of manufacturing activities;
- termination or nonrenewal of manufacturing and service agreements with third parties in a manner or at a time that is costly or damaging to us; and
- disruptions to the operations of our third-party manufacturers and service providers caused by conditions unrelated to our business or operations, including the bankruptcy of the manufacturer or service provider.

Building our new manufacturing facility will require additional investment, will be time-consuming and may be subject to delays, including because of shortage of labor or compliance with regulatory requirements. In addition, building a manufacturing facility may cost more than we currently anticipate. Delays or problems in the build out of our manufacturing facility may adversely impact our ability to provide supply for the development and commercialization of ITIL-168, as well as our financial condition.

Any of these events could lead to clinical trial delays or failure to obtain regulatory approval, or impact our ability to successfully commercialize ITIL-168. Some of these events could be the basis for FDA action, including injunction, recall, seizure or total or partial suspension of product manufacture.

Our current operations are concentrated in two locations. We or the third parties upon whom we depend may be adversely affected by earthquakes, wildfires or other natural disasters, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

We are in the process of transitioning from our manufacturing facility in Manchester, United Kingdom to our new manufacturing facility in Tarzana, California. Any unplanned event, such as flood, fire, explosion, earthquake, extreme weather condition, medical epidemics or pandemics, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations. Earthquakes, wildfires or other natural disasters could further disrupt our operations, and have a material and adverse effect on our business, financial condition, results of operations and prospects. If a natural disaster, power outage or other event prevented us from using all or a significant portion of our manufacturing facilities, or otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption may have a material and adverse effect on our business, financial condition, results of operations and prospects.

We depend on third-party suppliers for materials that are necessary for the conduct of preclinical studies and manufacture of our product candidates for clinical trials, and the loss of these third-party suppliers or their inability to supply us with sufficient quantities of adequate materials, or to do so at acceptable quality levels and on a timely basis, could harm our business.

Manufacturing our product candidates requires many reagents, which are substances used in our manufacturing processes to bring about chemical or biological reactions, and other specialty materials and equipment, some of which are manufactured or supplied by small companies with limited resources and experience to support commercial biologics production. We currently depend on a limited number of vendors for certain materials and equipment used in the manufacture of our product candidates. For example, we currently use facilities and equipment at external contract manufacturing organizations, or CMOs, as well as supply sources internal to the collaboration for vector supply. Our use of CMOs increases the risk of delays in production or insufficient supplies as we transfer our manufacturing technology to these CMOs and as they gain experience with our supply requirements. Some of these suppliers may not have the capacity to support clinical trials and commercial products manufactured under cGMP by biopharmaceutical firms or may otherwise be ill-equipped to support our needs. We also do not have supply contracts with many of these suppliers and may not be able to obtain supply contracts with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key materials and equipment to support clinical or commercial manufacturing.

For some of these reagents, equipment, and materials, we rely and may in the future rely on sole source vendors or a limited number of vendors. The supply of the reagents and other specialty materials and equipment that are necessary to produce our product candidates could be reduced or interrupted at any time. In such case, identifying and engaging an alternative supplier or manufacturer could result in delay, and we may not be able to find other acceptable suppliers or manufacturers on acceptable terms, or at all. Switching suppliers or manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines. If we change suppliers or manufacturers for commercial production, applicable regulatory agencies may require us to conduct additional studies or trials. If key suppliers or manufacturers are lost, or if the supply of the materials is diminished or discontinued, we may not be able to develop, manufacture and market our product candidates in a timely and competitive manner, or at all. An inability to continue to source product from any of these suppliers, which could be due to a number of issues, including regulatory actions or requirements affecting the supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, unexpected demands or quality issues, could adversely affect our ability to satisfy demand for our product candidates, which could adversely and materially affect our product sales and operating results or our ability to conduct clinical trials, either of which could significantly harm our business.

As we continue to develop and scale our manufacturing process, we expect that we will need to obtain rights to and supplies of certain materials and equipment to be used as part of that process. We may not be able to obtain rights to such materials on commercially reasonable terms, or at all, and if we are unable to alter our process in a commercially viable manner to avoid the use of such materials or find a suitable substitute, it would have a material adverse effect on our business. Even if we are able to alter our process so as to use other materials or equipment, such a change may lead to a delay in our clinical development and/or commercialization plans. If such a change occurs for product candidate that is already in clinical testing, the change may require us to perform both ex vivo comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials. These factors could cause the delay of studies or trials, regulatory submissions, required approvals or commercialization of product candidates that we develop, cause us to incur higher costs and prevent us from commercializing our product candidates successfully.

Any contamination or interruption in our manufacturing process, shortages of raw materials or failure of our suppliers of reagents to deliver necessary components could result in delays in our clinical development or marketing schedules.

Given the nature of cell therapy manufacturing, there is a risk of contamination. Any contamination could adversely affect our ability to produce product candidates on schedule and could, therefore, harm our results of

operations and cause reputational damage. Some of the raw materials required in our manufacturing process are derived from biologic sources. Such raw materials are difficult to procure and may be subject to contamination or recall. A material shortage, contamination, recall or restriction on the use of biologically derived substances in the manufacture of our product candidates could adversely impact or disrupt the commercial manufacturing or the production of clinical material, which could adversely affect our development timelines and our business, financial condition, results of operations and prospects.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates proceed through preclinical studies to late-stage clinical trials towards potential approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and product characteristics. Such changes carry the risk that they will not achieve our intended objectives. Any such changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the materials manufactured using altered processes. Such changes may also require additional testing, FDA notification or FDA approval. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commence sales and generate revenue. In addition, we may be required to make significant changes to our upstream and downstream processes across our pipeline, which could delay the development of our future product candidates.

Risks Related to the Commercialization of our Product Candidates

Even if any of our product candidates receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy, safety and potential advantages compared to alternative treatments;
- our ability to offer our products for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments;
- product labeling or product insert requirements of the FDA, EMA or other foreign regulatory authorities, including any limitations or warnings contained in a product's approved labeling, including any black box warning or REMS;
- the willingness of the target patient population to try new treatments and of physicians to prescribe these treatments;
- our ability to hire and retain a sales force in the United States;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for ITIL-168, ITIL-306 and any other product candidates, once approved;
- the prevalence and severity of any side effects; and
- any restrictions on the use of our products together with other medications.

If we are unable to establish sales, marketing and distribution capabilities for ITIL-168, ITIL-306 or any other product candidate that may receive regulatory approval, we may not be successful in commercializing those product candidates if and when they are approved.

We do not have sales or marketing infrastructure. To achieve commercial success for ITIL-168, ITIL-306 or any other product candidate for which we may obtain marketing approval, we will need to establish a sales and marketing organization. In the future, we expect to build a focused sales and marketing infrastructure to market our product candidates in the United States, if they are approved. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to market our products on our own include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians in order to educate physicians about our product candidates, once approved;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we are unable to establish our own sales, marketing and distribution capabilities and are forced to enter into arrangements with, and rely on, third parties to perform these services, our revenue and our profitability, if any, are likely to be lower than if we had developed such capabilities ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

The affected populations for our other product candidates may be smaller than we or third parties currently project, which may affect the addressable markets for our product candidates.

Our projections of the number of people who have the diseases we are seeking to treat, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are estimates based on our knowledge and understanding of these diseases. These estimates may prove to be incorrect and new studies may further reduce the estimated incidence or prevalence of this disease. The number of patients in the United States, the European Union and elsewhere may turn out to be lower than expected, may not be otherwise amenable to treatment with our product candidates or patients may become increasingly difficult to identify and access, all of which would adversely affect our business, financial condition, results of operations and prospects. Further, even if we obtain approval for our product candidates, the FDA or other regulators may limit their approved indications to more narrow uses or subpopulations within the populations for which we are targeting development of our product candidates.

The total addressable market opportunity for our product candidates will ultimately depend upon a number of factors including the diagnosis and treatment criteria included in the final label, if approved for sale in specified indications, acceptance by the medical community, patient access and product pricing and reimbursement. Incidence and prevalence estimates are frequently based on information and assumptions that are

not exact and may not be appropriate, and the methodology is forward-looking and speculative. The process we have used in developing an estimated incidence and prevalence range for the indications we are targeting has involved collating limited data from multiple sources. Accordingly, the incidence and prevalence estimates included in this prospectus should be viewed with caution. Further, the data and statistical information used in this prospectus, including estimates derived from them, may differ from information and estimates made by our competitors or from current or future studies conducted by independent sources.

Off-label use or misuse of our products may harm our reputation in the marketplace, result in injuries that lead to costly product liability suits, and/or subject us to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with any product.

If our product candidates are approved by the FDA, we may only promote or market our product candidates for their specifically approved indications. We will train our marketing and sales force against promoting our product candidates for uses outside of the approved indications for use, known as "off-label uses." We cannot, however, prevent a physician from using our products off-label, when in the physician's independent professional medical judgment he or she deems it appropriate. Furthermore, the use of our products for indications other than those approved by the FDA may not effectively treat such conditions. Any such off-label use of our product candidates could harm our reputation in the marketplace among physicians and patients. There may also be increased risk of injury to patients if physicians attempt to use our products for these uses for which they are not approved, which could lead to product liability suits that that might require significant financial and management resources and that could harm our reputation.

Advertising and promotion of any product candidate that obtains approval in the United States will be heavily scrutinized by the FDA, the U.S. Federal Trade Commission, the Department of Justice, or the DOJ, the Office of Inspector General of the U.S. Department of Health and Human Services, or HHS, state attorneys general, members of the U.S. Congress, and the public. Additionally, advertising and promotion of any product candidate that obtains approval outside of the United States will be heavily scrutinized by comparable foreign entities and stakeholders. Violations, including actual or alleged promotion of our products for unapproved or off-label uses, are subject to enforcement letters, inquiries, and investigations, and civil and criminal sanctions by the FDA, DOJ, or comparable foreign bodies. Any actual or alleged failure to comply with labeling and promotion requirements may result in fines, warning letters, mandates to corrective information to healthcare practitioners, injunctions, or civil or criminal penalties.

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

Drug development is highly competitive and subject to rapid and significant technological advancements. There are several large and small pharmaceutical companies focused on delivering therapeutics for the treatment of metastatic melanoma and other oncology indications we might target in the future. Further, it is likely that additional drugs will become available in the future for the treatment of our target indications.

We face competition from segments of the pharmaceutical, biotechnology and other related markets that pursue the development of TIL or other cell therapies for the treatment of solid tumors. Companies that are developing TIL therapies include Iovance Biotherapeutics Inc., Adaptimmune Therapeutics, Plc., Achilles Therapeutics, Ltd., Intima Bioscience, Inc., Nurix Therapeutics, Inc., KSQ Therapeutics, Inc., Obsidian Therapeutics, Inc., PACT Pharma, Inc. and Neogene Therapeutics, B.V. In addition, we may face competition from companies focused on CAR-T and TCR-T cell therapies, such as Kite Pharma, Inc., a subsidiary of Gilead, Inc., Juno Therapeutics, Inc., a subsidiary of Bristol-Myers Squibb, Inc., TCR2 Therapeutics, Inc., Poseida Therapeutics, Inc. and Immatics N.V. There are also companies utilizing other cell-based approaches that may be competitive to our product candidates. For example, companies such as Celyad, S.A. and Nkarta, Inc. are developing therapies that target and/or engineer natural killer, or NK, cells.

Many of our existing or potential competitors have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of product candidates, as well as in obtaining regulatory approvals of those product candidates in the United States and in foreign countries. Our current and potential future competitors may also have significantly more experience commercializing drugs, particularly cell therapy and other biological products, that have been approved for marketing. Mergers and acquisitions in the pharmaceutical and biotechnology industries could result in even more resources being concentrated among a small number of our competitors.

We will face competition from other drugs or from other non-drug products currently approved or that will be approved in the future in the oncology field, including for the treatment of diseases and disorders in the therapeutic categories we intend to target. Therefore, our ability to compete successfully will depend largely on our ability to:

- develop and commercialize drugs that are superior to other products in the market;
- demonstrate through our clinical trials that our product candidates are differentiated from existing and future therapies;
- attract qualified scientific, product development and commercial personnel;
- obtain patent or other proprietary protection for our medicines;
- obtain required regulatory approvals;
- obtain coverage and adequate reimbursement from, and negotiate competitive pricing with, third-party payors; and
- successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new medicines.

The availability of our competitors' products could limit the demand, and the price we are able to charge, for any product candidate we develop. The inability to compete with existing or subsequently introduced drugs would have an adverse impact on our business, financial condition and prospects. In addition, the reimbursement structure of approved cell therapies by other companies could impact the anticipated reimbursement structure of our cell therapies, if approved, and our business, financial condition, results of operations and prospects.

Established pharmaceutical companies may invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make our product candidates less competitive. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome price competition and to be commercially successful. Accordingly, our competitors may succeed in obtaining patent protection, discovering, developing, receiving regulatory and marketing approval for, or commercializing, drugs before we do, which would have an adverse impact on our business and results of operations.

Any product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

If we are successful in achieving regulatory approval to commercialize any biologic product candidate that we develop, it may face competition from biosimilar products. In the United States, our product candidates are regulated by the FDA as biologic products subject to approval under the BLA pathway. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the

FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed by the FDA. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. 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 BPCIA may be fully adopted by the FDA, any such processes could have an adverse effect on the future commercial prospects for our biological products.

There is a risk that any of our product candidates approved as a biological product under a BLA would not qualify for the 12-year period of exclusivity or that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our 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. If competitors are able to obtain marketing approval for biosimilars referencing our candidates, if approved, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and potential adverse consequences.

The success of our product candidates will depend significantly on coverage and adequate reimbursement or the willingness of patients to pay for these therapies.

We believe our success depends on obtaining and maintaining coverage and adequate reimbursement for our product candidates, including ITIL-168 for the treatment of metastatic melanoma, and the extent to which patients will be willing to pay out-of-pocket for such products, in the absence of reimbursement for all or part of the cost. In the United States and in other countries, 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. The availability of coverage and adequacy of reimbursement for our products by third-party payors, including government health care programs (e.g., Medicare, Medicaid, TRICARE), managed care providers, private health insurers, health maintenance organizations, and other organizations is essential for most patients to be able to afford medical services and pharmaceutical products such as our product candidates. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a payor-by-payor basis. One payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage, and adequate reimbursement. The principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services, or HHS. CMS decides whether and to what extent products will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree.

Third-party payors determine which products and procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular product or procedure, the resulting reimbursement payment rates may not be adequate. Patients who are treated in-office for a medical condition generally rely on third-party payors to reimburse all or part of the costs associated with the procedure, including costs associated with products used during the procedure, and may be unwilling to undergo such procedures in the absence of such coverage and adequate reimbursement. Physicians may be unlikely to offer procedures for such treatment if they are not covered by insurance and may be unlikely to purchase and use our product candidates, if approved, for our stated indications unless coverage is provided and reimbursement is adequate. In addition, for products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs.

Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that a procedure is safe, effective and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and neither cosmetic, experimental, nor investigational. Further, increasing efforts by third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. In order to secure coverage and reimbursement for any product that might be approved for sale, we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain FDA or comparable regulatory approvals. Additionally, we may also need to provide discounts to purchasers, private health plans or government healthcare programs. Our product candidates may nonetheless not be considered medically necessary or cost-effective. If third-party payors do not consider a product to be cost-effective compared to other available therapies, they may not cover the product after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow a company to sell its products at a profit. We expect to experience pricing pressures from third-party payors in connection with the potential sale of any of our product candidates. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Foreign governments also have their own healthcare reimbursement systems, which vary significantly by country and region, and we cannot be sure that coverage and adequate reimbursement will be made available with respect to the treatments in which our products are used under any foreign reimbursement system.

There can be no assurance that ITIL-168 or any other product candidate, if approved for sale in the United States or in other countries, will be considered medically reasonable and necessary, that it will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available or that reimbursement policies and practices in the United States and in foreign countries where our products are sold will not adversely affect our ability to sell our product candidates profitably, if they are approved for sale.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or drugs caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or drugs that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards paid to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

Although we maintain product liability insurance coverage, such insurance may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our business and operations would suffer in the event of computer system failures, cyberattacks or a deficiency in our cybersecurity.

Despite the implementation of security measures, our internal computer systems, and those of third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyberattacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization. The risk of a security breach or disruption, particularly through cyberattacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned 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 was to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur material legal claims and liability and damage to our reputation, and the further development of our product candidates could be delayed.

We are subject to a variety of privacy and data security laws, and our failure to comply with them could harm our business.

We maintain a large quantity of sensitive information, including confidential business and personal information in connection with the conduct of our clinical trials and related to our employees, and we are subject to laws and regulations governing the privacy and security of such information. In the United States, there are numerous federal and state privacy and data security laws and regulations governing the collection, use, disclosure and protection of personal information, including federal and state health information privacy laws, federal and state security breach notification laws, and federal and state consumer protection laws. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues, which may affect our business and is expected to increase our compliance costs and exposure to liability. In the United States, numerous federal and state laws and regulations could apply to our operations or the operations of our partners, including state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws and regulations (e.g. Section 5 of the FTC Act), that govern the collection, use, disclosure, and protection of health-related and other personal information. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and regulations promulgated thereunder. Depending on the facts and circumstances, we could be subject to significant penalties if we obtain, use, or disclose individually identifiable health information in a manner that is not authorized or permitted by HIPAA.

In Europe, the General Data Protection Regulation or the GDPR, took effect in May 2018. The GDPR governs the collection, use, disclosure, transfer or other processing of personal data of individuals within the European Economic Area, or the EEA, including clinical trial data. Among other things, the GDPR imposes requirements regarding the security of personal data and notification of data processing obligations to the competent national data processing authorities, requires having lawful bases on which personal data can be processed, and requires changes to informed consent practices, as well as more detailed notices for clinical trial subjects and investigators. In addition, the GDPR increases the scrutiny of transfers of personal data from the EEA to the United States and other jurisdictions that the European Commission does not recognize as having “adequate” data protection laws; in July 2020, the Court of Justice of the European Union limited how organizations could lawfully transfer personal data from the EEA to the United States by invalidating the EU-US Privacy Shield and imposing further restrictions on use of the standard contractual clauses, which could increase our costs and our ability to efficiently process personal data from the EEA. The GDPR imposes substantial fines

for breaches and violations (up to the greater of €20 million or 4% of our consolidated annual worldwide gross revenue), and confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR. Relatedly, following the United Kingdom's withdrawal from the European Economic Area and the European Union, and the expiry of the transition period, which ended on January 1, 2021, companies have to comply with both the GDPR and the GDPR as incorporated into United Kingdom national law, the latter regime having the ability to separately fine up to the greater of £17.5 million or 4% of global turnover. On January 1, 2021, the United Kingdom became a third country for the purposes of the GDPR.

The relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains unclear, for example around how data can lawfully be transferred between each jurisdiction, which exposes us to further compliance risk. Pursuant to the EU-UK Trade and Cooperation Agreement of December 24, 2020, transfers of personal data from the European Union to the United Kingdom may continue to take place without a need for additional safeguards during a further transition period, to expire on (1) the date on which an adequacy decision with respect to the United Kingdom is adopted by the EU Commission; or (2) the expiry of four months, which shall be extended by a further two months unless either the European Union or the United Kingdom objects. It remains unclear whether the EU Commission will adopt an adequacy decision with respect to the United Kingdom. In the absence of such decision after the expiry of the additional transition period, we may need to put in place additional safeguards for transfers of personal data from the European Union to the United Kingdom, such as standard contractual clauses approved by the EU Commission.

Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous and time-intensive process, and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. If we fail to comply with any such laws or regulations, we may face significant fines and penalties that could adversely affect our business, financial condition and results of operations. Furthermore, the laws are not consistent, and compliance in the event of a widespread data breach is costly. In addition, states are constantly adopting new laws or amending existing laws, requiring attention to frequently changing regulatory requirements. For example, California enacted the California Consumer Privacy Act, or the CCPA, which took effect on January 1, 2020, became enforceable by the California Attorney General on July 1, 2020, and has been dubbed the first "GDPR-like" law in the United States. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used by requiring covered companies to provide new disclosures to California consumers (as that term is broadly defined) and provide such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. Further, the California Privacy Rights Act, or the CPRA, recently passed in California. The CPRA will impose additional data protection obligations on companies doing business in California, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. Although the CCPA currently exempts certain health-related information, including clinical trial data, the CCPA and the CPRA may increase our compliance costs and potential liability. Similar laws have been proposed in other states and at the federal level, and if passed, such laws may have potentially conflicting requirements that would make compliance challenging.

If we or any contract manufacturers and suppliers we engage fail to comply with environmental, health, and safety laws and regulations, we could become subject to fines or penalties or incur costs that could seriously harm our business.

We and any contract manufacturers and suppliers we engage are subject to numerous federal, state and local environmental, health, and safety laws, regulations, and permitting requirements, including those governing

laboratory procedures; the generation, handling, use, storage, treatment and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. We also could incur significant costs associated with civil or criminal fines and penalties.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research, product development and manufacturing efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty, and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended, which could seriously harm our business.

Risks Related to Our Dependence on Third Parties

We intend to rely on third parties to conduct, supervise and monitor a significant portion of our research and preclinical testing and clinical trials for our product candidates, and if those third parties do not successfully carry out their contractual duties, comply with regulatory requirements or otherwise perform satisfactorily, we may not be able to obtain regulatory approval or commercialize product candidates, or such approval or commercialization may be delayed, and our business may be substantially harmed.

We intend to engage CROs and other third parties to conduct our planned preclinical studies or clinical trials, including our planned Phase 2 trial of ITIL-168, and to monitor and manage data. We expect to continue to rely on third parties, including clinical data management organizations, medical institutions and clinical investigators, to conduct those clinical trials. Any of these third parties may terminate their engagements with us, some in the event of an uncured material breach and some at any time for convenience. If any of our relationships with these third parties terminate, we may not be able to timely enter into arrangements with alternative third parties or to do so on commercially reasonable terms, if at all. Switching or adding CROs involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects. Further, the performance of our CROs and other third parties conducting our trials may also be interrupted by the ongoing COVID-19 pandemic, including due to travel or quarantine policies, heightened exposure of CRO or clinical site or other vendor staff who are healthcare providers to COVID-19 or prioritization of resources toward the pandemic.

In addition, any third parties conducting our clinical trials 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 clinical programs. 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, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. Consequently, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase substantially and our ability to generate revenue could be delayed significantly.

We rely on these parties for execution of our preclinical studies and clinical trials, and generally do not control their activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, or GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. If we or any of our CROs or other third parties, including trial sites, fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA 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 by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP conditions. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

We also are required to register certain ongoing clinical trials and post the results of certain completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA. The FDA may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the trial. The FDA may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA and may ultimately lead to the denial of marketing approval for ITIL-168, ITIL-306 or any other product candidates.

We also expect to rely on other third parties to store and distribute product supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential revenue.

We may seek collaborations with third parties for the development or commercialization of our product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

We may seek third-party collaborators for the development and commercialization of our product candidates, including for the commercialization of any of our product candidates that are approved for marketing outside the United States. Our likely collaborators for any such arrangements include regional and national pharmaceutical companies and biotechnology companies. If we enter into any additional such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenue from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates would pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or drugs, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If any future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for any collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood

of approval by the FDA, EMA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate additional collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of such product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate revenue.

Risks Related to our Intellectual Property

If we are unable to obtain or protect intellectual property rights related to any of our product candidates, we may not be able to compete effectively in our market.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our product candidates and technologies. Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary technology and product candidates.

As of the date of prospectus, we do not currently in-license any intellectual property, but we may choose to do so in the future. The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. We cannot offer any assurances about which of our patent applications will issue, the breadth of any resulting patent or whether any of the issued patents will be found invalid and unenforceable or will be threatened by third parties. We cannot offer any assurances that the breadth of our resulting or granted patents will be sufficient to stop a competitor from developing and commercializing a product, including a biosimilar product, that would be competitive with one or more of our product candidates. There is no assurance that all the potentially relevant prior art relating to our patent and patent applications has been found, which can invalidate a patent or prevent a patent from issuing from a pending 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 or our future licensors were the first to file any patent application related to our product candidates and technologies. Additionally, an interference proceeding can be provoked by a third party or instituted by the United States Patent and Trademark Office (USPTO) to determine who was the first to invent any of the subject matter covered by the patent claims of our applications.

Furthermore, any successful challenge to these patents or any other patents owned by or licensed to us after patent issuance could deprive us of rights necessary for the successful commercialization of any of our product candidates and technologies that we may develop. Even if they are unchallenged or such third-party challenges are unsuccessful, our patent and patent applications may not adequately protect our intellectual property, provide exclusivity for our product candidates and technologies, or prevent others from designing around our claims. If the breadth or strength of protection provided by the patent and patent applications we hold, obtain or pursue with respect to our product candidates and technologies is challenged, or if they fail to provide meaningful

exclusivity for our product candidates and technologies, it could threaten our ability to commercialize our product candidates and technologies. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product candidate under patent protection, if approved, would be reduced.

The patent prosecution process is expensive and time-consuming. We may not be able to prepare, file and prosecute all necessary or desirable patent applications at a commercially reasonable cost, in a timely manner, or in all jurisdictions. It is also possible that we may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection. Moreover, depending on the terms of any future in-licenses to which we may become a party, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology in-licensed from third parties. Therefore, these patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. In addition to the protection provided by our patent estate, we rely on trade secret protection and confidentiality agreements to protect proprietary scientific, business and technical information and know-how that is not or may not be patentable or that we elect not to patent. We seek to protect our proprietary information, data and processes, in part, by confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors and partners. Although these agreements are designed to protect our proprietary information, 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. Although we generally require all of our employees to assign their inventions to us, and all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed with all third parties who may have helped to develop our intellectual property or who had access to our proprietary information, or that our agreements will not be breached. If any of the parties to these confidentiality agreements breaches or violates the terms of such agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result.

Enforcing a claim that a third party illegally obtained and is using our trade secrets, like patent litigation, is expensive and time-consuming, and the outcome is unpredictable. Further, 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. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret. We cannot guarantee that our employees, former employees or consultants will not file patent applications claiming our inventions. Because of the “first-to-file” laws in the United States, such unauthorized patent application filings may defeat our attempts to obtain patents on our own inventions.

Trade secrets and know-how can be difficult to protect as trade secrets and know-how will over time be disseminated within the industry through independent development, the publication of journal articles, and the movement of personnel skilled in the art from company to company or academic to industry scientific positions. Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology or develop their own technologies that fall outside of our intellectual property rights. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets and proprietary know-how were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We also 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.

Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective.

While we have confidence in these individuals, organizations and systems, our agreements or security measures may be breached, and we may not have adequate remedies for any breach. Also, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret. In addition, others may independently discover our trade secrets and proprietary information. For example, the FDA is considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA's disclosure policies may change in the future. If we are unable to prevent material disclosure of the non-patented intellectual property related to our technologies to third parties, and there is no guarantee that we will have any such enforceable trade secret protection, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, results of operations and financial condition.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time, and if we do not obtain protection under the Hatch-Waxman Amendments and similar non-United States legislation for extending the term of patents covering each of our product candidates, our business may be materially harmed.

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 generic medications. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates may expire before or shortly after such candidates are commercialized. Depending upon the timing, duration and conditions of FDA marketing approval of our product candidates, one or more of our United States patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments, and similar legislation in the European Union. The Hatch-Waxman Amendments permit a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval. Only one patent may be extended, and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product will be shortened and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced and could have a material adverse effect on our business.

If we fail to comply with our obligations imposed by any intellectual property licenses with third parties that we may need in the future, we could lose rights that are important to our business.

Although we do not currently have any intellectual property licenses with third parties, we may in the future require licenses to additional third-party technology and materials. Such licenses may not be available in the future or may not be available on commercially reasonable terms, or at all, which could have a material adverse effect on our business and financial condition. Even if we acquire the right to control the prosecution, maintenance and enforcement of the licensed and sublicensed intellectual property relating to our product candidates, we may require the cooperation of our licensors and any upstream licensor, which may not be forthcoming. Therefore, we cannot be certain that the prosecution, maintenance and enforcement of these patent rights will be in a manner consistent with the best interests of our business. If we or our licensor fail to maintain

such patents, or if we or our licensor lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated and our right to develop and commercialize any of our product candidates that are the subject of such licensed rights could be adversely affected. In addition to the foregoing, the risks associated with patent rights that we license from third parties will also apply to patent rights we may own in the future. Further, if we fail to comply with our development obligations under our license agreements, we may lose our patent rights with respect to such agreement, which would affect our patent rights worldwide.

Termination of our current or any future license agreements would reduce or eliminate our rights under these agreements and may result in our having to negotiate new or reinstated agreements with less favorable terms or cause us to lose our rights under these agreements, including our rights to important intellectual property or technology. Any of the foregoing could prevent us from commercializing our other product candidates, which could have a material adverse effect on our operating results and overall financial condition.

In addition, intellectual property rights that we in-license in the future may be sublicenses under intellectual property owned by third parties, in some cases through multiple tiers. The actions of our licensors may therefore affect our rights to use our sublicensed intellectual property, even if we are in compliance with all of the obligations under our license agreements. Should our licensors or any of the upstream licensors fail to comply with their obligations under the agreements pursuant to which they obtain the rights that are sublicensed to us, or should such agreements be terminated or amended, our ability to develop and commercialize our product candidates may be materially harmed.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our future patents.

Our ability to obtain patents is highly uncertain because, to date, some legal principles remain unresolved, and there has not been a consistent policy regarding the breadth or interpretation of claims allowed in patents in the United States. Furthermore, the specific content of patents and patent applications that are necessary to support and interpret patent claims is highly uncertain due to the complex nature of the relevant legal, scientific, and factual issues. Changes in either patent laws or interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

For example, on September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act included a number of significant changes to United States patent law. These included provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The USPTO has developed new and untested regulations and procedures to govern the full implementation of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, became effective in March 2013. The Leahy-Smith Act has also introduced procedures making it easier for third parties to challenge issued patents, as well as to intervene in the prosecution of patent applications. Finally, the Leahy-Smith Act contained new statutory provisions that require the USPTO to issue new regulations for their implementation, and it may take the courts years to interpret the provisions of the new statute. It is too early to tell what, if any, impact the Leahy-Smith Act will have on the operation of our business and the protection and enforcement of our intellectual property. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our future patents. Further, the United States Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening 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 actions by the United States 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 patents that we have owned or licensed or that we might obtain in the future. An inability to obtain, enforce, and defend patents covering our proprietary technologies would materially and adversely affect our business prospects and financial condition.

Similarly, changes in patent laws and regulations in other countries or jurisdictions, changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we may obtain in the future. Further, 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. For example, if the issuance in a given country of a patent covering an invention is not followed by the issuance in other countries of patents covering the same invention, or if any judicial interpretation of the validity, enforceability or scope of the claims or the written description or enablement, in a patent issued in one country is not similar to the interpretation given to the corresponding patent issued in another country, our ability to protect our intellectual property in those countries may be limited. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may materially diminish the value of our intellectual property or narrow the scope of our patent protection.

Competitors could enter the market with generic versions of our product candidates, which may result in a material decline in sales of our product candidates.

We may not be successful in securing or maintaining proprietary patent protection for products and technologies we develop or license. Moreover, if any patents that are granted and listed in the Orange Book are successfully challenged by way of a Paragraph IV certification and subsequent litigation, the affected product could more immediately face generic competition and its sales would likely decline materially. Should sales decline, we may have to write off a portion or all of the intangible assets associated with the affected product and our results of operations and cash flows could be materially and adversely affected.

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

Competitors may infringe our issued patents or any patents issued as a result of our pending or future patent applications. 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 a patent of ours is not valid or is unenforceable, or may refuse to stop the other party in such infringement proceeding 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 any of our patent applications at risk of not yielding an issued patent.

If we 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 or product candidate is invalid and/or unenforceable. In patent litigation in the United States, counterclaims alleging invalidity and/or unenforceability are common, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the PTO, or made a misleading statement, during prosecution. 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 re-examination, post grant review, *inter partes* review and equivalent proceedings in foreign jurisdictions (for example, opposition proceedings, nullity proceedings or litigation or invalidation trials or invalidation proceedings). Such proceedings could result in revocation of or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity of our patents, 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 invalidity

and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing and could have a material adverse impact on our business.

Interference or derivation proceedings provoked by third parties or brought by us may be necessary to determine the priority of inventions or inventorship (and possibly also ownership) of inventions with respect to our patent applications or resulting patents, or patent applications or resulting patents of third parties. An unfavorable outcome could require us to cease using the related technology or force us to take a license under the patent rights of the prevailing party, if available. Furthermore, our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent misappropriation of our intellectual property rights, 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. There could also 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 material adverse effect on the price of our common stock.

We may not identify relevant third party patents or may incorrectly interpret the relevance, scope or expiration of a third party patent which might adversely affect our ability to develop and market our products.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction.

The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products are not covered by a third party patent or may incorrectly predict whether a third party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our product candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

We may be unsuccessful in licensing or acquiring intellectual property from third parties that may be required to develop and commercialize our product candidates.

A third party may hold intellectual property, including patent rights that are important or necessary to the development and commercialization of our product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to acquire or obtain a license to such intellectual property from these third parties, and we may be unable to do so on commercially reasonable terms or at all. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual

property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or product candidate, which could have a material adverse effect on our business.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain.

Our commercial success depends in part on our ability to develop, manufacture, market and sell our drug candidates and use our proprietary technologies without infringing or otherwise violating the patents and proprietary rights of third parties. As our current and future product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. There is a substantial amount of litigation involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, derivation proceedings, post grant reviews, inter partes reviews, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Numerous United States and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing product candidates, and there may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates and technologies. Third parties, including our competitors may initiate legal proceedings against us alleging that we are infringing or otherwise violating their patent or other intellectual property rights.

We cannot provide any assurance that our current and future product candidates do not infringe other parties' patents or other proprietary rights, and competitors or other parties may assert that we infringe their proprietary rights in any event. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current and future product candidates, including interference or derivation proceedings before the USPTO. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could have a negative impact on our ability to commercialize ITIL-168, ITIL-306 or any future product candidates. In order to successfully challenge the validity of any such United States patent in federal court, we would need to overcome a presumption of validity. As this burden is high and requires us to present clear and convincing evidence as to the invalidity of any such United States patent claim, there is no assurance that a court of competent jurisdiction would agree with us and invalidate the claims of any such United States patent. Moreover, given the vast number of patents in our field of technology, we cannot be certain that we do not infringe existing patents or that we will not infringe patents that may be granted in the future.

While we may decide to initiate proceedings to challenge the validity of these or other patents in the future, we may be unsuccessful, and courts or patent offices in the United States and abroad could uphold the validity of any such patent. Furthermore, because patent applications can take many years to issue and may be confidential for 18 months or more after filing, and because pending patent claims can be revised before issuance, there may be applications now pending which may later result in issued patents that may be infringed by the manufacture, use or sale of our product candidates. Regardless of when filed, we may fail to identify relevant third-party patents or patent applications, or we may incorrectly conclude that a third-party patent is invalid or not infringed by our product candidates or activities. If a patent holder believes that one of our product candidates infringes its patent, the patent holder may sue us even if we have received patent protection for our technology. In addition, third parties may obtain patents in the future and claim that our product candidates or technologies infringe upon these patents. Moreover, we may face patent infringement claims from non-practicing entities that have no relevant drug revenue and against whom our own patent portfolio may thus have no deterrent effect. If a patent infringement suit were threatened or brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the drug or product candidate that is the subject of the actual or threatened suit.

If we are found to infringe a third party's valid intellectual property rights, we could be required to obtain a license from such third party to continue commercializing our product candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we may be unable to effectively market product candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. Alternatively, we may need to redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. Under certain circumstances, we could be forced, including by court orders, to cease commercializing our product candidates. In addition, in any such proceeding or litigation, we could be found liable for substantial monetary damages, potentially including treble damages and attorneys' fees, if we are found to have willfully infringed the patent at issue. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could harm our business. Any claims by third parties that we have misappropriated their confidential information or trade secrets could have a similar negative impact on our business.

The cost to us in defending or initiating any litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

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

We employ individuals who were previously employed at other biotechnology or biopharmaceutical companies. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, 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 our employees' former employers or other third parties. We may also be subject to claims that former employers or other third parties have an ownership interest in our future patents. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. There is no guarantee of success in defending these claims, and even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees.

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

We may also be subject to claims that former employees, collaborators, or other third parties have an ownership interest in our patent applications, our future patents issued as a result of our pending or future applications, or other intellectual property. We may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. Although it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own, and we cannot be certain that our agreements with such parties will be upheld in the face of a potential challenge, or that they will not be breached, for which we may not have an adequate remedy. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and litigation may be necessary to defend against these and other claims challenging inventorship or ownership. 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.

Reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

If we rely on third parties to manufacture or commercialize our product candidates, or if we collaborate with additional third parties for the development of such product candidates, we must, at times, share trade secrets with them. We may also conduct joint research and development programs that may require us to share trade secrets under the terms of our research and development partnerships or similar agreements. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure could have an adverse effect on our business and results of operations.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets. Despite our efforts to protect our trade secrets, we may not be able to prevent the unauthorized disclosure or use of our technical know-how or other trade secrets by the parties to these agreements. Moreover, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our confidential information or proprietary technology and processes. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. If any of the collaborators, scientific advisors, employees, contractors and consultants who are parties to these agreements breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result. Moreover, if confidential information that is licensed or disclosed to us by our partners, collaborators, or others is inadvertently disclosed or subject to a breach or violation, we may be exposed to liability to the owner of that confidential information. Enforcing a claim that a third party illegally obtained and is using our trade secrets, like patent litigation, is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets.

We may enjoy only limited geographical protection with respect to certain patents and we may not be able to protect our intellectual property rights throughout the world.

Filing and prosecuting patent applications and defending patents covering our product candidates in all countries throughout the world would be prohibitively expensive. 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 rights are not as strong as that in the United States or Europe. These products may compete with our product candidates, and our future patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

In addition, we may decide to abandon national and regional patent applications before they are granted. The examination of each national or regional patent application is an independent proceeding. As a result, patent

applications in the same family may issue as patents in some jurisdictions, such as in the United States, but may issue as patents with claims of different scope or may even be refused in other jurisdictions. It is also quite common that depending on the country, the scope of patent protection may vary for the same product candidate or technology.

While we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our product candidates. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate, which may have an adverse effect on our ability to successfully commercialize our product candidates in all of our expected significant foreign markets. If we encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished, and we may face additional competition from others in those jurisdictions.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws or rules and regulations in the United States and Europe and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property rights, especially those relating to life sciences, which could make it difficult for us to stop the infringement of our future patents or marketing of competing products in violation of our proprietary rights generally. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit. Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws.

Proceedings to enforce our patent rights in other jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our future patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing as patents, 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. Furthermore, while we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our product candidates. 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 from third parties.

Some countries also have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, some countries limit the enforceability of patents against government agencies or government contractors. In those countries, the patent owner may have limited remedies, which could materially diminish the value of such patents. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired.

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

Periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents and/or applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our patents and/or applications and any patent rights we may obtain in the future. Furthermore, the USPTO and various non-United States government patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals and rely on such third parties to help us comply with

these requirements and effect payment of these fees with respect to the patent and patent applications that we own, and if we in-license intellectual property, we may have to rely upon our licensors to comply with these requirements and effect payment of these fees with respect to any patents and patent applications that we license. In many cases, an inadvertent lapse of a patent or patent application can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patents or patent applications, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market, which could have a material adverse effect on our business.

Any trademarks we have obtained or may obtain may be infringed or otherwise violated, or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish our product candidates, if approved for marketing, from the drugs of our competitors. Once we select new trademarks and apply to register them, our trademark applications may not be approved. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. Third parties may oppose or attempt to cancel our trademark applications or trademarks, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our drugs, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe or otherwise violate our trademarks and we may not have adequate resources to enforce our trademarks. Any of the foregoing events may have a material adverse effect on our business. Moreover, any name we propose to use with our product candidates in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

Any collaboration arrangements that we may enter into in the future may not be successful, which could adversely affect our ability to develop and commercialize our product candidates.

We may seek collaboration arrangements with pharmaceutical or biotechnology companies for the development or commercialization of our product candidates depending on the merits of retaining commercialization rights for ourselves as compared to entering into collaboration arrangements. We will face, to the extent that we decide to enter into collaboration agreements, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time-consuming to negotiate, document, implement and maintain. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements should we so chose to enter into such arrangements. The terms of any collaborations or other arrangements that we may establish may not be favorable to us.

Any future collaborations that we enter into may not be successful. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborations are subject to numerous risks, which may include that:

- collaborators have significant discretion in determining the efforts and resources that they will apply to collaborations;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in their strategic focus due to the acquisition of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;

- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates;
- a collaborator with marketing, manufacturing and distribution rights to one or more products may not commit sufficient resources to or otherwise not perform satisfactorily in carrying out these activities;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and a collaborator that causes the delay or termination of the research, development or commercialization of our current or future products or that results in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated, and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable current or future products;
- collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to develop or commercialize such intellectual property; and
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make products that are similar to or otherwise competitive with our product candidates but that are not covered by the claims of our current or future patents;
- an in-license necessary for the manufacture, use, sale, offer for sale or importation of one or more of our product candidates may be terminated by the licensor;
- we or future collaborators might not have been the first to make the inventions covered by our issued or future issued patents or our pending patent applications;
- we or future collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or in-license may be held invalid or unenforceable as a result of legal challenges by our competitors;
- issued patents that we own or in-license may not provide coverage for all aspects of our product candidates in all countries;

- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Risks Related to Legal and Regulatory Compliance Matters

Our relationships with customers, healthcare providers, including physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Healthcare providers, including physicians, and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject us to various federal and state fraud and abuse laws and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute, the federal civil and criminal false claims laws and the law commonly referred to as the Physician Payments Sunshine Act and regulations promulgated under such laws. These laws will impact, among other things, our clinical research, proposed sales, marketing and educational programs, and other interactions with healthcare professionals. In addition, we may be subject to patient privacy laws by both the federal government and the states in which we conduct or may conduct our business. The laws that will affect our operations include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, individuals or entities from knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind in return for, or to induce, either the referral of an individual, or the purchase, lease, order or arrangement for or recommendation of the purchase, lease, order or arrangement for any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid 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 involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. A person does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation;
- the federal civil and criminal false claims laws, including, without limitation, the federal False Claims Act, which can be enforced by private citizens through civil whistleblower or qui tam actions, and civil monetary penalty laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from the federal government, including Medicare, Medicaid and other government payors, that are false or fraudulent or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim or to avoid, decrease or conceal an obligation to pay money to the federal government. A claim includes “any request or demand” for money or property presented to the United States federal government. Several pharmaceutical and other healthcare companies 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 products for unapproved, and thus non-reimbursable, uses. 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 federal False Claims Act;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal criminal statutes which prohibit, among other things, a person from knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up 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. 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;
- the federal transparency laws, including the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, medical devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the State Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to: (i) payments or other "transfers of value'' made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and (ii) ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made during the previous year to physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives; and
- analogous state and foreign laws and regulations; state laws that require manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or drug pricing; 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, or that otherwise restrict payments that may be made to healthcare providers; and state and local laws that require the registration of pharmaceutical sales representatives.

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 could be subject to challenge under one or more of such laws. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant penalties, including, without limitation, civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in federal and state funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, diminished profits and future earnings, reputational harm and the curtailment or restructuring of our operations, any of which could harm our business.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. The shifting compliance environment and the need to

build and maintain robust and expandable systems to comply with multiple jurisdictions with different compliance and/or reporting requirements increases the possibility that a healthcare company may run afoul of one or more of the requirements.

Even if we obtain regulatory approval for ITIL-168, ITIL-306 or any future product candidates, they will remain subject to ongoing regulatory oversight, which may result in significant additional expense.

Even if we obtain any regulatory approval for ITIL-168, ITIL-306 or any future product candidates, such product candidates, they will be subject to ongoing regulatory requirements applicable to manufacturing, labeling, packaging, storage, advertising, promoting, sampling, record-keeping and submission of safety and other post-market information, among other things. Any regulatory approvals that we receive for ITIL-168, ITIL-306 or any future product candidates may also be subject to a risk evaluation and mitigation strategy, limitations on the approved indicated uses for which the drug may be marketed or to the conditions of approval, or requirements that we conduct potentially costly post-marketing testing and surveillance studies, including Phase 4 trials and surveillance to monitor the quality, safety and efficacy of the drug. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval. We will further be required to immediately report any serious and unexpected adverse events and certain quality or production problems with our products to regulatory authorities along with other periodic reports.

Any new legislation addressing drug safety issues could result in delays in product development or commercialization, or increased costs to assure compliance. We will also have to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drug products are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we will not be allowed to promote our products for indications or uses for which they do not have approval, commonly known as off-label promotion. The holder of an approved BLA must submit new or supplemental applications and obtain prior approval for certain changes to the approved product, product labeling, or manufacturing process. A company that is found to have improperly promoted off-label uses of their products may be subject to significant civil, criminal and administrative penalties.

In addition, drug manufacturers are subject to payment of user fees and continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP requirements and adherence to commitments made in the BLA or foreign marketing application. If we, or a regulatory authority, discover previously unknown problems with a drug, such as adverse events of unanticipated severity or frequency, or problems with the facility where the drug is manufactured or if a regulatory authority disagrees with the promotion, marketing or labeling of that drug, a regulatory authority may impose restrictions relative to that drug, the manufacturing facility or us, including requesting a recall or requiring withdrawal of the drug from the market or suspension of manufacturing.

If we fail to comply with applicable regulatory requirements following approval of ITIL-168, ITIL-306 or any future product candidates, a regulatory authority may:

- issue an untitled letter or warning letter asserting that we are in violation of the law;
- seek an injunction or impose administrative, civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical trials;
- refuse to approve a pending marketing application or supplement to an approved application or comparable foreign marketing application (or any supplements thereto) submitted by us or our strategic partners;
- restrict the marketing or manufacturing of the drug;

- seize or detain the drug or otherwise require the withdrawal of the drug from the market;
- refuse to permit the import or export of products or product candidates; or
- refuse to allow us to enter into supply contracts, including government contracts.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize ITIL-168, ITIL-306 or any future product candidates and harm our business, financial condition, results of operations and prospects.

Even if we obtain FDA or EMA approval any of our product candidates in the United States or European Union, we may never obtain approval for or commercialize any of them in any other jurisdiction, which would limit our ability to realize their full market potential.

In order to market any products in any particular jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a country-by-country basis regarding safety and efficacy.

Approval by the FDA in the United States or the EMA in the European Union does not ensure approval by regulatory authorities in other countries or jurisdictions. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval elsewhere. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country.

Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approval could result in difficulties and increased costs for us and require additional preclinical studies or clinical trials which could be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. We do not have any product candidates approved for sale in any jurisdiction, including in international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, or if regulatory approvals in international markets are delayed, our target market will be reduced and our ability to realize the full market potential of any product we develop will be unrealized.

Healthcare legislative or regulatory reform measures may have a negative impact on our business and results of operations.

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 our ability to profitably sell any product candidates for which we obtain marketing approval.

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, in March 2010, the ACA was passed, which substantially changed the way healthcare is financed by both the government and private insurers, and significantly impacts the United States pharmaceutical industry. The ACA, among other things: (i) established 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; (ii) expanded the entities eligible for discounts under the 340B drug pricing program; (iii) increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate

Program 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, or AMP; (iv) expanded the eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new eligibility categories for individuals with income at or below 133% (as calculated, it constitutes 138%) of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability; (v) addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics that are inhaled, infused, instilled, implanted or injected; (vi) introduced a new Medicare Part D coverage gap discount program in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D (increased from 50%, effective January 1, 2019, pursuant to the Bipartisan Budget Act of 2018); (vii) created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and (viii) established the 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.

There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017, or Tax Act, included a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a Texas United States District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the United States Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. The United States Supreme Court is currently reviewing this case, although it is unclear when a decision will be made. It is also unclear how such litigation and other efforts to challenge, repeal or replace the ACA will impact the ACA or our business.

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013, and due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2021, unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These laws may result in additional reductions in Medicare and other healthcare funding, which could have an adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

Additionally, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the Trump administration's budget proposal for fiscal year 2021 includes a $135 billion allowance (over a period of time) to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy

expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. On July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Further, in November 2020, CMS issued an interim final rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. The MFN Model regulations mandate participation by identified Part B providers and will apply in all U.S. states and territories for a seven-year period beginning January 1, 2021, and ending December 31, 2027. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election.

We expect that these and other healthcare reform measures that may be adopted in the future may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved drug. Any reduction in reimbursement from Medicare or 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 drugs. It is also possible that additional governmental action is taken to address the COVID-19 pandemic.

In addition, FDA regulations and guidance may be revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. For example, the results of the 2020 U.S. Presidential election may impact our business and industry. The Trump administration took several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the 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 whether or how these requirements will be interpreted and implemented, or whether they will be rescinded and replaced under the Biden administration. The policies and priorities of the new administration are unknown and could materially impact the regulations governing our product candidates. Any new regulations or guidance, or revisions or reinterpretations of existing regulations or guidance, may impose additional costs or lengthen FDA review times for ITIL-168, ITIL-306 or any future product candidates. We cannot determine how changes in regulations, statutes, policies, or interpretations when and if issued, enacted or adopted, may affect our business in the future. Such changes could, among other things, require:

- additional clinical trials to be conducted prior to obtaining approval;
- changes to manufacturing methods;
- recalls, replacements, or discontinuance of one or more of our products; and
- additional recordkeeping.

Such changes would likely require substantial time and impose significant costs, or could reduce the potential commercial value of ITIL-168, ITIL-306 or other product candidates, and could materially harm our business and our financial results. In addition, delays in receipt of or failure to receive regulatory clearances or approvals for any other products would harm our business, financial condition, and results of operations.

Risks Related to Employee Matters and Managing our Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the management, development, clinical, financial and business development expertise of our executive officers. Each of our executive officers may currently terminate their employment with us at any time. We do not maintain "key person" insurance for any of our executives or employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of our product pipeline toward scaling up for commercialization, manufacturing and sales and marketing personnel, will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our clinical development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of December 31, 2020, we had employees. As our development progresses, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of clinical product development, regulatory affairs, manufacturing and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Our employees, independent contractors, consultants, collaborators, principal investigators, CROs, suppliers and vendors may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements.

We are exposed to the risk that our employees, independent contractors, consultants, collaborators, principal investigators, CROs, suppliers and vendors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct that violates FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare laws and regulations, and laws that require the true, complete and accurate reporting of financial information or data. In particular, sales, marketing and business

arrangements in the healthcare industry are subject to extensive laws and regulations intended 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 programs and other business arrangements. Misconduct by these parties could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity 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. 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 significant civil, criminal and administrative penalties, including, without limitation, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, additional reporting requirements and 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.

Risks Related to This Offering, Ownership of our Common Stock and our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your shares of our common stock at or above the initial offering price, if at all.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock was determined through negotiations with the underwriters and may not be indicative of the price at which our common stock will trade after the closing of this offering. Although we have applied to list our common stock on The Nasdaq Global Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop or is not sustained, it may be difficult for you to sell shares you purchased in this offering at an attractive price or at all.

The trading price of the shares of our common stock may be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price may be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the shares. The market price for our common stock may be influenced by many factors, including:

- the commencement, enrollment or results of our clinical trials of ITIL-168, ITIL-306 or any future clinical trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for ITIL-168, ITIL-306 or any other product candidate we may develop, 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;
- delays in or termination of clinical trials;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- unanticipated serious safety concerns related to the use of ITIL-168, ITIL-306 or any other product candidate;
- changes in financial estimates by us or by any equity research analysts who might cover our stock;

- conditions or trends in our industry;
- changes in the market valuations of similar companies;
- announcements by our competitors of new product candidates or technologies, or the results of clinical trials or regulatory decisions;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- our relationships with our collaborators;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- investors' general perception of our company and our business;
- recruitment or departure of key personnel;
- overall performance of the equity markets;
- trading volume of our common stock;
- 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;
- changes in the structure of healthcare payment systems;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

The stock market in general, and the Nasdaq Global Market and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies, including very recently in connection with the ongoing COVID-19 pandemic, which has resulted in decreased stock prices for many companies notwithstanding the lack of a fundamental change in their underlying business models or prospects. Broad market and industry factors, including potentially worsening economic conditions and other adverse effects or developments relating to the ongoing COVID-19 pandemic, may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this section, could have a significant and material adverse impact on the market price of our common stock.

In addition, in the past, stockholders have initiated class action lawsuits against pharmaceutical and biotechnology companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources from our business.

If you purchase shares of our common stock in this offering, you will suffer immediate dilution of your investment.

The initial public offering price of our common stock is substantially higher than the net tangible book value (deficit) per share of our common stock. Therefore, if you purchase shares of our common stock in this offering,

you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the assumed initial public offering price.

In addition, as of December 31, 2020, we had outstanding stock options to purchase an aggregate of shares of common stock at a weighted average exercise price of $ per share. To the extent these outstanding options are exercised, there will be further dilution to investors in this offering. See "Dilution."

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. As a newly public company, we have only limited research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline significantly.

Upon the closing of this offering, we will have outstanding shares of common stock, after giving effect to the automatic conversion of our outstanding convertible preferred stock into 74,350,596 shares of our common stock, and assuming no exercise of outstanding options to purchase shares of our redeemable convertible preferred stock. Of these shares, the shares sold in this offering will be freely tradable and substantially all of the additional shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus following the expiration of lock-up agreements between some of our stockholders and the underwriters. Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC may release these stockholders from their lock-up agreements with the underwriters at any time and without notice, which would allow for earlier sales of shares in the public market.

In addition, promptly following the closing of this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act of 1933, as amended, or the Securities Act, registering the issuance of shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates.

Additionally, after this offering, the holders of an aggregate of 74,350,596 shares of our common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public

market. If these additional shares 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.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws to be in effect upon the closing of this offering that may make it difficult for a third party to acquire, or attempt to acquire, control of our company, even if a change of control was considered favorable by you and other stockholders. For example, our board of directors will have the authority to issue up to shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges, and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change of control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents will also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors will be elected each year;
- stockholders will not be entitled to remove directors other than by a 66 2/3% vote and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders; and
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change of control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates beneficially own % of our outstanding common stock. As a result, these persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transactions.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the current market price of our common stock and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

We are an "emerging growth company" and a "smaller reporting company" and, as a result of the reduced disclosure and governance requirements applicable to emerging growth companies and smaller reporting companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we intend to take advantage of some of the exemptions from 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 in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- not being required to hold a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our common stock less attractive because we will 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. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of the last day of the fiscal year (i) following the fifth anniversary of the closing of our initial public offering, (ii) in which we have total annual gross revenue of at least $1.07 billion, or (iii) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may, under certain circumstances, still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

We will have broad discretion over the use of proceeds from this offering. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. We expect to use the net proceeds to us from this offering, together with our existing cash and cash equivalents, to . See "Use of Proceeds." In addition, we may use a portion of the proceeds from this offering to pursue our strategy to in-license or acquire additional product candidates. Our failure to apply the net proceeds from this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

You should not rely on an investment in our common stock to provide dividend income. We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings,

if any, to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Investors seeking cash dividends should not purchase our common stock.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising under the Delaware General Corporation Law, our amended and restated certificate of incorporation, or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our amended and restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business.

General Risk Factors

We will incur increased costs and demands upon management as a result of being a public company.

As a public company listed in the United States, we will incur significant additional legal, accounting and other costs, which we anticipate could be between $1.0 million and $2.0 million annually. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and the Nasdaq Stock Market, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies.

We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

After the closing of this offering, we will be subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the rules and regulations of the stock market on which our common stock is listed. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting.

Commencing with our fiscal year ending December 31, 2022, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to this offering, we have never been required to test our internal control within a specified period, and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner.

We may identify weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the Securities and Exchange Commission or other regulatory authorities.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of accrued amounts.

We are subject to taxation in more than one tax jurisdiction. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including passage of newly enacted tax legislation, changes in the mix of our profitability from jurisdiction to jurisdiction, the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, changes in accounting for income taxes and changes in tax laws. Any of these factors could cause us

to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

We might not be able to utilize a significant portion of our net operating loss carryforwards.

We have generated and expect to continue to generate in the future significant federal and state net operating loss, or NOL, carryforwards. These NOL carryforwards could expire unused and be unavailable to offset future income tax liabilities. Under the Tax Cuts and Jobs, or the Tax Act, as modified by the CARES Act, federal NOLs incurred in taxable years beginning after December 31, 2017 and in future taxable years may be carried forward indefinitely, but the deductibility of such federal NOLs incurred in the taxable year beginning after December 31, 2020 is limited. It is uncertain how various states will respond to the Tax Act and CARES Act. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. The completion of this offering, together with private placements and other transactions that have occurred since our inception, may trigger such an ownership change pursuant to Section 382. We have not yet completed a Section 382 analysis. We may experience ownership changes as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. If an ownership change occurs and our ability to use our NOL carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations. We have a full valuation allowance for deferred tax assets including NOLs.

Our business activities will be subject to the Foreign Corrupt Practices Act, or FCPA, and similar anti-bribery and anti-corruption laws.

As we expand our business activities outside of the United States, including our clinical trial efforts, we will be subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. The FCPA generally prohibits offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to a non-United States government official in order to influence official action, or otherwise obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-United States governments. Additionally, in many other countries, the healthcare providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, our dealings with these prescribers and purchasers will be subject to regulation under the FCPA. Recently the SEC and Department of Justice have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies. There is no certainty that all of our employees, agents, suppliers, manufacturers, contractors, or collaborators, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers, or our employees, the closing down of facilities, including those of our suppliers and manufacturers, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs, and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to offer our products in one or more countries as well as difficulties in manufacturing or continuing to develop our products, and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, and our business, prospects, operating results, and financial condition.

Disruptions at the FDA, the SEC and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs or biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including most recently from December 22, 2018 to January 25, 2019, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Separately, in response to the COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most inspections of foreign manufacturing facilities and products and subsequently, on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission critical inspections to resumption of all regulatory activities.. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic and may experience delays in their regulatory activities. . If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting business as usual or conducting inspections, reviews or other regulatory activities, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. Portions of our future clinical trials may be conducted outside of the United States and unfavorable economic conditions resulting in the weakening of the U.S. dollar would make those clinical trials more costly to operate. Furthermore, a severe or prolonged economic downturn, including a recession or depression resulting from the current COVID-19 pandemic or political disruption could result in a variety of risks to our business, including weakened demand for our product candidates or any future product candidates, if approved, and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy or political disruption, including any international trade disputes, could also strain our manufacturers or suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our potential products. Any of the foregoing could seriously harm our business, and we cannot anticipate all of the ways in which the political or economic climate and financial market conditions could seriously harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections titled “Prospectus Summary,” “Risk Factors,” “ Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere in this prospectus. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “estimate,” “believe,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions intended to identify statements about the future. These statements speak only as of the date of this prospectus and involve known and unknown risks, uncertainties and other important factors that 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. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements include, without limitation, statements about the following:

- the timing, progress and results of our preclinical studies and clinical trials of ITIL-168, ITIL-306 and any future product candidates, including statements regarding the timing of our planned IND submissions, initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs;
- the timing of any submission of filings for regulatory approval of, and our ability to obtain and maintain regulatory approvals for, our current and future product candidates;
- our manufacturing capabilities and strategy, including the scalability and commercial viability of our manufacturing methods and processes;
- our ability to identify patients with the diseases treated by our product candidates and to enroll these patients in our clinical trials;
- our expectations regarding the size of the patient populations, market acceptance and opportunity for and clinical utility of our product candidates, if approved for commercial use;
- our expectations regarding the scope of any approved indication for ITIL-168, ITIL-306 or any other product candidate;
- our ability to successfully commercialize our product candidates;
- our ability to leverage our CoStAR platform to identify and develop future product candidates;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements and our need for or ability to obtain additional funding before we can expect to generate any revenue from product sales and the period over which we expect the net proceeds of this offering, together with our existing cash and cash equivalents, to be sufficient to fund our operations;
- our expected use of proceeds from this offering;
- our competitive position and the development of and projections relating to our competitors or our industry; and
- business disruptions affecting our preclinical studies or the initiation, patient enrollment, development and operations of our clinical trials, including a public health crisis, such as the outbreak of COVID-19.

The foregoing list of forward looking statements is not exhaustive. You should refer to the “Risk Factors” section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Other sections of this prospectus may include additional factors that could harm our business and financial performance. Moreover, we operate in

an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. You should, however, review the factors and risks and other information we describe in the reports we will file from time to time with the SEC after the date of this prospectus.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, the events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements.

You should 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 our forward-looking statements by these cautionary statements.

MARKET AND INDUSTRY DATA

We obtained the industry, statistical and market data included in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. All of the market data used in this prospectus involve a number of assumptions and limitations, and the sources of such data cannot guarantee the accuracy or completeness of such information. While we are not aware of any misstatements regarding the third-party information and we believe that each of these studies and publications is reliable, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those described in the section titled "Risk Factors." These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase up to additional shares), assuming an initial public offering price of $ per share, which is 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.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by $ 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. Each increase or decrease of 1.0 million in the number of shares offered by us would increase or decrease the net proceeds to us from this offering by $ million, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our intended uses of the net proceeds from this offering, although it may impact the amount of time prior to which we may need to seek additional capital.

As of December 31, 2020, we had cash and cash equivalents of $ million. Subsequent to December 31, 2020, we received $52.5 million in net proceeds from the issuance and sale of our Series C convertible preferred stock. We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to ;
- approximately $ million to ; and
- the remainder for working capital and other general corporate purposes.

We may also use a portion of the remaining net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets, although we have no current agreements, commitments or understandings to do so.

We believe that the net proceeds of this offering, together with our existing cash and cash equivalents, will enable us to fund our operations through . Based on our current operational plans and assumptions, we expect the net proceeds from this offering, together with our cash and cash equivalents, will be sufficient to . We have based these estimates on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect.

This expected use of net proceeds from this offering and our existing cash and cash equivalents represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of those net proceeds. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending their use, we plan to invest the net proceeds from this offering in short-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States.

DIVIDEND POLICY

We have never declared or paid, and do not anticipate declaring or paying in the foreseeable future, 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.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of December 31, 2020:

- on an actual basis;
- on a pro forma basis to give effect to (i) the receipt of $52.5 million in aggregate net proceeds from the issuance and sale of Series C convertible preferred stock during the first quarter of 2021, (ii) the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 74,350,596 shares of our common stock, as if such conversion had occurred on December 31, 2020 and (iii) the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is 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.

Our capitalization following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our financial statements and the related notes appearing at the end of this prospectus, the section of this prospectus titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and other financial information contained in this prospectus.

	As of December 31, 2020		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
	(in thousands, except share and per share amounts)		
Cash and cash equivalents	$	$	$
Series A convertible preferred stock, par value $0.000001; 25,000,000 shares authorized, issued and outstanding, actual, and no shares authorized and outstanding, pro forma and pro forma as adjusted	$	$	$
Series B convertible preferred stock, par value $0.000001; 34,600,523 shares authorized, issued and outstanding, actual, and no shares authorized and outstanding, pro forma and pro forma as adjusted			
Series C convertible preferred stock, par value $0.000001; 14,750,075 shares authorized, 10,575,523 shares issued and outstanding, actual, and no shares authorized and outstanding, pro forma and pro forma as adjusted			
Stockholders’ (deficit) equity:			
Common stock, $0.000001 par value; shares authorized; shares issued and outstanding, actual, excluding shares subject to forfeiture; shares, authorized; shares issued pro forma and pro forma, as adjusted; shares outstanding, pro forma; shares outstanding, pro forma as adjusted			
Additional paid-in capital			
Accumulated deficit			
Total stockholders’ (deficit) equity			
Total capitalization	$	$	$

(1) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the

pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million in the number of shares offered by us would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock outstanding in the table above excludes:

- shares of our common stock issuable upon the exercise of options under the 2018 Plan outstanding as of December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock issuable upon the exercise of options under our 2018 Plan granted subsequent to December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock reserved for future issuance under the 2018 Plan, which shares will cease to be available for issuance at the time the 2021 Plan becomes effective and will be added to, and become available for issuance under, the 2021 Plan;
- shares of our common stock reserved for future issuance under the 2021 Plan, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

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 and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of December 31, 2020, we had a historical net tangible book value (deficit) of $ million, or $ per share of common stock. Our historical net tangible book value (deficit) per share represents total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding as of December 31, 2020.

Our pro forma net tangible book value as of December 31, 2020 was $ million, or $ per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) the receipt of $52.5 million in net proceeds from the issuance and sale of Series C convertible preferred stock during the first quarter of 2021 and (ii) the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 74,350,596 shares of our common stock as if such conversion had occurred on December 31, 2020. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of December 31, 2020, after giving effect to those pro forma adjustments.

After giving further effect to the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is 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 December 31, 2020 would have been $ million, or $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and immediate dilution of $ per share to new investors in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of common stock in this offering.

The following table illustrates this dilution:

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of December 31, 2020	$	
Pro forma increase in net tangible book value (deficit) per share attributable to the pro forma transactions described above		
Pro forma net tangible book value per share as of December 31, 2020		
Increase in pro forma as adjusted net tangible book value per share attributable to new investors participating in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors participating in this offering		$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted net tangible book value per share after this offering by $, and dilution in pro forma net tangible book value per share to new investors by $, 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase of 1.0 million shares in the number of shares we are

offering would increase the pro forma as adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. A decrease of 1.0 million shares in the number of shares we are offering would decrease the pro forma as adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

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

The following table summarizes, as of December 31, 2020, on the pro forma as adjusted basis described above, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the average price per share that existing stockholders and new investors paid for such shares. This calculation is based on an assumed initial public offering price of $ per share, which is 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.

	Total Shares		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100%	$	100%	

The foregoing tables and calculations are based on the number of shares of our common stock outstanding as of December 31, 2020, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 74,350,596 shares of common stock as if such conversion had occurred on December 31, 2020, and excludes:

- shares of our common stock issuable upon the exercise of options under the 2018 Plan outstanding as of December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock issuable upon the exercise of options under our 2018 Plan granted subsequent to December 31, 2020, at a weighted-average exercise price of $ per share;
- shares of our common stock reserved for future issuance under the 2018 Plan, which shares will cease to be available for issuance at the time the 2021 Plan becomes effective and will be added to, and become available for issuance under, the 2021 Plan;
- shares of our common stock reserved for future issuance under the 2021 Plan, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

To the extent that stock options are exercised, new stock options are issued under our equity incentive plan or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If 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.

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 our financial statements and the related notes included 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, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the section of this prospectus titled "Risk Factors," our actual results could differ materially from the results described in or implied by these forward- looking statements.

Overview

We are a clinical-stage biopharmaceutical company focused on developing an innovative cell therapy pipeline of autologous tumor infiltrating lymphocyte, or TIL, therapies for the treatment of patients with cancer. We are advancing our lead TIL product candidate, ITIL-168, for the treatment of advanced melanoma. Based on the clinical results from a compassionate use program with a TIL product that was produced with a prior version of the ITIL-168 manufacturing process, we plan to submit an investigational new drug application, or IND, to the U.S. Food and Drug Administration, or the FDA, and, if authorized to proceed, initiate a Phase 2 trial in which we believe could support a BLA submission in . We plan to initiate Phase 1 trials of ITIL-168 in additional indications with significant unmet medical need, including cutaneous squamous cell carcinoma, non-small cell lung cancer, head and neck cancer and cervical cancer in . ITIL-168 will be manufactured in our company-operated in-house manufacturing facilities for both our clinical trials and commercial sale, if approved.

We are also developing a novel class of genetically engineered TIL therapies using our Co-Stimulatory Antigen Receptor, or CoStAR, platform. These modified TILs still rely on their native, patient-specific T cell receptors, or TCRs, to bind to tumor neoantigens, but have been enhanced to express novel CoStAR molecules, which bind to shared tumor-associated antigens and provide potent costimulation to T cells within the microenvironment. We anticipate filing an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .

We were founded in August 2018. In February 2019, we entered into a license agreement with Immetacyte Ltd., or Immetacyte, pursuant to which we obtained a worldwide license to Immetacyte's proprietary technology, know-how and intellectual property for the research, development, manufacture and commercialization of TIL therapies. Immetacyte had been manufacturing a TIL product under a compassionate use program since 2011. Under this license agreement, we were obligated to make an up-front payment, along with payments related to the achievement of development and commercial milestones, as well as royalty payments on net sales, if any. This transaction was accounted for as an asset acquisition and, because the assets were determined to have no alternative future use, we recognized an amount of in-process research and development expense during the year ended December 31, 2019. We were also obligated to make payments for certain research and development, manufacturing, monitoring and other services.

In March 2020, we acquired 100% of the share capital of Immetacyte for total cash and non-cash consideration, including contingent consideration, of $15.5 million. In connection with the acquisition, we terminated the Immetacyte license agreement and associated payment obligations.

Since our inception, we have raised an aggregate of $380.7 million of net proceeds from the issuance and sale of convertible preferred stock to leading global institutional investors. As of December 31, 2020, we had cash on hand of $ million. During the first quarter of 2021, we received an additional $52.5 million of net proceeds from our Series C convertible preferred stock financing.

Impact of the COVID-19 Pandemic on Our Operations

On March 11, 2020, the World Health Organization characterized the outbreak of COVID-19 as a global pandemic and recommended containment and mitigation measures. Since then, extraordinary actions have been

taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world, including the United Kingdom and California, where most of our operations are conducted. These actions include travel bans, quarantines, "stay-at-home" orders and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations. We have been carefully monitoring the COVID-19 pandemic as it continues to progress and its potential impact on our business. As a result of COVID-19, we have taken precautionary measures in order to minimize the risk of the virus to our employees, including the suspension of all non-essential business travel. In addition, the majority of our workforce now works remotely. To date, we have been able to continue our key business activities and advance our clinical programs. However, in the future, it is possible that it will become more difficult to enroll participants in our clinical trials, which could delay our clinical development timelines. While the broader implications of the COVID-19 pandemic on our results of operations and overall financial performance remain uncertain, the COVID-19 pandemic has, to date, not had a material adverse impact on our results of operations or our ability to raise funds to sustain operations. The economic effects of the pandemic and resulting societal changes are currently not predictable, and the future financial impacts could vary from those foreseen.

See "Risk Factors" for a further discussion of the potential adverse impact of COVID-19 on our business.

Components of Operating Results

Operating Expenses

Research and Development

Research and development expenses account for a significant portion of our operating expenses. Research and development expenses consist primarily of research and development, manufacturing, monitoring and other services payments and in-license payments to Immetacyte and, to a lesser extent, salaries, benefits, and other personnel-related costs, including stock-based compensation, professional service fees and facility and other related costs. In-licensing payments to Immetacyte were treated as in-process research and development and expensed when incurred because the product candidates using the in-licensed TIL technology were determined to have no alternative future use. For the year ended December 31, 2019, we did not allocate our research and development expenses by program.

We expect our research and development expenses to increase substantially for the foreseeable future as we continue to ramp up our clinical development activities and incur expenses associated with hiring additional personnel to support our research and development efforts. Our expenditures on future nonclinical and clinical development programs are subject to numerous uncertainties in timing and cost to completion. The duration, costs and timing of clinical trials and development of product candidates will depend on a variety of factors, including:

- the scope, rate of progress and expenses of clinical trials and other research and development activities;
- potential safety monitoring and other studies requested by regulatory agencies;
- significant and changing government regulation; and
- the timing and receipt of regulatory approvals, if any.

The process of conducting the necessary clinical research to obtain FDA and other regulatory approval is costly and time consuming and the successful development of product candidates is highly uncertain. The risks and uncertainties associated with our research and development projects are discussed more fully in the section of this prospectus titled "Risk Factors." As a result of these risks and uncertainties, we are unable to determine with any degree of certainty the duration and completion costs of our research and development projects, or if, when or to what extent we will generate revenues from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates.

General and Administrative

General and administrative expenses consist primarily of compensation and personnel-related expenses, including stock-based compensation, for our personnel in executive, finance and other administrative functions. General and administrative expenses also include professional fees paid for accounting, auditing, legal, tax and consulting services, insurance costs, recruiting costs, travel expenses, amortization and depreciation, and other general and administrative costs.

We expect our general and administrative expenses to increase substantially for the foreseeable future as we continue to increase our headcount to support our research and development activities and operations generally, the growth of our business and, if any of our product candidates receive marketing approval, commercialization activities. We will also incur additional expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC, additional director and officer insurance expenses, investor relations activities and other administrative and professional services.

Interest Income

Interest income consists primarily of interest income earned on our cash and cash equivalents.

Income Tax Provision

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Due to the uncertainty of the business in which we operate, projections of future profitability are difficult and past profitability is not necessarily indicative of future profitability. Management does not believe it is more likely than not that the deferred tax assets will be realized, and accordingly, a valuation allowance at December 31, 2019 of $1.5 million has been established and no deferred tax asset and related tax benefit have been recognized in our financial statements. As of December 31, 2019, we had net operating loss carryforwards for federal income tax purposes of $1.3 million (tax effected), which will carry forward indefinitely.

Results of Operations

For the Year Ended December 31, 2019

The following table summarizes our results of operations for the year ended December 31, 2019 (in thousands):

	Year ended December 31, 2019
Costs and expenses:	
Research and development	$ 4,027
General and administrative	2,558
Total operating expenses	6,585
Loss from operations	(6,585)
Interest income	68
Other expense	(5)
Net loss	$ (6,522)

Research and Development Expenses

For the year ended December 31, 2019, research and development expenses consisted primarily of $3.5 million of research and development, manufacturing, monitoring and other services and in-license payments to Immetacyte related to know-how and intellectual property for the research, development and manufacture of TIL therapies utilizing the in-licensed TIL technology. Research and development expenses for the year ended December 31, 2019 also included $0.5 million of salaries, benefits, and other personnel related costs, including stock-based compensation, professional service fees and facility and other related costs.

General and Administrative Expenses

For the year ended December 31, 2019, general and administrative expenses consisted primarily of $1.1 million in compensation and personnel-related costs, $0.7 million in legal fees, $0.5 million in consulting and outsourced management fees and $0.3 million of facility and other related costs.

Interest Income

For the year ended December 31, 2019, we earned $0.1 million of interest income on our cash and cash equivalents.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have not generated any revenue from product sales and we have incurred significant operating losses. We do not have any products that have achieved regulatory marketing approval and we do not expect to generate revenue from sales of any product candidates for several years, if ever.

To date, we have funded our operations primarily through the issuance and sale of convertible preferred stock. From our inception through December 31, 2019, we had raised net cash proceeds of $15.0 million from the issuance of shares of our Series A convertible preferred stock. As of December 31, 2019, we had cash and cash equivalents of $8.9 million and an accumulated deficit of $7.2 million.

Subsequent to December 31, 2019, we have raised aggregate net cash proceeds of $365.7 million from the issuance and sale of convertible preferred stock. In May 2020, we completed a second closing of the Series A convertible preferred stock financing, selling additional shares of Series A convertible preferred stock for net proceeds of $10.0 million. In June 2020, we completed the closing of our Series B convertible preferred stock financing for net proceeds of $170.2 million. In December 2020, we completed the first closing of our Series C convertible preferred stock financing for net proceeds of $133.0 million. In January and February 2021, we completed additional closings of our Series C convertible preferred stock financing for net proceeds of $52.5 million.

Funding Requirements

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditure requirements through . We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. We expect to continue to expend significant resources for the foreseeable future.

We use our cash to fund operations, primarily to fund our research and development expenditures and related personnel costs. We expect our expenses to increase substantially for the foreseeable future as we continue to invest in research and development activities, particularly as we advance our product candidates into later stages of development and conduct larger clinical trials, seek regulatory approvals for and commercialize any product candidates that successfully complete clinical trials, hire additional personnel and invest in and grow

our business, expand and protect our intellectual property portfolio, and operate as a public company. Because of the numerous risks and uncertainties associated with research, development and commercialization of our product candidates, we are unable to estimate the exact timing and amount of our funding requirements. Our future operating expenditures will depend on many factors, including:

- the scope, rate of progress, costs and results of our clinical and preclinical development activities;
- the number and characteristics of any additional product candidates we develop or acquire;
- the timing of, and the costs involved in, obtaining regulatory approvals for ITIL-168 or any future product candidates, and the number of trials required for regulatory approval;
- the cost of manufacturing ITIL-168, ITIL-306 or any future product candidates as well as any products we successfully commercialize;
- costs related to our manufacturing and other facilities;
- the cost of commercialization activities of our product candidates, if approved for sale, including marketing, sales and distribution costs;
- the timing, receipt and amount of sales of ITIL-168, ITIL-306 or any future product candidates, if approved;
- the costs associated with constructing our new clinical and commercial manufacturing facility and building out lab space;
- the extent to which we acquire or in-license other companies' product candidates and technologies;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of any such arrangements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- any product liability or other lawsuits;
- the expenses needed to attract, hire and retain skilled personnel;
- our investments in our operational, financial and management information systems;
- the costs associated with operating as a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our intellectual property portfolio; and
- any delays or issues resulting from the ongoing COVID-19 pandemic.

Under our license agreement with Immetacyte that was in place as of December 31, 2019, we had payment obligations that were contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and were required to make royalty payments in connection with the sale of products developed under those agreements.

In March 2020, we acquired 100% of the share capital of Immetacyte for total cash and non-cash consideration, including contingent consideration, of $15.5 million. In connection with the acquisition, we terminated the Immetacyte license agreement and associated payment obligations. The maximum consideration that remained unpaid at December 31, 2020, which payment is contingent on future events, was $14.8 million.

Until such time as we can generate significant revenue from sales of our product candidates, if ever, we expect to finance our operations through equity offerings, debt financings or other capital sources, which may include strategic collaborations or other arrangements with third parties. Additional funds may not be available to us on acceptable terms or at all. If we raise additional funds by issuing equity or convertible debt securities, our stockholders will suffer dilution and the terms of these securities may include liquidation or other preferences

that adversely affect the rights of our common shareholders. Debt financing, if available, may involve restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of our equity securities receive any distribution of our corporate assets. If we raise funds through collaborations or other similar arrangements with third parties, we may have to relinquish valuable rights to technologies, future revenue streams, product candidates or research programs or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common shares. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic. If we fail to obtain necessary capital when needed on acceptable terms, or at all, it could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.

In the normal course of business, we enter into contracts with CROs and other third parties for preclinical studies and clinical trials, research and development supplies and other testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and generally provide us the option to cancel, reschedule and adjust our requirements based on our business needs, prior to the delivery of goods or performance of services. However, it is not possible to predict the maximum potential amount of future payments under these agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement.

Cash Flows

The following table summarizes our cash flows for the year ended December 31, 2019 (in thousands):

	Year ended December 31, 2019
Net cash provided by (used in):	
Cash used in operating activities	$ (5,293)
Cash used in investing activities	(760)
Cash provided by financing activities	14,948
Net increase in cash and cash equivalents	$ 8,895

Cash Flows from Operating Activities

Cash used in operating activities for the year ended December 31, 2019 was $5.3 million, which consisted of the net loss of $6.5 million partially offset by $0.9 million in non-cash charges and other adjustments to reconcile net loss to net cash used in operating activities and $0.4 million in a net change of our net operating assets and liabilities. The non-cash charges consist of stock-based compensation of $0.3 million. Additionally, acquired in-process research and development expenses of $0.6 million, which is included in net loss, are recorded as investing cash flows. The net change in our operating assets and liabilities was primarily due to an increase of $0.3 million in accounts payable and $0.4 million in accrued expenses and other liabilities partially offset by an increase of $0.3 million in prepaid expenses and other current assets.

Cash Flows from Investing Activities

Cash used in investing activities for the year ended December 31, 2019 was $0.8 million, which consisted of $0.2 million related to purchases of property and equipment and $0.6 million related to the acquisition of in-process research and development assets from Immetacyte.

Cash Flows from Financing Activities

Cash provided by financing activities for the year ended December 31, 2019 was entirely from net cash proceeds of $14.9 million from the issuance and sale of shares of our Series A convertible preferred stock.

Critical Accounting Policies and Estimates

This 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 accounting principles generally accepted in the United States of America, or GAAP. The preparation of 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.

While our significant accounting policies are described in the notes to our financial statements included elsewhere in this prospectus, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results.

Stock-Based Compensation

We maintain a stock-based compensation plan as a long-term incentive for employees, directors and consultants. The plan allows for the issuance of stock options, stock appreciation rights and restricted stock units.

We recognize stock-based compensation expense for stock-based awards on a straight-line basis over the requisite service period and account for forfeitures as they occur. For stock-based awards with performance conditions, stock-based compensation expense is not recognized until the performance condition is probable to occur. Our stock-based compensation costs are based upon the grant date fair value estimated using the Black-Scholes option pricing model. This model utilizes inputs that are highly subjective assumptions and generally require significant judgment. These assumptions include:

- *Fair Value of Common Stock*—See the subsection titled "— Common Stock Valuations" below.
- *Expected Term* — The expected term represents the period that stock-based awards are expected to be outstanding and is determined as the average of the time-to-vesting and the contractual life of the awards.
- *Expected Volatility* — Since we are privately held and do not have any trading history for our common stock, the expected volatility was 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.
- *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 awards.
- *Expected Dividend Yield* —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.

See Note 8 to our financial statements included elsewhere in this prospectus for more information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options granted in the year ended December 31, 2019. Some of these assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different.

We recorded stock-based compensation expense of $0.3 million for the year ended December 31, 2019. As of December 31, 2019, we had $1.2 million of total unrecognized stock-based compensation cost, which we

expect to recognize over an estimated weighted-average period of 1.34 years. We expect to continue to grant stock options and other stock-based awards in the future, and to the extent that we do, our stock-based compensation expense recognized in future periods will likely increase. The following table summarizes by grant date the number of shares of common stock underlying stock options granted from December 31, 2019 through the date of this prospectus and the associated per share exercise price and the estimated fair value per share of our common stock on the grant date:

Grant Date	Number of Stock Options Granted	Exercise Price	Fair Value Per Share of Common Stock	Aggregate Grant Date Fair Value
Total				

Common Stock Valuations

Historically, for all periods prior to this offering, fair values of the shares of common stock underlying our stock-based awards were estimated on each grant date by our board of directors. Our board of directors, with input from management considered, among other things, valuations of our common stock, which were prepared by an independent third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, or the Practice Aid.

In valuing our common stock in March 2020, the fair value of our business, or enterprise value, was determined using an income approach. The income approach estimates the fair value of a company based on the present value of our future estimated cash flows and our residual value beyond the forecast period. These future cash flows, including the cash flows beyond the forecast period for the residual value, are discounted to their present values using an appropriate discount rate to reflect the risks inherent in our company achieving these estimated cash flows.

In valuing our common stock in July 2020, the enterprise value of our business was determined using the back-solve method of the market approach, which considered the sales price of our Series B convertible preferred shares to third-party investors and back-solved for our enterprise value.

For all valuations performed, the enterprise value determined was then adjusted to add back cash and cash equivalents as of the valuation date to arrive at an equity value. In general, the resulting equity value was then allocated to our common stock using the option pricing method, or OPM. After the equity value was determined and allocated to the various classes of shares, a discount for lack of marketability, or DLOM, was applied to arrive at the fair value of the common stock. The DLOM reflects the lower value placed on securities that are not freely transferable, as compared to those that trade frequently in an established market.

The assumptions underlying these valuations represented management's best estimates, which involved inherent uncertainties and the application of management's judgment. If we had used significantly different assumptions or estimates, the fair value of our common stock and our stock-based compensation expense could have been materially different.

Given the absence of a public trading market, our board of directors, with input from management, considered numerous objective and subjective factors to determine the fair value of common stock at each grant date. The factors included, but were not limited to:

- valuations performed by an independent third-party valuation firm in accordance with the Practice Aid;
- our stage of development and material risks related to our business;
- the progress of our research and development programs, including the status and results of preclinical studies;

- our business conditions and projections;
- sales of our convertible preferred stock;
- the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock;
- lack of marketability of our common and convertible preferred stock as a private company;
- our operating results and financial performance;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company, in light of prevailing market conditions;
- the trends, developments and conditions in the life sciences and biotechnology industry sectors;
- the analysis of initial public offering and the market performance and stock price volatility of similar public companies in the life sciences and biopharmaceutical sectors; and
- the economy in general.

For valuations after the completion of this offering, the fair value of each share of underlying common stock will be based on the closing price of our common stock as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Recent Accounting Pronouncements

See Note 2 to our financial statements included elsewhere in this prospectus for more information.

Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

We had cash and cash equivalents of $8.9 million as of December 31, 2019. We generally hold our cash in interest-bearing money market accounts. We believe that historical fluctuations in interest rates have not had a material effect on our results of operations during the period presented.

Due to the low risk profile of our investments, a hypothetical one percentage point change in interest rates during the period presented would not have had a material impact on our financial statements included elsewhere in this prospectus.

Emerging Growth Company Status

We are an “emerging growth company” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted and intend to rely on certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation-related information that would be required if we were not an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, 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 avail ourselves of 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 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 the new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest of (i) December 31, 2026, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

BUSINESS

Overview

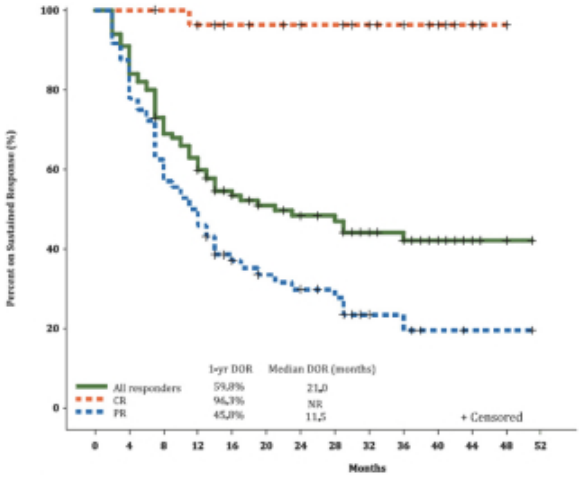
We are a clinical-stage biopharmaceutical company focused on developing an innovative cell therapy pipeline of autologous tumor infiltrating lymphocyte, or TIL, therapies for the treatment of patients with cancer. We have assembled an accomplished team with a successful track record in the development, manufacture, regulatory approval and commercialization of multiple cell therapies. Using our optimized and scalable manufacturing process, we are advancing our lead TIL product candidate, ITIL-168, for the treatment of advanced melanoma. Based on the clinical results from a compassionate use program with a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process, we plan to submit an investigational new drug application, or IND, to the U.S. Food and Drug Administration, or the FDA, and, if authorized to proceed, initiate a Phase 2 trial in , which we believe could support a BLA submission in . We plan to initiate Phase 1 trials of ITIL-168 in additional indications with significant unmet medical need, including cutaneous squamous cell carcinoma, non-small cell lung cancer, head and neck cancer and cervical cancer, in . ITIL-168 will be manufactured in our company-operated in-house manufacturing facilities for both our clinical trials and commercial sale, if approved.

We are also developing a novel class of genetically engineered TIL therapies using our Co-Stimulatory Antigen Receptor, or CoStAR, platform. These modified TILs still rely on their native, patient-specific T cell receptors, or TCRs, to bind to tumor neoantigens, but have been enhanced to express novel CoStAR molecules, which bind to shared tumor-associated antigens and provide potent costimulation to T cells within the microenvironment. We believe that the ability of CoStAR to augment the activation of TILs upon native TCR-mediated recognition of tumor neoantigens has the potential to bring TIL therapy to patients with cancer types that have been historically resistant to immunotherapy. We anticipate submitting an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .

We believe the critical advantage of TIL therapy over other cell therapies relates to the intrinsic and diverse anti-tumor reactivity of TILs. Unlike most cell therapies in development for solid tumors, which only recognize a single target antigen shared across a diverse patient population, TILs are polyclonal and therefore have the ability to recognize the broad set of antigens unique to each patient. This comprehensive polyclonality helps overcome a major limitation of cell therapies, such as CAR-Ts and TCR-Ts, by providing the requisite diversity to match the marked heterogeneity of solid tumors.

The successful use of TIL therapy to treat solid tumors was first published in 1988 by Steven A. Rosenberg, M.D., Ph.D., and his colleagues from the National Cancer Institute, or NCI, who demonstrated remissions in patients with advanced melanoma who had been treated with TILs. Since these initial reports, clinical studies of TILs have expanded significantly. In a study published in *Annals of Oncology* in 2019, U. Dafni and colleagues conducted a meta-analysis of clinical trials of TIL therapies published between 1988 and 2016, which reported an overall remission rate, or ORR, of 41% and a complete remission, or CR, rate of 12% in 410 heavily pretreated patients with metastatic melanoma. As shown below, in patients for whom detailed follow-up was available, the CRs were found to be remarkably durable, with only one of 28 patients experiencing disease recurrence.

TIL Therapy Demonstrated Durable CRs
in Patients with Melanoma in Clinical Trials Between 1988 and 2016



In addition to melanoma, TIL therapy has also demonstrated efficacy in multiple other solid tumors, including non-small cell lung cancer, or NSCLC, squamous cell carcinoma of the head and neck, or HNSCC, and cervical cancer. However, despite these compelling clinical results, TIL therapy has largely been limited to the academic or compassionate use settings due to the lack of an industrialized and scalable process for the manufacture of these products.

By leveraging our team's experience, we are executing on our plan to efficiently launch in-house capabilities of manufacturing, process development, clinical operations, regulatory strategy and research and development. We have created a robust, reproducible process to generate well-characterized and commercially viable TIL product candidates that we believe will provide patients with long-term therapeutic benefit.

Our Strengths

Our goal is to become the leader in the design, manufacture and delivery of TIL therapies to patients with cancer. We believe the following strengths will enable us to achieve this goal:

Highly experienced team. Our senior management team and a large fraction of our operational staff have extensive experience in cell therapy, with many having participated in the design and execution of the clinical development, manufacture and regulatory approval of Yescarta and Tecartus at Kite Pharma/Gilead, as well as the development of other clinical-stage cell therapy product candidates. In addition, our team and scientific advisors have a track record of successfully leading the technology discovery, process development, GMP manufacturing and clinical operations functions at other cell therapy companies.

Robust clinical development experience with TILs. Members of our team have been generating and improving TIL therapy for over a decade, and a TIL product manufactured by us has been used in the treatment of patients with refractory melanoma through a compassionate use program at the Christie Hospital in Manchester, United Kingdom, which is the largest single site cancer center in Europe. In the 21 patients treated through the compassionate use program using a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process, we observed a CR in four patients (19%) and a partial remission, or PR, in 10 patients (48%), resulting in an ORR of 67%. In addition, four patients reported SD, resulting in a disease control rate, or DCR, of 86%. Ten of the 21 patients have died from complications arising from disease progression. The results from the compassionate use program do not provide a guarantee that ITIL-168 will be deemed to be safe or effective for the treatment of melanoma or additional indications, and extensive clinical testing and regulatory approval will be required before ITIL-168 can be commercially marketed for the treatment of melanoma. Based on these results, together with our development and manufacturing expertise, we intend to transform TIL therapy into what we believe will be a scalable, convenient and effective option for patients with cancer.

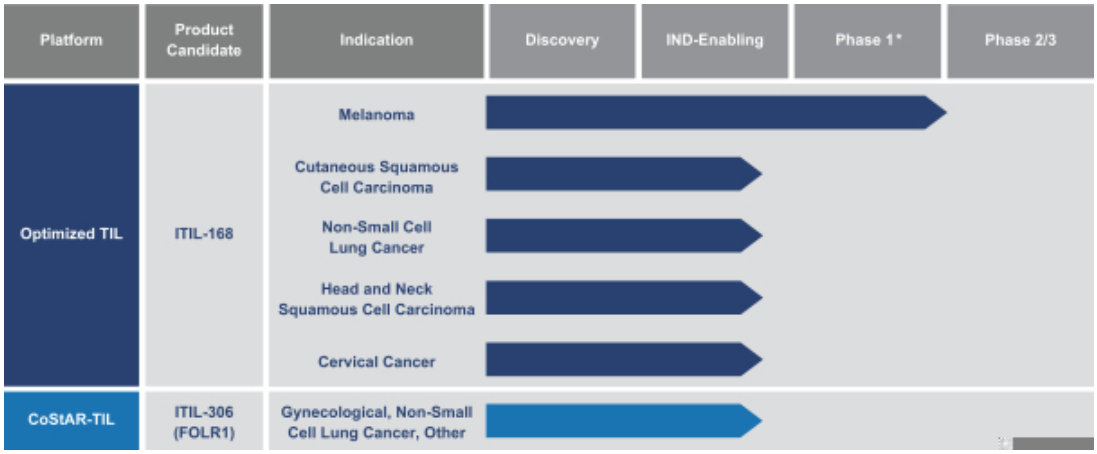
Optimized and scalable manufacturing process. We are developing a manufacturing process customized for autologous TIL therapies to maximize manufacturing success rate and potential for clinical efficacy beyond current practices. To ensure product quality and consistency, we have chosen to maintain full control of the entire manufacturing process, from the procurement of tumor samples through the shipping of the final product, without any outsourcing of core manufacturing process or quality control testing steps. Our process includes the optimized cryopreservation of both the digested tumor at the beginning to preserve cell viability and potency and the final product at the end to provide increased shelf life. Importantly, our cryopreservation process also provides significant scheduling flexibility for physicians and patients.

Company-operated in-house manufacturing facilities. We believe we are well positioned to execute on our clinical development plans and serve the U.S. and European markets with our existing and planned infrastructure. We have invested and plan to continue to invest in our manufacturing capabilities on two continents, with one facility in the United States in Tarzana, California and another in Manchester, United Kingdom. By controlling and operating our manufacturing facilities on two continents, we believe we have the unique ability to more efficiently implement continuous improvements into our operations and to readily provide therapies to patients across a broad geography. With the planned capacity across both of our facilities, we expect to have sufficient doses for all our clinical trials, as well as to meet the initial commercial demand of ITIL-168, if approved.

Strong capitalization. Since 2019, we have raised $380.7 million in net proceeds from leading global institutional investors. This funding has enabled us to assemble a team with experience across the entire spectrum of cell therapy development, including clinical development and operations, regulatory submissions, process engineering, quality analytics, manufacturing and strategic commercialization planning.

Our Pipeline

We are building an innovative pipeline of optimized TIL product candidates, including both unmodified and genetically engineered TILs, for the treatment of patients with cancer. We own worldwide rights to all our product candidates. Our current pipeline is summarized in the diagram below.



* For ITIL-168 in melanoma, we believe that the compassionate use program satisfies the requirements for a Phase 1 clinical trial. Based on the clinical results from the compassionate use program and our discussions with the FDA, we plan to submit an IND and, if authorized to proceed, initiate a Phase 2 trial

Our lead product candidate, ITIL-168, is an autologous TIL therapy that we are initially developing for the treatment of PD-1-inhibitor relapsed or refractory advanced melanoma. We are utilizing an optimized and scalable manufacturing process that we believe will differentiate the profile of ITIL-168 from other cell therapies, including other TIL therapies. Our process for ITIL-168 manufacturing begins with the complete digestion of the tumor tissue, which releases all TILs from the tumor microenvironment and enables cryopreservation of the digested tumor at the beginning of the process to preserve cell viability and potency.

Additionally, we cryopreserve the final product to provide increased shelf life. Our cryopreservation process at both the beginning and end of the manufacturing process provides significant scheduling flexibility for physicians and patients.

We have generated preliminary safety and efficacy data in advanced melanoma in the context of a compassionate use program in the United Kingdom, using a TIL product that was produced with a prior version of the ITIL-168 manufacturing process. Twenty-one patients with stage IV metastatic cutaneous melanoma were treated in this compassionate use program between 2011 and 2019. Treatment led to an ORR of 67%, including four patients (19%) who achieved CR and ten patients (48%) who achieved a PR. The DCR, which included patients with CR, PR or SD, was 86%. Based on these clinical results and our discussions with the FDA, we plan to submit an IND for ITIL-168 and, if authorized to proceed, initiate a Phase 2 trial in . We believe this trial, if successful, could support a BLA submission in . Additionally, in , we intend to initiate Phase 1 trials of ITIL-168 in tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer.

We are also developing genetically engineered TIL product candidates modified with CoStAR to augment the activation of TILs in the tumor microenvironment. In preclinical studies, CoStAR+ T cells demonstrated markedly increased activity as compared to normal T cells, including enhanced cytokine expression and proliferative capacity. CoStAR's modular architecture can be adapted to potentially target any cell surface antigen, which will allow us to develop additional CoStAR-TIL product candidates that enhance TIL function in multiple solid tumors.

Our lead CoStAR-TIL product candidate, ITIL-306, expresses a CoStAR molecule designed to recognize folate receptor alpha, or FOLR1, a tumor-associated antigen that is expressed on numerous solid tumors, including ovarian cancer, uterine cancer, NSCLC and renal cancer. We believe that ITIL-306 has the potential to increase anti-tumor activity due to its ability to improve proliferation and enhance cytokine secretion while retaining the specificity and polyclonality of TILs. We intend to submit an IND for ITIL-306 in and initiate a Phase 1 trial in to evaluate safety, feasibility and preliminary efficacy in multiple tumor types.

The modular nature of our CoStAR platform allows for multiple product candidates to be developed with minimal changes to the fundamental architecture of the molecule. We have generated a number of constructs containing antigen-binding domains directed against different tumor-associated antigens that are expressed by a wide variety of tumor types, including stomach, colorectal, pancreatic, breast and other cancers. We intend to select our next CoStAR-TIL product candidate for IND-enabling studies in .

Our History and Team

We were founded in August 2018, and in early 2019, we in-licensed our foundational TIL technology from Immetacyte Ltd. and subsequently raised our Series A round of funding from Curative Ventures. In March 2020, we acquired Immetacyte Ltd., which had been manufacturing a TIL product for the compassionate use program at the Christie Hospital in the United Kingdom from 2011 to 2019. Since our inception, we have raised an aggregate of $ million of net proceeds from leading global institutional investors.

We have assembled a team of industry veterans with deep experience in conducting all phases of development, from early stage clinical trials through regulatory approval across multiple regions, as well as in the commercial manufacture and marketing of cell therapies. Our management team consists of entrepreneurs, physicians and scientists with prior experience at cell therapy and oncology companies such as Kite Pharma/Gilead, Amgen, Pfizer, Genentech and Johnson & Johnson, among others.

Our Strategy

Our goal is to leverage our optimized and scalable manufacturing process to deliver innovative, life-saving TIL therapies to patients with cancer. In order to achieve this goal, our strategy involves the following key elements:

- **Develop and commercialize ITIL-168 in advanced melanoma.** We intend to file an IND and initiate a Phase 2 trial of ITIL-168 in patients with relapsed or refractory advanced melanoma

in . Based on our discussions with the FDA and the clinical results generated through a compassionate use program with a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process, we are designing our Phase 2 trial to support a BLA submission in . We believe that our optimized and scalable manufacturing process for TIL therapies, coupled with our team's prior experience and success with developing and obtaining regulatory approval for multiple complex autologous cell therapies, will enable us to efficiently advance the development, manufacture and regulatory approval of ITIL-168.

- **Expand ITIL-168 into multiple solid tumors beyond melanoma.** In addition to melanoma, we intend to develop ITIL-168 in tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer. In , we plan to file an amendment to our IND for ITIL-168 and initiate a Phase 1 trial in patients with locally advanced or metastatic CSCC, an indication in which PD-1 blockade has demonstrated benefit but a significant unmet medical need still exists. In addition, in , we expect to file another amendment to our IND to initiate a multi-indication Phase 1 trial in patients with NSCLC, HNSCC and cervical cancer, tumor types where clinical proof of concept has been established for TIL therapy.

- **Leverage our experience with ITIL-168 to develop our CoStAR platform of engineered TIL therapies.** By enhancing the activity of TILs with our CoStAR molecules, we believe we will be able to demonstrate efficacy in tumor types that historically have been resistant to immunotherapy, including TILs. We have observed that TILs enhanced with CoStAR molecules demonstrated a markedly increased ability to respond to tumor cells *in vitro* as compared to normal T cells. Our preclinical studies have shown robust TCR- and CoStAR-dependent proliferation, as well as increased secretion of activating cytokines and decreased levels of immunosuppressive cytokines into the tumor microenvironment. By modulating the local immunological milieu, our CoStAR-TIL product candidates could recruit additional anti-tumor immune cells and reduce recruitment of suppressive cells. We leverage the optimized and scalable manufacturing process developed for ITIL-168 for our CoStAR-TIL product candidates, which will allow us to efficiently develop a portfolio of CoStAR-TIL pipeline candidates. We plan to assess the safety, feasibility and efficacy of CoStAR-TIL product candidates in several tumor types where TILs have not yet been systematically tested or response to TIL therapy has been poor. We intend to file an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .

- **Enhance and expand our global manufacturing capabilities and capacity.** We have invested and plan to continue to invest in our manufacturing capabilities on two continents, with one facility in the United States in Tarzana, California and another in Manchester, United Kingdom. By , our clinical capacity is estimated to reach over 150 patient doses per year at our Manchester facility and is expected to expand to over 500 patient doses per year from both of our facilities combined by , which we believe will fully support the clinical development of our programs. With continued investments and buildout, we expect to have sufficient capacity to produce thousands of commercial patient doses per year beginning in , which we believe will be sufficient to meet the initial commercial demand for ITIL-168, if approved. While we believe we are well positioned to serve the U.S. and European markets with our existing and planned infrastructure, we intend to continue expanding our manufacturing network into additional regions, as needed.

- **Continuously improve and refine our manufacturing process and operations.** We plan to pursue process development efforts on two distinct but strategically aligned paths. The first path includes our continuous improvement initiatives, which are designed to allow us to implement rapid design iterations that incrementally improve process efficiency, robustness and control. The second path includes our longer-term manufacturing innovation initiatives, where we will drive towards generational and disruptive changes to our manufacturing methods. For example, we plan to introduce automated bioprocessing equipment and eliminate select reagents from the manufacturing process to achieve shorter manufacturing times and reduce costs. We believe these improvements will continually reduce manufacturing and operational costs while preserving product quality, allowing us to potentially make our TIL therapies globally accessible.

Background on TILs

Overview of Engineered T Cell Therapies

T cells are one of the key cell types of the immune system. Their roles include targeting cells that pose a threat to our health, such as infected or cancerous cells, for direct killing, as well as producing soluble mediators of immunity, like cytokines, to improve or otherwise modulate the overall immune response. T cells recognize and target these cells for killing through the engagement of the TCR by peptide antigens presented on the surface of the target cell by the major histocompatibility complex, or MHC. T cell therapies can be generated from peripheral blood collected and separated via leukapheresis to isolate T cells that are then genetically modified to express relevant TCRs or CARs. Alternatively, T cell therapies can be generated from tumor-infiltrating lymphocytes, or TILs, collected from a resected tumor.

CAR-T and TCR-T therapies are cell products composed of T cells that have been genetically engineered to recognize a specific cancer-related antigen on the surface of tumor cells. Recently, multiple CAR-T therapies such as Yescarta, Tecartus and Kymriah, which each target the B-cell antigen CD19, have achieved regulatory approval after demonstrating efficacy in the treatment of several kinds of B-cell malignancies. Despite these successes in blood cancers, CAR-T and TCR-T therapies have shown limited efficacy in the treatment of solid tumors. In addition to the general lack of anti-tumor activity, serious and potentially fatal toxicities commonly seen with these therapies have been observed in multiple clinical trials in solid tumors. These side effects include those related to normal tissue distribution of the target antigen, as well as antigen-independent toxicities such as cytokine release syndrome, neurotoxicity and prolonged pancytopenia. For these reasons, there are currently no approved CAR-T or TCR-T therapies for the treatment of solid tumors.

Tumor heterogeneity is a major obstacle in successfully treating solid tumors with single-antigen targeting modalities like CAR-Ts and TCR-Ts. Individual cancer cells within tumors are clonally diverse and thus display significant differences in the profile of antigens they express. As most CAR-T and TCR-T therapies are engineered to target a single antigen, they lack the ability to address the profound antigenic heterogeneity found within solid tumors. Patients with solid tumors who have been treated with these therapies are at increased risk of clonal escape, which is the growth of tumor cells that do not express the antigen targeted by the therapy. Clonal escape, also known as target-negative relapse, is a well-described mechanism by which single antigen targeting therapies fail in the treatment of cancer.

Other limitations of both CAR-T and TCR-T therapies are related to tissue distribution of the target antigen itself. CAR-T cells target cell surface proteins that are often found on both normal tissues and tumors, leading to on-target, off-tumor toxicity. In the case of anti-CD19 CAR-T cell products, the complete elimination of normal B cells is an expected side effect and results in possibly permanent immunosuppression. Also, because CAR-T therapies can only target surface antigens, they are not able to recognize intracellular tumor-specific proteins, which significantly limits the number of potential molecules to target. In contrast, TCRs recognize all cellular antigens that have been presented by MHC molecules, enabling T cells to recognize and attack cancer cells, including those expressing either intracellular or membrane-anchored tumor-specific proteins. However, despite the broader antigen recognition capabilities of TCR-Ts, the MHC-dependent mechanism requires careful tissue matching between the transgenic TCR and the patient, thus limiting the addressable patient population to only those patients with the appropriate MHC alleles. Finally, the targeted antigen for either CAR-T or TCR-T therapies must be shared broadly between patients. As a result, these therapies are not able to recognize unique, patient-specific antigens that may otherwise be attractive targets.

Overview of TIL Therapies

The application of TILs to treat solid tumors began in 1988, when these cells were first used as an experimental therapy at the U.S. National Cancer Institute. At that time, Steven A. Rosenberg, M.D., Ph.D. and his colleagues published results demonstrating melanoma regression in patients who had been treated with TILs grown *ex vivo*. Over the past 30 years, interest in TIL therapy for melanoma and other solid tumors has expanded

significantly beyond academia, with dozens of academic and industry-sponsored clinical trials ongoing currently, ranging from Phase 1 exploratory trials of TILs in combination with a checkpoint inhibitor to Phase 3 randomized trials comparing TILs with established therapies.

A meta-analysis of clinical trials evaluating TIL therapies was published in the journal *Annals of Oncology* in 2019 and reported an ORR of 41% in 410 heavily pretreated patients with metastatic melanoma. Twelve percent of patients achieved CR with long-term durability, with only one of 28 patients experiencing disease recurrence.

We believe the following key factors are critical to the development of a patient-specific TIL-based therapy for the treatment of solid tumors:

Polyclonal recognition of tumor-specific antigens. TILs are activated to recognize and kill tumor cells based on their ability to bind to tumor-specific antigens. Unlike CAR-T cells and other engineered cell therapies that recognize only a single target antigen that is required to be both expressed on the surface of all tumor cells and shared across different patients, TILs are polyclonal and have the ability to recognize the broad set of antigens that are unique to each individual patient. This comprehensive, patient-specific polyclonality provides TIL therapies with the requisite diversity to respond to the marked clonal heterogeneity of the patient's tumors, addressing a major limitation of cell therapies such as CAR-Ts and TCR-Ts.

Optimized processing and manufacturing methods. TIL therapies rely on patient-derived material obtained from each patient's resected tumor. The processing methods for the freshly removed tumor tissue immediately following resection impact the characteristics of the final TIL product, including its potential efficacy. Streamlined and timely tumor procurement, processing and transportation is required to ensure manufacturing and clinical success.

The composition of the TIL population. TILs are immune cells naturally present in some tumors and composed of two types of T cells: CD8+ and CD4+ T cells. CD8+ T cells are cytotoxic T cells that are able to directly kill tumor cells. CD4+ T cells are T helper cells that secrete cytokines and engage in other activities to stimulate and recruit other immune cells, including other T cells, macrophages and dendritic cells, to tumor sites. Correlative studies have shown that high levels of T cells in tumors and surrounding tissues are associated with improved prognosis in a number of solid tumors, and the presence of both types of T cells is necessary for effective tumor control.

Our Approach

Our goal is to become the leader in the design, manufacture and delivery of TIL therapies to patients with cancer. We believe that the key elements that differentiate us include our highly experienced team, our optimized and scalable manufacturing process and our company-operated in-house manufacturing facilities.

Our Highly Experienced Team

We have assembled a team with extensive experience in the manufacture, clinical development and regulatory approval of cell therapies. Our process and engineering teams bring rigor to managing changes to our manufacturing processes based on their recognized track record in cell therapy research, development and commercialization. Our clinical operations team has developed CAR-T and TCR-T therapies in clinical trials across a wide variety of diseases, lines of therapy and patient populations across multiple geographies under the supervision of FDA, EMA and other leading regulatory agencies. We have operational know-how regarding tissue collection, chain of identity and custody, logistics and administration of autologous cell therapy products. Our team has a track record of successfully completing regulatory audits across multiple clinical trial sites, external vendors and internal processes. Notably, many members of our team were instrumental in the manufacture, clinical development and regulatory approvals of Yescarta and Tecartus.

Our Optimized and Scalable Manufacturing Process

We have designed our TIL manufacturing process to maximize manufacturing success rate and potential for clinical efficacy beyond current industry practices. To ensure product quality and consistency, we have chosen to maintain full control of the entire manufacturing process, from the procurement of tumor samples through the shipping of the final product, without any outsourcing of core manufacturing process or quality control testing steps. Our process includes the optimized cryopreservation of both the fully digested tumor at the beginning of the manufacturing process to preserve cell viability and potency and the final product at the end of the manufacturing process to provide increased shelf life. Importantly, our cryopreservation process also provides significant scheduling flexibility for physicians and patients, which may improve our ability to provide treatment to patients in a timely manner.

With our team's extensive experience in the commercialization of cell therapies, we understand the feasibility and the value of continuous improvements in manufacturing. We have designed a robust quality system focused on compliance that includes routine testing for release, documentation of our processes and the assessment of the impact of any changes on final product performance. The quality of this data is essential as regulators rely on it to understand the relationship between products that may have been generated by modified or updated manufacturing procedures. In addition to our continuous refinements, we are also focused on longer-term manufacturing innovation initiatives that will drive generational changes to our manufacturing methods. For example, we are developing an automated, standardized platform to minimize manual processing and provide in-line process measurements that can be used to shorten manufacturing times, increase manufacturing success and reduce costs.

Another key component of the manufacturing process for cell therapies is the release criteria used to characterize the final product. We have developed and are validating a robust potency assay aimed at understanding the mechanism of action of our TIL therapies. Based on initial discussions with regulatory agencies regarding our potency assay and other release methods to support our IND, we believe that our assay methodology and final product release criteria will satisfy guidelines and meet the expectations of the FDA and other regulatory authorities. Additionally, we have developed robust assays for purity, safety and dose to assure quality of our product. In addition to our release assays, we have generated a comprehensive package of characterization data to support our IND.

Our Company-Operated In-house Manufacturing Facilities

We are investing in expanding our manufacturing capabilities at our facilities in Manchester, United Kingdom, which has been operational since 2011, and in the United States in Tarzana, California, which is expected to be operational in 2021. Both facilities are fully controlled and operated by us, which will allow us to more efficiently introduce new product candidates and implement next-generation manufacturing technologies. In addition, by having facilities on two continents, we would have the ability to provide therapies, if approved, to patients across a broad geography as well as to continuously improve our operations.

Our facility in Tarzana, which will begin producing patient doses in , has flexible modular technology using prefabricated modular cleanroom pods, enabling future process scalability and minimizing delays associated with the need for onsite construction. These modular cleanroom pods also provide the required segregation to allow for simultaneous manufacturing of distinct autologous products, such as ITIL-168 and ITIL-306, within the same manufacturing facility. Our clinical capacity at our Manchester facility is currently 70 patient doses per year and is estimated to reach over 150 patient doses per year by . Our Tarzana manufacturing facility will initially have a clinical capacity of 300 patient doses per year. We believe the aggregate capacity from these facilities will be sufficient for all of our planned clinical development activities. We plan to increase the capacity to 2,500 to 3,100 commercial patient doses per year by , which we believe will be sufficient to meet the initial commercial demand of ITIL-168, if approved.

Our TIL Manufacturing Process

Our manufacturing process comprises three distinct and serial stages: (i) tumor processing, which includes tissue harvesting and cryopreservation, (ii) TIL generation, which includes the outgrowth and rapid expansion phases, and (iii) final product processing, which includes formulation and cryopreservation. We believe our novel approach to these three stages provides us with key advantages compared to historical approaches, as summarized below.

	Historical Approach	Our Novel Approach	Our Potential Advantages
Tumor Processing	• Transport of fresh tumor for continuous manufacturing • Fresh tumor fragments as starting material	• Cryopreservation and shipment of digested tumor • Fully digested tumor suspension as starting material	• More TILs are liberated from the digested tumor tissue, increasing clonal diversity in the final product • Enhanced cell viability and potency • Flexible patient scheduling and efficient manufacturing capacity utilization
TIL Generation	• Seeding of tumor fragments in open multi-well plates • TIL culture in plates with manual perfusion • Expansion of T cells in a static flask with manual controls • Manual media feed based on cell counts	• Seeding of tumor digest in closed gas-permeable culture bags • Expansion of T cells in a suspended bioreactor with process controls • Constant automated perfusion	• Closed processing and automated controls increase manufacturing robustness • More opportunities for optimization on bioreactor platforms vs. traditional flasks
Final Product Processing	• Manual formulation • Shipment of fresh final product	• Automated formulation • Shipment of cryopreserved final product	• Increased shelf life • Scheduling flexibility for physicians and patients

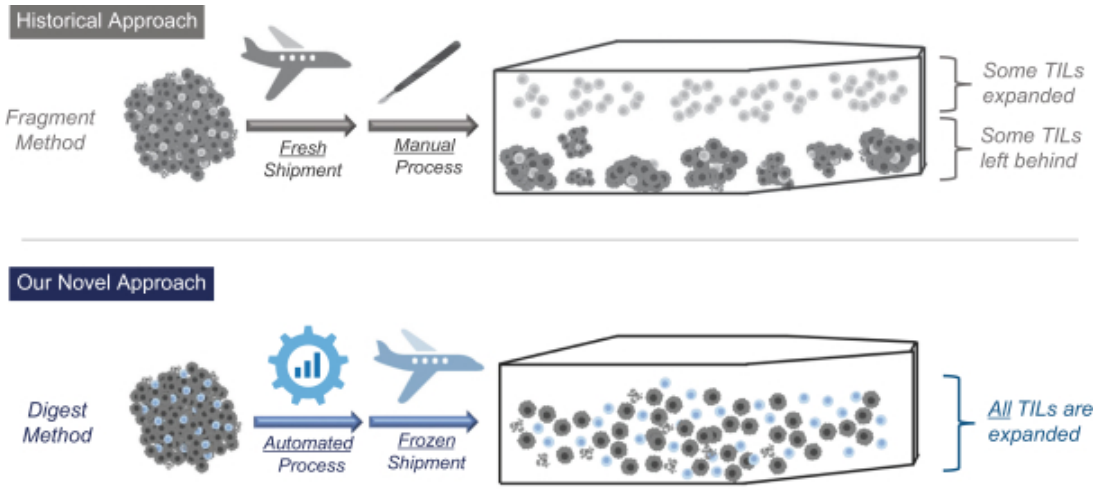
Tumor Processing

The starting material for our TIL product candidates is personalized with TILs isolated from a surgically excised sample of the patient's tumor. These tumor samples contain tumor cells, stromal cells and TILs. When TIL therapy was first developed in an academic research setting, the operating room in which the patient underwent the tumor resection procedure was in close physical proximity to the laboratory in which the TIL therapy was made. Therefore, both the time required and the complexity of the transportation from operating room to manufacturing site were minimized. As TIL product candidates advance from single-institution clinical trials into registration-enabling global trials with multiple clinical sites and centralized manufacturing, controls for the stability of the removed tumor tissue must be instituted. We have developed a proprietary process in which the resected tissue is immediately processed and cryopreserved at one of our regional hubs located close to

the clinical site, ensuring that our starting material is stable and preserved for shipment to one of our in-house manufacturing facilities for further processing.

The first step in our process involves fully dissociating the tumor tissue into a cell suspension through a combination of enzymatic digestion and gentle, automated agitation of the tissue. This initial step in our proprietary process has been designed to harvest all of the TILs embedded within the tumor without impacting cell viability. Our process is distinguished from typical manufacturing processes that start with manually minced fragments of tumor tissue. Our technique ensures that the greatest possible diversity of unique TCRs are preserved from the time of resection through the entire manufacturing process, as shown below:

Our Tumor Processing Method Releases and Preserves All of the TILs from Tumor Samples



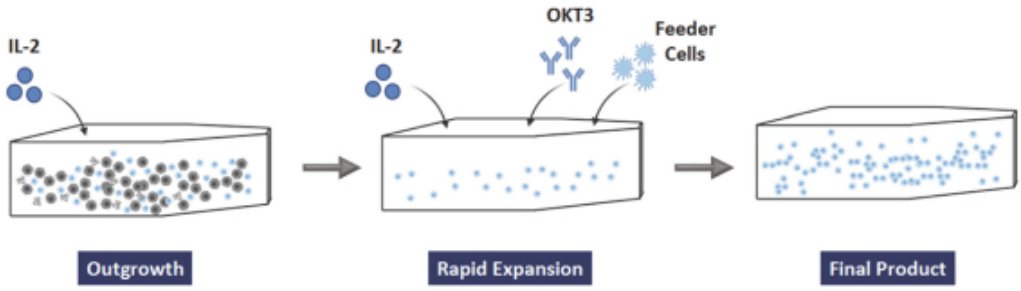
The rapid and reproducible stabilization of starting tumor material is crucial in enabling a scalable commercial process for treatment of patients across a broad geography. Logistical challenges, including coordination of patient scheduling with hospital availability, transportation of fresh tumor material and availability of manufacturing slots, have represented a significant barrier to the successful commercialization of autologous cell therapies. The process and infrastructure that we have developed to industrialize tumor procurement both preserves the starting tumor material and provides flexibility by allowing us to schedule tumor resection and TIL manufacturing independently from each other. Furthermore, once the starting material is cryopreserved, it can be stored for an extended period under controlled conditions before manufacturing begins, which reduces the risk of manufacturing failures due to tissue degradation and provides treatment flexibility for physicians and patients. Our novel approach will allow for the harvest of starting tumor material during routine biopsies or debulking surgeries for use in future TIL therapies.

In order to minimize the time from initial tumor resection to the processing, freezing and shipping of the tumor tissue, as part of our clinical trial, we plan to deploy a team of trained TIL recovery specialists to staff regional processing hubs strategically located near major treatment centers. The ability to have our specially trained staff take control of the tumor tissue as early in the process as possible and to process it using our proprietary methods helps ensure that the TILs in the starting material are of the highest possible quality and meet our manufacturing standards.

TIL Generation

The TIL generation step in our process includes the outgrowth and rapid expansion phases, as shown below, to ensure that our final TIL product contains an expanded population of TILs to maximize potential clinical efficacy.

The Outgrowth and Rapid Expansion of Our TILs Result in a Final Product Containing an Expanded Population of TILs



Outgrowth Phase. Once the cryopreserved tumor sample has reached one of our in-house manufacturing facilities, we thaw the suspension and culture the TILs and tumor cells together to promote the identification of tumor neoantigens by the TILs. This TIL outgrowth phase is designed to offer maximum exposure of the diverse and complete population of TILs to the clonally heterogenous tumor cells.

The complete tumor digestion that we utilize during the tumor processing step liberates all TILs from the tumor. During the outgrowth phase, all TILs are exposed to uniform concentrations of Interleukin-2, or IL-2, a potent T cell growth factor, in the cell suspension and freely associate with tumor cells. Our digestion process allows all of the harvested TILs to be collected and transitioned into the rapid expansion phase, or REP, of manufacturing and included in the final product. In contrast, the fragmentation method, in which a tumor specimen is manually minced into small fragments that are then cultured whole during outgrowth, relies on the migration of TILs out of the fragments by following an IL-2 gradient. Only those cells that successfully leave the tumor fragment and enter the bulk culture are collected and used to seed the REP of manufacturing; those that remain within the tumor fragment are discarded at the end of the outgrowth phase and thus are prevented from inclusion in the REP and final product. By the end of the TIL outgrowth phase in our process, the culture is predominantly composed of viable tumor-educated T cells, including CD8+ cytotoxic T cells and CD4+ helper T cells, and ready for further processing.

Rapid Expansion Phase. In the REP of manufacturing, we optimize the culture conditions to be conducive to the expansion of T cells that make up the final cell dose of the TIL therapy. We stimulate the cells with IL-2, OKT3, an anti-CD3 antibody that activates all TCRs, as well as feeder cells, which are peripheral blood mononuclear cells that support optimal growth conditions. Once sufficient expansion of the cell product has been reached to achieve what we define to be a therapeutic dose, the culture is harvested and prepared for final formulation and cryopreservation.

We believe our optimized and scalable manufacturing process provides several key advantages, including:

- The ability to capture and preserve maximum health and diversity of each patient's TILs by completely digesting and immediately cryopreserving the tumor sample near the clinical site to ensure stability during transportation to one of our in-house manufacturing facilities;
- A limited number of manual processing steps and a functionally closed manufacturing process to increase process reliability and scalability; and
- Flexibility to coordinate fresh tissue harvest with manufacturing availability through cryopreservation of both the starting material as well as the final product.

These attributes give us confidence that we will be able to deliver TIL-based therapies at a level of robustness, quality, consistency and scale not previously achieved by other TIL-based approaches.

Our Product Candidates

ITIL-168

Our lead TIL product candidate, ITIL-168, is an autologous TIL therapy that we are initially developing for the treatment of advanced melanoma. We have generated preliminary safety and efficacy data in advanced melanoma in the context of a compassionate use program using a TIL product that was produced with a prior version of the ITIL-168 manufacturing process. Twenty-one patients with stage IV metastatic cutaneous melanoma were treated between 2011 and 2019. Treatment led to an ORR of 67%, including four patients (19%) who achieved CR and ten patients (48%) who achieved PR. The DCR, which included patients with CR, PR or SD, was 86%. Based on these clinical results and our discussions with the FDA, we plan to submit an IND for ITIL-168 and, if authorized to proceed, initiate a Phase 2 trial in . We believe this trial, if successful, could support a BLA submission in . In addition to melanoma, we intend to initiate Phase 1 trials of ITIL-168 in tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer, in .

Melanoma Overview

Melanoma is the most lethal form of skin cancer, accounting for the majority of skin cancer deaths. It arises from a malignant proliferation of melanocytes in the skin. The National Cancer Institute estimated that there would be more than 100,000 diagnoses of melanoma and 6,850 deaths from melanoma in the United States in 2020. Localized cutaneous melanoma is the fifth most common malignancy in the United States, and the incidence is rising. Most patients diagnosed with localized cutaneous melanoma have an excellent prognosis; however, in patients with distant metastatic spread of their disease, the 5-year survival rate is only 27%.

The primary risk factor for development of melanoma is exposure to ultraviolet, or UV, light, including sunlight and tanning beds. UV light and other environmental toxins can cause DNA damage, which, if not repaired, leads to an increased number of genetic mutations. In part due to this type of DNA damage, melanoma typically contains a high number of mutations. Furthermore, approximately half of melanomas have oncogenic driver mutations, such as alterations in the gene for proto-oncogene B-Raf, or BRAF. Both oncogenic driver and other mutations are an important differentiating feature between melanoma cells and healthy cells and form the pathophysiologic basis for recently developed therapeutic options.

Approximately one-half of cutaneous melanomas have an activating mutation in the BRAF gene. BRAF activates the mitogen-activated protein kinase, or MAPK, pathway, which accelerates the transformation of the cell into a cancer cell. BRAF inhibitors have demonstrated various positive clinical outcomes in melanoma, including tumor regression and survival improvement. Because many patients with BRAF mutations also have mutations in other oncogenes, the combination of a BRAF inhibitor with an inhibitor of mitogen-activated extracellular signal-regulated kinase, or MEK, an enzyme in the MAPK pathway, has been shown to further improve response rates and survival as compared with BRAF inhibition alone. Multiple BRAF inhibitors, such as vemurafenib (Zelboraf), dabrafenib (Tafinlar) and encorafenib (Braftovi), and MEK inhibitors, such as trametinib (Mekinist), cobimetinib (Cotellic) and binimetinib (Mektovi), have been approved for the treatment of metastatic melanoma.

More recently, multiple novel immunotherapies known as checkpoint inhibitors have been approved to treat advanced melanoma. These inhibitors block pathways such as PD-1/PD-L1 and CTLA4, which serve as negative regulators of T cell function. These groundbreaking therapies have changed the treatment landscape for metastatic melanoma and have dramatically improved both response rates and survival for patients.

Patients who are ineligible for surgery are typically treated with these systemic therapies. However, despite the significant response rates achieved with BRAF/MEK inhibitors and immunotherapies, a large proportion of patients either do not respond at all or develop resistance following an initial response and require additional therapy. Patients with melanoma that is refractory to or has relapsed following these treatments face a dearth of

therapeutic options. There is no standard approach to the management of these patients and the limited number of agents used in this setting have shown poor response rates, high toxicity and limited survival benefit, as shown below.

Summary of Published Trials of Treatments for Patients with Advanced Melanoma

Lead Author (Year of Publication)	N	Treatment	ORR	Toxicity	Overall Survival
Zimmer (2017)	37	Ipilimumab + nivolumab	21%	33% discontinuation	55% (1 year)
Bowyer (2016)	40	Ipilimumab	10%	35% grade 3+ immune-related adverse events (AEs)	Not reported (median progression free survival of 5 months)
Kirchberger (2016)	9	Low dose ipilimumab + pembrolizumab	0%	Minimal	8 months (median)
Aya (2016)	9	Ipilimumab	22%	56% grade 3+ immune-related AEs	Not reported (median progression free survival of 3.1 months)
Weichenthal (2019)	200	Various	4-22%	10-36% grade 3+ AEs or discontinuation	9.2 – 15.6 months
Buchbinder (2019)	40	High dose IL-2	23%	20% discontinuation after one cycle	29.4 months

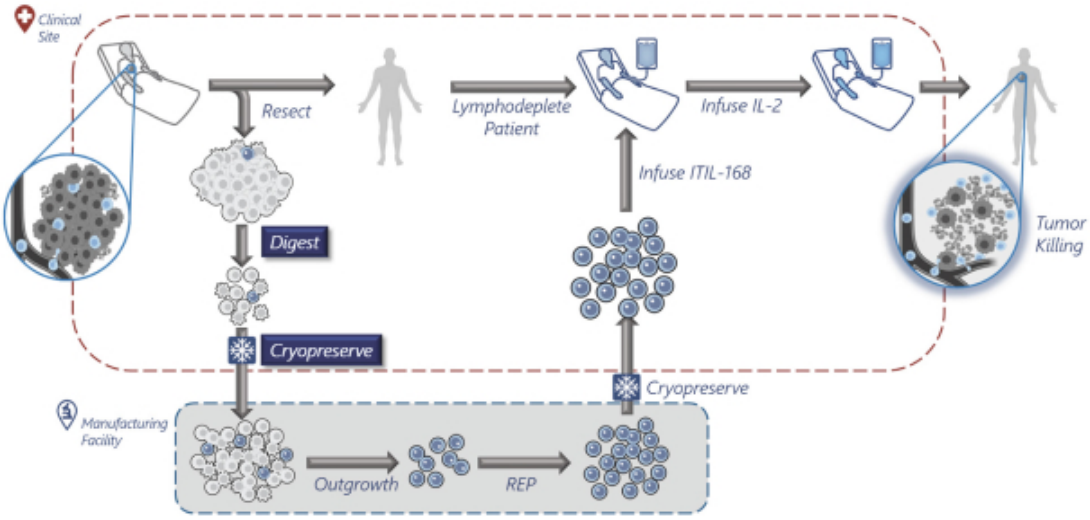
According to the scientific literature, TIL therapy is considered one of the most effective treatments for patients with advanced melanoma, including following the failure of checkpoint inhibitors and BRAF/MEK inhibitors. However, because of the complexity in scaling autologous cell therapies, including TIL therapy, access to this potentially life-saving treatment has been limited to patients who are enrolled in clinical trials or treated under compassionate use. Furthermore, the majority of these TIL therapy clinical trials have been conducted in single academic centers with little standardization in the manufacturing methods used to isolate, activate and expand the TILs that comprise the final product. We believe our optimized process will enable the standardization and scaling of the manufacture of our lead TIL product candidate, ITIL-168, to provide significant clinical benefit for patients with advanced melanoma.

Our Solution: ITIL-168

We intend to initiate global, multi-center clinical trials of ITIL-168 in several solid tumor types, beginning with PD-1-inhibitor relapsed or refractory advanced melanoma in . Our process for ITIL-168 begins with the procurement of the resected tumor by one of our trained specialists. At one of our regional processing hubs located near the clinical site, the resected tumor is placed into a sterile bag containing media and tissue digestion enzymes. The bag is then heat-sealed and its contents are digested through a process of gentle agitation and enzymatic activity to generate a homogeneous cell suspension containing tumor cells and TILs. This proprietary method allows for the complete digestion of the tumor tissue and releases all of the TILs from the tumor microenvironment. The cell suspension is then cryopreserved and shipped to one of our in-house manufacturing facilities, where it is thawed. The process of activating and expanding the TILs is then initiated. Upon completion of manufacturing, the final product candidate is formulated and cryopreserved for shipment

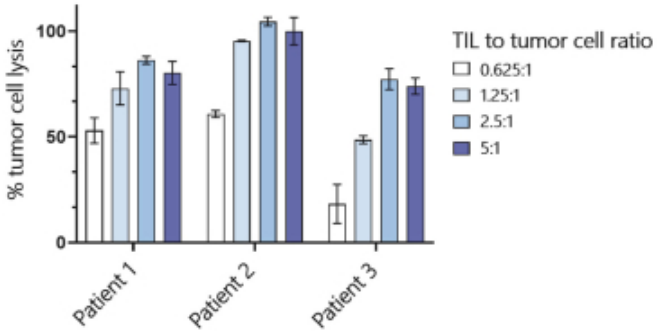
back to the clinical site. Following treatment with lymphodepleting chemotherapy and ITIL-168, the patient is treated with IL-2 to support the further proliferation of ITIL-168 *in vivo*. The manufacturing period takes approximately 24 days based on our current processes. Our manufacturing and treatment process for ITIL-168 is summarized in the graphic below:

The ITIL-168 Manufacturing and Treatment Process



A preclinical study of TILs made from three separate patients using a process similar to ITIL-168 consistently killed tumor cells. In addition, this study showed dose-dependent anti-tumor activity *in vitro* with evidence of tumor killing even at low TIL to tumor cell ratios, as shown below:

A Preclinical Study Demonstrated Dose-Dependent Anti-Tumor Activity *In Vitro*



Clinical Data from Compassionate Use Program

We have generated preliminary safety and efficacy data from a compassionate use program in the United Kingdom in advanced melanoma using a TIL product that was manufactured using a prior version of the ITIL-168 manufacturing process. The compassionate use program was authorized under a Manufacturing Specials license from the Medicines and Healthcare products Regulatory Agency. Individual patients were referred by their local oncologists to Professor Robert Hawkins, MBBS FRCP, Ph.D., our Chief Strategy Advisor and a well-known medical oncologist and cell therapy investigator at the Christie Hospital in Manchester, United Kingdom, for evaluation and treatment.

Between 2011 and 2019, a total of 21 patients with stage IV metastatic cutaneous melanoma received approximately the same treatment regimen we intend to evaluate in our clinical trials of ITIL-168: lymphodepleting chemotherapy, TIL infusion and post-TIL IL-2 treatment. The majority of these patients had metastases to the lung and other non-CNS sites, referred to as stage M1c disease, or brain metastases, referred to as stage M1d disease, including 14 patients who had metastatic lesions in more than three sites and seven patients who had brain metastases. These patients were referred to Dr. Hawkins after being treated with and failing an average of three prior systemic therapies. Over 90% of the patients had failed the CTLA4 inhibitor ipilimumab, and 12 patients had experienced disease progression on or following treatment with a PD-1 inhibitor as well as ipilimumab. More than half of the patients had a BRAF mutation and had progressed on a BRAF inhibitor.

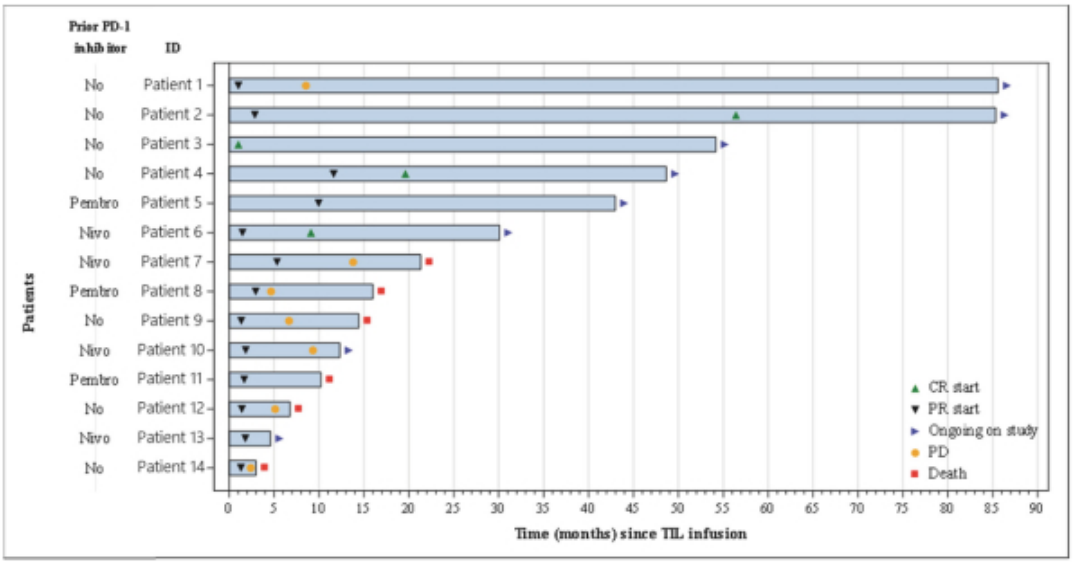
As shown in the table below, treatment with TIL therapy led to an ORR of 67% in these 21 patients, including four patients (19%) who achieved CR and 10 patients (48%) who achieved PR. The DCR, which included 4 patients with SD in addition to those with CRs and PRs, was 86%. Of these 21 patients, 15 were followed up with CT and/or MRI at regular intervals in a manner consistent with standard RECIST 1.1 methodology; in this subgroup of patients, the ORR was 53% and the CR rate was 13%. The other six patients were followed with non-RECIST imaging modalities like PET/CT as well as clinical monitoring. Two of these six patients had developed melanoma that was unequivocally refractory to the BRAF inhibitor dabrafenib in combination with MEK inhibitor therapy immediately prior to TIL treatment but were continued on dabrafenib, with brief interruptions for tumor harvest and TIL infusion, to prevent the rapid disease progression that often accompanies abrupt dabrafenib discontinuation. Both patients developed durable responses following TIL treatment. One patient, who had also failed prior ipilimumab and PD-1 blockade, achieved a PR that lasted approximately 14 months from TIL infusion during which time dabrafenib was continued. The second patient was treated with dabrafenib for approximately three months following TIL infusion at which point the dabrafenib was stopped. This patient achieved a PR at approximately 12 months after TIL infusion that converted to a durable CR that was ongoing for over four years after TIL infusion at the time of data cutoff.

Summary of Responses in All Patients Treated in Compassionate Use Program (n=21)

	n (%)
Overall remission rate	14 (67%)
Partial remission rate	10 (48%)
Complete remission rate	4 (19%)
Disease control rate	18 (86%)

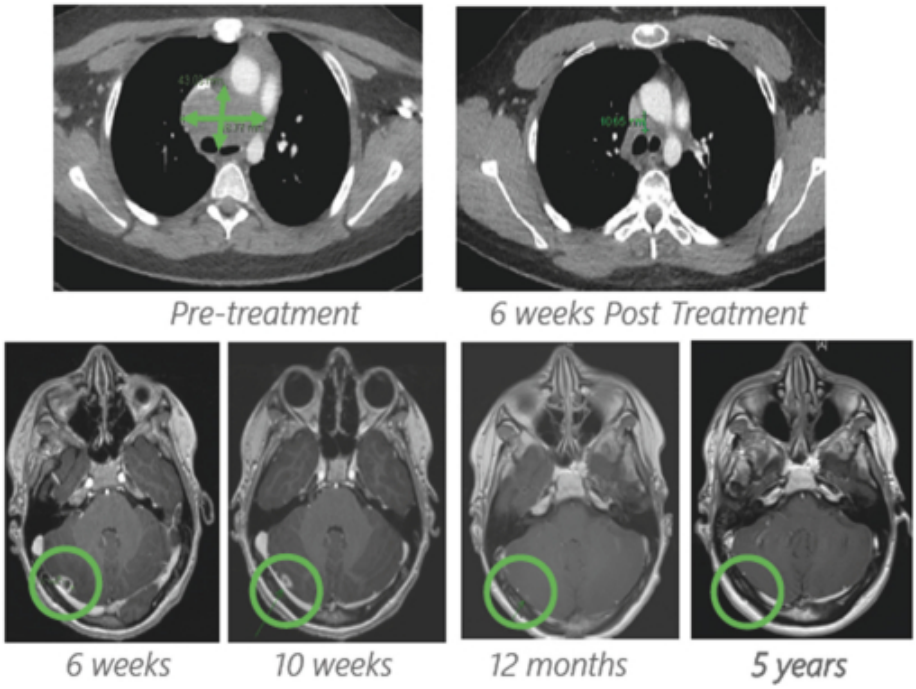
Eight of the 14 responders were still alive as of the data cutoff date of December 31, 2019, with all four patients with CRs remaining without disease progression, as shown below.

Treatment with TIL Therapy Led to Long-term Survival of Patients with Metastatic Melanoma in Compassionate Use Program



One of the responding patients in the compassionate use program was a 16-year-old male with widely metastatic and bulky (sum of lesion diameters = 103mm), BRAF-mutated melanoma that was refractory to three prior lines of therapy, including ipilimumab, a CTLA4 inhibitor, and dabrafenib, a BRAF inhibitor. Following treatment with TIL therapy, this patient experienced a rapid reduction in his disease burden, as shown in the images below. Over the following year, repeated scans confirmed continued reduction in his systemic and brain metastases, and he subsequently achieved CR and has remained without disease progression for over seven years.

Ongoing Complete Remission at 7+ Years in a 16-Year-Old Patient with Metastatic Melanoma in Compassionate Use Program



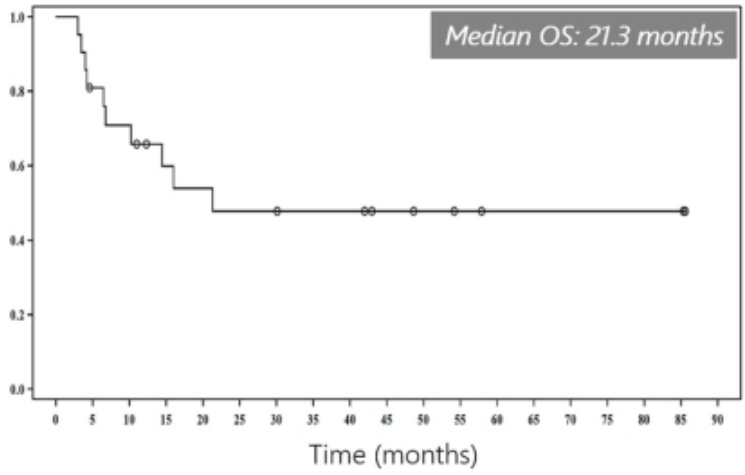
Among the 12 patients who had previously failed at least one PD-1 inhibitor as well as ipilimumab, seven patients (58%) achieved a remission, including one (8%) who achieved CR. The DCR, which included two patients with SD, was 75%, as shown in the table below.

Summary of Responses in Patients with PD-1 and CTLA4 Inhibitor Relapsed or Refractory Melanoma in Compassionate Use Program (n=12)

	n (%)
Overall remission rate	7 (58%)
Partial remission rate	6 (50%)
Complete remission rate	1 (8%)
Disease control rate	9 (75%)

The median time to response in all 21 patients was under 2 months and the median overall survival was 21.3 months, as shown in the Kaplan-Meier survival graph below. The results from the compassionate use program do not provide a guarantee that ITIL-168 will be deemed to be safe or effective for the treatment of melanoma or additional indications, and extensive clinical testing and regulatory approval will be required before ITIL-168 can be commercially marketed for the treatment of melanoma.

Survival of Patients with Advanced Melanoma Treated with TIL Therapy in Compassionate Use Program



Safety

Overall, the safety findings associated with the TIL regimen of lymphodepletion, TIL transfusion and post-TIL IL-2 treatment was consistent with the published literature of TIL therapy in patients with melanoma. Side effects were largely transient, self-limited and generally attributable to the lymphodepleting chemotherapy regimen and post-TIL IL-2 treatment. The most common adverse events, or AEs, after the TIL infusion were transient low blood counts and physiological manifestations of IL-2, including fever, tachycardia and edema. There were no deaths deemed related to the treatment regimen. As of the data cutoff date, 10 of 21 patients had died due to complications arising from disease progression.

AEs experienced by patients in this compassionate use program were not systematically graded by the treating physicians nor was AE attribution or seriousness consistently collected. Rather, AEs were summarized by signs and symptoms and according to the time of onset relative to the treatment sequence. The most frequently reported AEs during the lymphodepleting chemotherapy period were neutropenia (nine patients, 43%) and nausea (four patients, 19%). All other AEs were reported in one patient (5%) each. The most frequently reported AEs after TIL infusion were thrombocytopenia (13 patients, 62%), pyrexia (12 patients, 57%) and rigors (nine patients, 43%). Neutropenia and tachycardia were experienced by six patients (29%) each; pulmonary edema and vascular leak were each observed in five patients (24%). Rash was observed in four patients (19%) and atrial fibrillation, cardiovascular instability, chest infection and oedema were each observed in three patients (14%). All other AEs occurred in two or fewer patients (<10%).

Clinical Development Plans

Based on the results from the compassionate use program, we plan to submit an IND and, if authorized to proceed, initiate a Phase 2 trial of ITIL-168 in patients with PD-1-inhibitor relapsed or refractory advanced melanoma in . We anticipate obtaining topline safety and efficacy data in , and we believe this Phase 2 trial, if successful, has the potential to support the submission of a BLA to the FDA and a Marketing Authorization Application to the European Medicines Agency in .

We are designing our Phase 2 trial to enroll approximately 75 to 100 patients who have relapsed or refractory cutaneous melanoma and have failed treatment with a PD-1 inhibitor and, if applicable, a BRAF inhibitor. Patients will undergo surgery to remove a small amount of their tumor to initiate the manufacturing process. Once the patient-specific ITIL-168 is fully manufactured and sent back to the clinical site, patients will

be treated with lymphodepleting chemotherapy. ITIL-168 infusion will be followed by treatment with IL-2 to support the further proliferation of ITIL-168 *in vivo. The primary endpoint of this trial will be ORR, with secondary endpoints focusing on additional aspects of safety and efficacy.*

Clinical Development for ITIL-168 in Additional Tumor Types

Shortly following the initiation of our Phase 2 trial for the treatment of PD-1-inhibitor relapsed or refractory advanced melanoma, we intend to initiate clinical trials of ITIL-168 in other solid tumor types where evidence of immune cell recognition and elimination of cancer cells has been observed, such as CSCC, NSCLC, HNSCC and cervical cancer.

In , we plan to file an amendment to our IND for ITIL-168 and initiate a Phase 1 trial in patients with PD-1-inhibitor relapsed or refractory, locally-advanced or metastatic CSCC, which is the most common type of UV-induced skin cancer and has an underlying pathophysiology that is similar to melanoma. An estimated one million patients are diagnosed with CSCC each year in the United States. While most patients with localized CSCC have a good prognosis, locally advanced and unresectable or metastatic CSCC causes up to 15,000 deaths in the United States annually. Until recently, very few treatment options for this typically chemo-refractory cancer were available for patients. Since 2018, two PD-1 inhibitors have been approved for the treatment of patients with locally advanced and unresectable or metastatic CSCC, indicating an important role for T cells in the treatment of CSCC. Most of these patients, however, ultimately experience disease progression and require additional therapy. We are designing our Phase 1 trial to evaluate safety, feasibility and efficacy of ITIL-168 in the treatment of PD-1 inhibitor-relapsed or refractory, locally-advanced or metastatic CSCC.

In addition, we plan to evaluate ITIL-168 for the treatment of relapsed or refractory NSCLC, HNSCC and cervical cancer. Third-party TIL therapy has demonstrated clinical proof of concept in each of these tumor types, with an ORR of 31% reported in a clinical trial of a third-party TIL therapy for the treatment of HNSCC and an ORR of 25% reported in a clinical trial of a third-party TIL therapy for the treatment of NSCLC. Furthermore, PD-1 inhibitors have demonstrated efficacy in each of these tumors in clinical trials, further supporting a role for T cell-based immunoreactivity in the treatment of these cancers. However, all of these tumor types continue to have a significant unmet medical need. In 2019, the annual mortality of NSCLC, HNSCC and cervical cancers in the U.S. surpassed 120,000, 10,000, and 4,000, respectively. We expect to file another amendment to our IND for ITIL-168 and initiate a multi-indication Phase 1 trial in . Following this trial, we anticipate opening Phase 2 trials within each of these three tumor types to evaluate the safety and efficacy of ITIL-168 in these indications.

CoStAR: A Co-stimulatory Platform to Genetically Engineer TILs

We are developing a novel class of genetically engineered TIL product candidates designed to express Co-Stimulatory Antigen Receptor, or CoStAR, molecules to augment the activation of TILs in the tumor microenvironment, potentially leading to an increase in anti-tumor activity. We believe that the ability of CoStAR to enhance the activation of TILs upon recognition of tumor neoantigens has the potential to bring TIL therapy to patients with cancer types that historically have been resistant to immunotherapy. In preclinical studies, we observed that CoStAR+ T cells demonstrated markedly increased activity as compared to normal T cells, including enhanced cytokine expression and proliferative capacity. We are leveraging the optimized and scalable manufacturing process that we have developed for ITIL-168 to develop manufacturing process steps specific to CoStAR-TIL therapies.

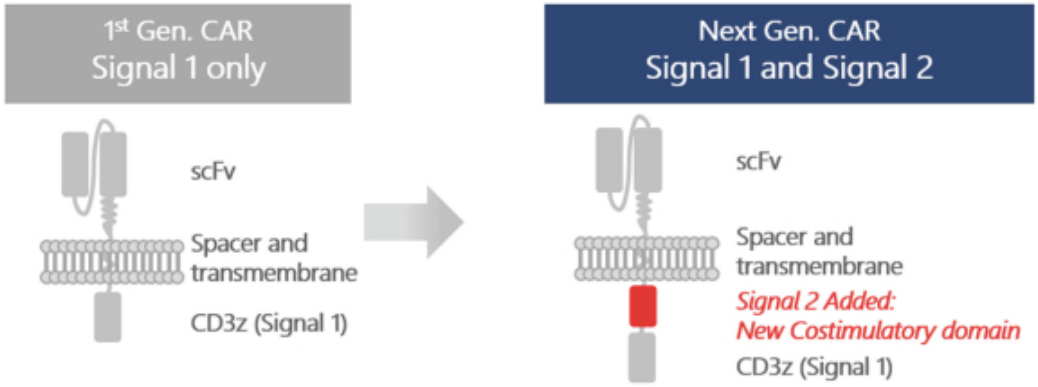
We plan to evaluate CoStAR-TIL therapies in several tumor types where TILs have not yet established proof of concept or responses to TIL therapy have been poor. We anticipate submitting an IND for our lead CoStAR-TIL product candidate, ITIL-306, in .

Role of Co-stimulation in T Cell Activation

Activation of T cells typically requires more than the recognition of an antigenic peptide bound to the MHC on the surface of a target cell. Maximum T cell activation generally requires both this antigen-specific signal and

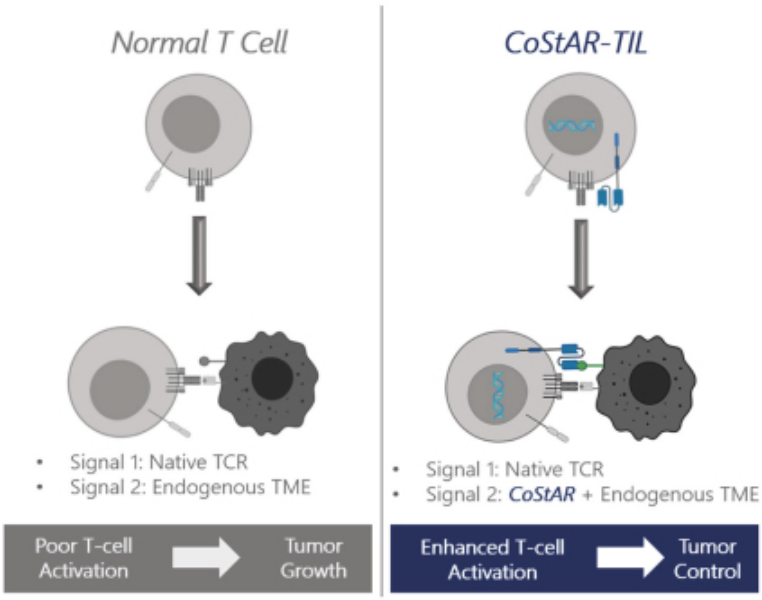
a second, antigen-independent signal known as costimulation. Costimulation occurs when a costimulatory molecule on the surface of the T cell binds to its ligand on the target cell at the same time that the TCR is engaging with the antigen presented by the MHC. The requirement for costimulation also applies to T cell therapies. For example, first generation CAR-T therapies did not contain any additional costimulatory molecules, as shown below, and therefore relied on endogenous co-stimulation for enhanced activity within the tumor microenvironment. As a result, the anti-tumor activity of these first-generation products was low. Subsequent generations of CAR-T therapies included one or more costimulatory domains, which have been shown to increase their anti-tumor activity. However, these therapies are still bound by the limitations of single-antigen targeting, including on-target, off-tumor toxicities.

Costimulatory Domains in First Generation vs.
Next-Generation CAR-T Therapies



Design and Intended Function of CoStAR

Our CoStAR platform encompasses a class of novel CARs designed to increase the anti-tumor activity of our TIL product candidates by providing potent co-stimulation via two intracellular costimulatory domains that are linked by a transmembrane sequence to an extracellular single chain variable fragment, or scFv. When CoStAR is expressed on the surface of TILs, the scFv is designed to bind to commonly expressed, shared tumor-associated antigens and thereby deliver a potent costimulatory signal to the T cell. This costimulatory signal is only relevant when the TIL's native TCR engages a tumor-specific neoantigen on the surface of the tumor cell, as shown below. In preclinical studies, we did not observe any measurable effects of CoStAR engagement of the shared tumor-associated antigen on the T cell without concomitant TCR recognition of a tumor neoantigen.



The main difference between CoStAR and second or later generation CARs is that CoStAR is designed to exclusively induce co-stimulation. This effect is achieved by the elimination of the CD3ζ signaling domain that is uniformly included in CAR-T products. Absence of the CD3ζ domain renders CoStAR ligation alone unable to lead to T cell activation or cytolytic activity. Similar to ITIL-168, the full activation of CoStAR+ T cells is first dependent on the recognition of tumor-specific antigens by the native TCR. The CoStAR modification only serves to augment the activation of the T cells once TCR binding has occurred. In preclinical studies, we did not observe any measurable effects of CoStAR engagement of the shared tumor-associated antigen on the T cell without concomitant TCR recognition of a tumor neoantigen.

We believe the separation of function between tumor recognition and activation in our CoStAR-TILs provides the following key advantages compared to CAR-T therapies:

Increased potency without a change in specificity. The introduction of a CAR to a T cell fundamentally changes its specificity to target cells that express the antigen bound by the scFv of the CAR. Because the target antigen is not unique to individual tumor cells, CAR-T cells kill any cells that express this antigen, including healthy cells. This lack of discrimination often results in on-target, off-tumor toxicity, as observed with anti-CD19 CAR-T therapies that eliminate normal B cells that express CD19, causing prolonged immunosuppression. In contrast, CoStAR does not change the specificity of TILs, as T cell activation is still entirely dependent on the recognition by the cell's native TCR of a unique tumor neoantigen presented by the target cell. CoStAR strictly provides the necessary costimulatory signal for full T cell activation. Through the selection of the specific scFv incorporated into the CoStAR architecture, costimulation is triggered in a tumor-specific manner, providing a microenvironment-specific signal leading to increased TIL activation.

Retention of polyclonal antigen recognition. Our CoStAR-TILs rely on the unique endogenous TCRs expressed by each T cell to recognize the heterogeneous set of tumor neoantigens that are presented by tumor cells. With CoStAR-TIL therapy, the T cells isolated directly from the patient's tumor have been naturally selected by the immune system and preserved by our manufacturing process to target patient-specific neoantigens. We believe the ability to target multiple antigens is critical to the success of cell therapies in solid tumors due to the intra-tumor heterogeneity of cancer cells in solid tumors and the limited success observed with single-antigen cell therapy approaches to date.

Enhanced cytokine secretion and profile. Our CoStAR-TIL product candidates are designed to secrete high levels of activating cytokines into their surrounding microenvironment upon the engagement of unique tumor neoantigens by the TILs' native TCRs in combination with the engagement of the target by CoStAR. Additionally, the production of immunosuppressive cytokines is reduced. We believe that these properties of our CoStAR-TILs will stimulate immune cell migration into tumors, which may, in turn, drive additional immune reaction to the tumor, resulting in the conversion of poorly immunogenic tumors with few endogenous immune cells into inflamed tumors with a broad array of activated immune cell subsets. Such inflamed tumors have been shown to be more amenable to treatment with immunotherapies and to have better prognosis.

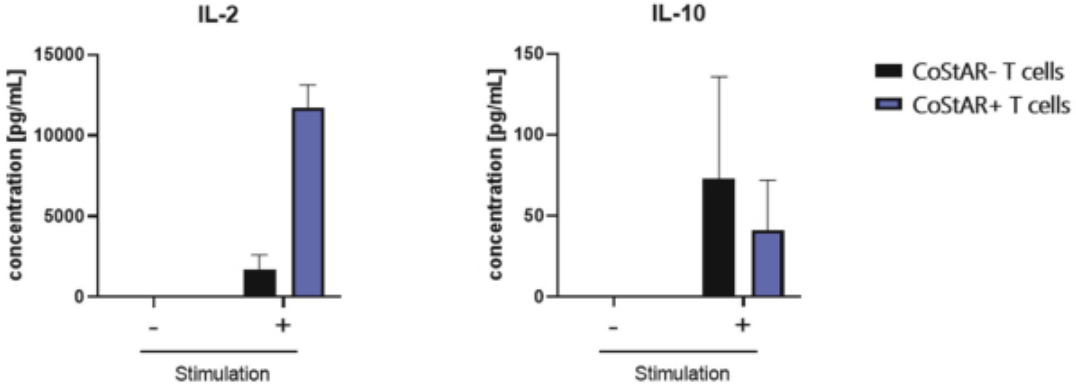
Broad platform targeting shared tumor-associated antigens. A defining feature of our CoStAR platform is its expected safety profile. Unlike conventional ADC or CAR-T therapies, CoStAR's engagement with the cell expressing its target antigen alone does not trigger its elimination. This key attribute allows us to consider a wide array of antigens to target with our CoStAR-TIL product candidates with fewer concerns related to safety risk associated with normal tissue expression. In addition to the tumor-associated antigens commonly targeted by other therapeutic modalities, such as HER2, CoStAR may have the potential to target other antigens, including those with extensive normal tissue expression.

Our CoStAR Platform

During our development of the CoStAR platform, we empirically designed and tested a number of sequences containing various costimulatory domains, either as single domains or as pairs of domains, to identify the most potent architecture using a variety of target antigens. We found that the inclusion of a particular configuration of two costimulatory domains led to markedly enhanced cytokine secretion, cell survival and proliferation *in vitro* as compared to the other tested variants.

We observed increased expression of certain pro-inflammatory cytokines, such as IL-2, without increased expression of immunosuppressive cytokines, such as IL-10, that are known to be detrimental to T cells and other immune subsets, as shown below, which we believe is due to the design of the signaling domains in CoStAR. We believe that CoStAR's ability to increase pro-inflammatory cytokines with no significant rise in immunosuppressive ones creates a favorable immunological milieu that may promote a robust anti-tumor response.

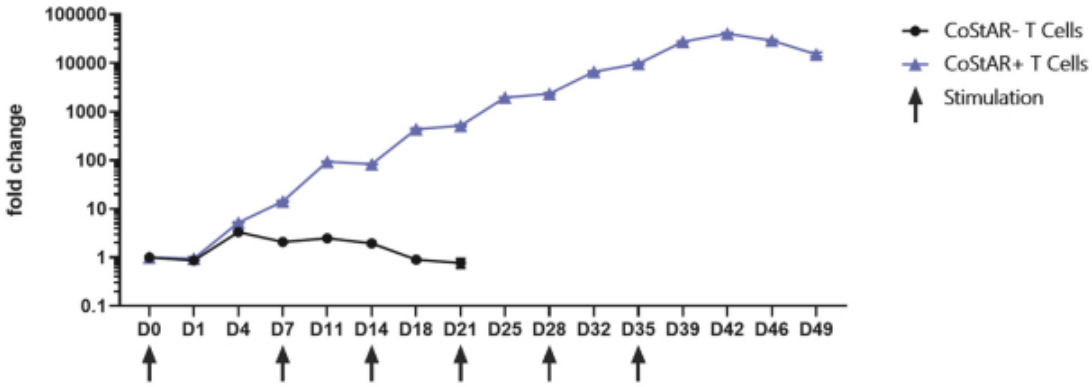
CoStAR Increased Pro-inflammatory Cytokines
And Did Not Increase Immunosuppressive Cytokines



In multiple third-party CAR-T therapy clinical trials, post-infusion expansion of T cells has been shown to correlate with deep and durable clinical responses in patients. The *in vitro* expansion of T cells demonstrated in our preclinical studies, even in stringent culture conditions that lack supplemental IL-2, provides preclinical

evidence of the improved proliferative capacity of CoStAR+ T cells. As shown below, CoStAR+ T cells responded to target cells that expressed OKT3, an anti-CD3 antibody that activates all TCRs, and the CoStAR target with increased survival and proliferation as compared to CoStAR- T cells.

CoStAR+ T Cells Showed Increased Survival and Proliferation of Cells in the Absence of IL-2



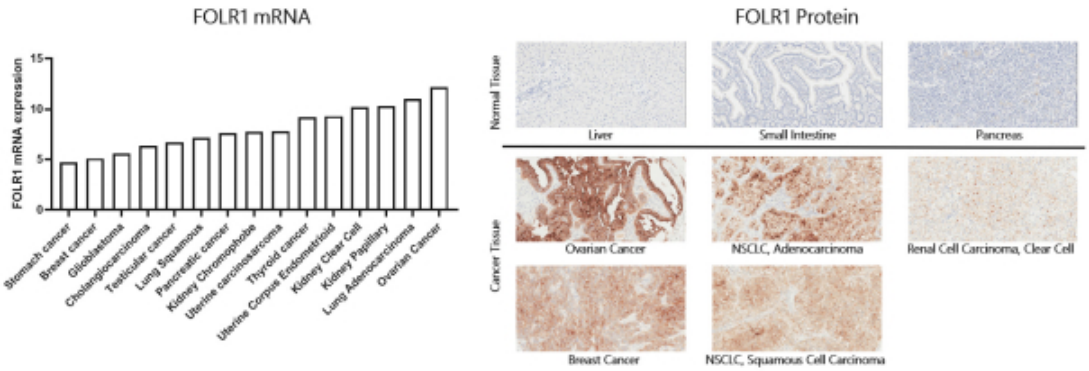
Our preclinical studies of CoStAR+ T cells have demonstrated the potential of CoStAR-TIL therapies to increase anti-tumor activity compared to conventional TIL therapies. Specifically, the CoStAR platform:

- Retained the anti-tumor TCR repertoire of the starting TIL population, thus reducing the potential for normal tissue toxicity;
- Demonstrated markedly increased survival and growth potential and reduced dependence on supplemental IL-2 in response to target cells expressing OKT3 and the CoStAR target; and
- Secreted high levels of immune-activating cytokines like IL-2 without increased expression of immunosuppressive cytokines, which we believe offers the potential for a potent bystander effect in the tumor microenvironment.

Our Lead CoStAR-TIL Product Candidate, ITIL-306

Our first CoStAR-TIL product candidate, ITIL-306, is an autologous TIL therapy genetically engineered to express a CoStAR molecule that recognizes FOLR1. FOLR1 is a tumor-associated antigen that is expressed on numerous solid tumors, including ovarian, uterine, NSCLC and renal cancers. As shown in the immunohistochemical, or IHC, stains below, FOLR1 is found to be expressed at high levels in numerous solid tumor indications and its expression in normal tissue is minimal.

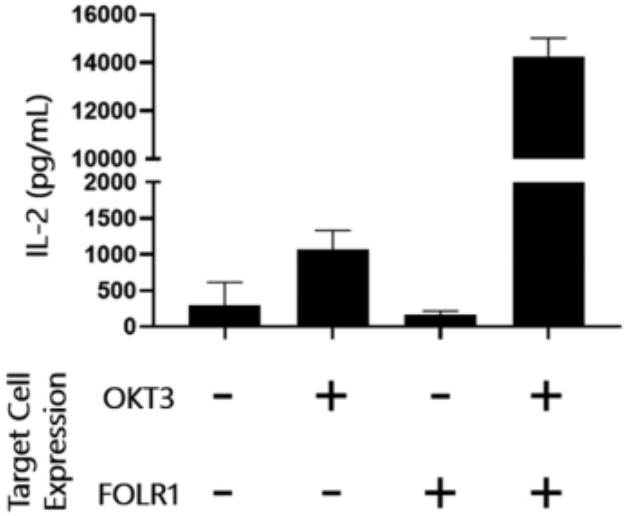
**FOLR1 is Expressed by Numerous Solid Tumors,
as Assessed by mRNA and Protein**



To validate that FOLR1-CoStAR TILs are robustly activated only in the presence of FOLR1 and native TCR stimulation, we assessed the ability of CoStAR+ T cells to secrete IL-2 in an *in vitro* study. Cytokine secretion is a classical measure of activation of T cells and represents a key mechanism by which CoStAR+ T cells enhance the tumor microenvironment and proliferation of TILs. These CoStAR+ T cells were cultured with target cells that were engineered to express OKT3, FOLR1, neither of these molecules, or both.

As shown below, the culture with OKT3-expressing target cells yielded a modest increase in IL-2 secretion over baseline. The addition of CoStAR costimulation, as shown by the FOLR1 expression in the target cells, led to an approximately 10-fold increase in IL-2 secretion. Importantly, ligation of CoStAR by FOLR1 alone in the absence of TCR engagement led to no measurable increase over baseline IL-2 secretion, supporting that the delivery of costimulation through the CoStAR molecule alone does not activate T cells. This finding supports our hypothesis that CoStAR will limit the on-target, off-tumor toxicity that is often found with classical CAR-T therapies, while enhancing T cell activation within the tumor.

CoStAR+ T Cells Enhanced Secretion of IL-2 in the Presence of Both FOLR1 and Activated TCRs



We intend to submit an IND for ITIL-306 in . Further preclinical and manufacturing development of ITIL-306 will inform the final clinical development plan and first-in-human study design. We anticipate

initiating a Phase 1 trial in to evaluate preliminary safety, feasibility and efficacy in multiple tumor types.

Additional CoStAR-TIL Programs

The modular nature of our CoStAR platform allows for multiple product candidates to be developed with minimal changes to the fundamental architecture of the molecule. We have generated a number of constructs containing antigen-binding domains directed against different tumor-associated antigens that are expressed by a wide variety of tumor types, including stomach, colorectal, pancreatic, breast and other cancers. We intend to select our next CoStAR-TIL product candidate for IND-enabling studies in .

Commercialization Plan

We are in the process of building our U.S. commercial and medical affairs infrastructure and intend to build our own global commercialization capabilities over time in certain geographies for our TIL product candidates, including ITIL-168 and ITIL-306. If any of our TIL product candidates are approved, we expect to commercialize those products with an experienced sales, marketing and distribution organization, including a national specialty oncology sales force. As additional product candidates advance through our pipeline, our commercial plans will evolve as we consider elements such as the market potential.

Competition

The biotechnology and pharmaceutical industries are characterized by the rapid evolution of technologies and understanding of disease etiology, intense competition and a strong emphasis on intellectual property. We believe that our approach, strategy, scientific and manufacturing capabilities, know-how and experience provide us with competitive advantages. However, we expect substantial competition from multiple sources, including major pharmaceutical, specialty pharmaceutical, and existing or emerging biotechnology companies, academic research institutions and governmental agencies and public and private research institutions worldwide. Many of our competitors, either alone or through collaborations, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These entities also compete with us in recruiting and retaining qualified scientific, manufacturing and management personnel and establishing clinical trial sites and patient enrollment in clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. As a result, our competitors may discover, develop, license or commercialize products before or more successfully than we do.

We face competition from segments of the pharmaceutical, biotechnology and other related markets that pursue the development of TIL or other cell therapies for the treatment of solid tumors. Companies that are developing TIL therapies include Iovance Biotherapeutics Inc., Adaptimmune Therapeutics, Plc., Achilles Therapeutics, Ltd., Intima Bioscience, Inc., Nurix Therapeutics, Inc., KSQ Therapeutics, Inc., Obsidian Therapeutics, Inc., PACT Pharma, Inc., and Neogene Therapeutics, B.V. In addition, we may face competition from companies focused on CAR-T and TCR-T cell therapies, such as Kite Pharma, Inc., a subsidiary of Gilead, Inc., Juno Therapeutics, Inc., a subsidiary of Bristol-Myers Squibb, Inc., TCR2 Therapeutics, Inc., Poseida Therapeutics, Inc. and Immatics N.V. There are also companies utilizing other cell-based approaches that may be competitive to our product candidates. For example, companies such as Celyad, S.A. and Nkarta, Inc. are developing therapies that target and/or engineer natural killer, or NK, cells.

Furthermore, we also face competition more broadly across the oncology market for cost-effective and reimbursable cancer treatments. The most common methods of treating patients with cancer are surgery, radiation and drug therapy, including chemotherapy, hormone therapy, biologic therapy, such as monoclonal and bispecific antibodies, immunotherapy, cell-based therapy and targeted therapy, or a combination of any such

methods. There are a variety of available drug therapies marketed for cancer. In many cases, these drugs are administered in combination to enhance efficacy. While our TIL product candidates, if any are approved, may compete with these existing drugs and other therapies, to the extent they are ultimately used in combination with or as an adjunct to these therapies, our TIL therapies may not be competitive with them. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. Insurers and other third-party payors may also encourage the use of generic products or specific branded products. As a result, obtaining market acceptance of, and gaining significant share of the market for, any of our TIL therapies that we successfully introduce to the market may pose challenges. In addition, many companies are developing new oncology therapeutics, and we cannot predict what the standard of care will be as our product candidates progress through clinical development.

We could see a reduction or elimination in our commercial opportunity if our competitors develop and commercialize drugs that are safer, more effective, have fewer or less severe side effects, are more convenient to administer, are less expensive or with a more favorable label than our TIL product candidates. Our competitors also may obtain FDA or other regulatory approval for their drugs 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. The key competitive factors affecting the success of all of our TIL product candidates, if approved, are likely to be their efficacy, safety, convenience, price and the availability of reimbursement from government and other third-party payors.

Intellectual Property

Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions, improvements and know-how related to our business; defend and enforce our patents and other intellectual property; preserve the confidentiality of our trade secrets; and operate without infringing or otherwise violating the valid enforceable patents and proprietary rights of third parties. Our ability to stop third parties from making, using, selling, offering to sell or importing our products may depend on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. 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 manufacturing the same. We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets can be difficult to protect. See “Risk Factors – Risks Related to Our Intellectual Property.”

We actively seek to protect our proprietary technology, inventions, and other intellectual property that is commercially important to the development of our business by a variety of means, such as seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We also may rely on trade secrets and know-how relating to our proprietary technology platform, on continuing technological innovation and on in-licensing opportunities to develop, strengthen and maintain the strength of our position in the field of cell therapy that may be important for the development of our business. We also intend to seek patent protection or rely upon trade secret rights to protect other technologies that may be used to discover and validate targets, as well as to manufacture and develop novel cell therapy products. Additional regulatory protection may also be afforded through data exclusivity, market exclusivity and patent term extensions where available.

ITIL-168

We have one U.S. patent application and one European patent application directed to an aseptic tissue processing method, kit and device, which, if issued, are expected to expire in 2038, without taking into account any possible patent term adjustment or extension.

We have one PCT application and two foreign patent applications in Argentina and Taiwan directed to methods for isolating unmodified tumor infiltrating lymphocytes and expansion of cell populations, which, if issued, are expected to expire in 2040, without taking into account any possible patent term adjustment or extension.

We have one U.S. design patent application and foreign design patent applications in 21 countries: Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Europe including the United Kingdom, Ecuador, India, Israel, Japan, South Korea, Mexico, Peru, Philippines, Russia, Singapore, Taiwan and Ukraine, directed to a tissue collection bag for sealing tissue therein for processing. The U.S. design patent will expire 15 years from issue.

We have seven provisional applications directed to cryopreserved tumor infiltrating lymphocytes, and methods of treatment, which, if issued, are expected to expire in 2041, without taking into account any possible patent term adjustment or extension.

ITIL-306

We have one U.S. patent application and one European patent application directed to an aseptic tissue processing method, kit and device, which, if issued, are expected to expire in 2038, without taking into account any possible patent term adjustment or extension.

We have one PCT application and two foreign patent applications in Argentina and Taiwan directed to methods for isolating unmodified tumor infiltrating lymphocytes and expansion of cell populations, which, if issued, are expected to expire in 2040, without taking into account any possible patent term adjustment or extension.

We have one U.S. and foreign design patent applications in 21 countries: Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Europe including the United Kingdom, Ecuador, India, Israel, Japan, South Korea, Mexico, Peru, Philippines, Russia, Singapore, Taiwan and Ukraine, directed to a tissue collection bag for sealing tissue therein for processing. The U.S. design patent will expire 15 years from issue.

We have seven provisional applications directed to cryopreserved tumor infiltrating lymphocytes, and methods of treatment. Patents from full patent applications claiming priority to the provisional application, if issued, are expected to expire in 2041, without taking into account any possible patent term adjustment or extension.

We have one PCT application and one provisional application directed to receptors providing targeted costimulation for adoptive cell therapy. Patents from the PCT application, if issued, are expected to expire in 2040, without taking into account any possible patent term adjustment or extension. Patents from full patent applications claiming priority to the provisional application, if issued, are expected to expire in 2041, without taking into account any possible patent term adjustment or extension.

Others

We have one U.S. patent application, 19 foreign patent applications and one PCT application in Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Eurasia, Ecuador, Europe, India, Israel, Japan, South Korea, Mexico, Peru, Philippines, Singapore and Ukraine directed to biomarkers predictive of tumor infiltrating lymphocyte therapy and uses thereof, which, if issued, are expected to expire in 2039 (U.S. and 19 foreign applications) and 2040 (PCT application), without taking into account any possible patent term adjustment or extension.

We have one U.S. patent application and 19 foreign patent applications in Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Eurasia, Ecuador, Europe, India, Israel, Japan, South Korea, Mexico, Peru, Philippines, Singapore and Ukraine directed to cells expressing chimeric growth factor receptors and uses thereof, which, if issued, are expected to expire in 2039, without taking into account any possible patent term adjustment or extension.

We have one provisional application directed to chimeric molecules providing targeted co-stimulation for adoptive cell therapy. Patents from full applications claiming priority from that provisional application if filed and issued, are expected to expire in 2041, without taking into account any possible patent term adjustment or extension.

We have one U.S. patent application and one European application directed to cells expressing recombinant growth factor receptors, which, if issued, are expected to expire in 2036, without taking into account any possible patent term adjustment or extension.

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Biologics Regulation

In the United States, biological products are subject to regulation under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, and other federal, state, local and foreign statutes and regulations. The process required by the FDA before biologics may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's Good Laboratory Practice requirements, or GLP);
- submission to the FDA of an IND, which must become effective before clinical trials may begin;
- approval by an institutional review board, or 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 practice, or GCP, regulations and any additional requirements for the protection of human research subjects and their health information to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA, after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current Good Manufacturing Practices, or cGMP, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency and, if applicable, to assess compliance with the FDA's current Good Tissue Practice, or cGTP, requirements for the use of human cellular and tissue products, and of selected clinical investigation sites to assess compliance with Good Clinical Practices, or GCPs;
- potential FDA audit of the nonclinical and clinical study sites that generated the data in support of the BLA; and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Before testing any biological product candidate 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.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the submission of an IND to the FDA before initiation of a clinical trial in the United States, certain human clinical trials involving recombinant or synthetic nucleic acid molecules are subject to oversight of institutional biosafety committees, or IBCs, as set forth in the National Institutes of Health, or NIH, Guidelines for Research Involving Recombinant DNA Molecules, or the NIH Guidelines. Specifically, under the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being 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.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. 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.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.

- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product in the intended therapeutic indication, particularly for long-term safety follow-up. These so-called Phase 4 studies may also be made a condition to approval of the BLA.

Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by independent investigators. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the FDA 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. Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after the filing date, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may also be extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may also convene an advisory committee to provide clinical insight on application review questions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. For a product candidate that is also a human cellular or tissue product, the FDA also will not approve the application if the manufacturer is not in compliance with cGTPs. These are FDA regulations that

govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues, and cellular and tissue based products, or 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 compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter, or CRL. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A CRL will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the CRL, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks, or otherwise limit the scope of any approval. A REMS is a safety strategy implemented to manage a known or potential serious risk associated with a product 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. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product’s safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. For example, the fast track program is intended to expedite or facilitate the process for reviewing new products that 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. Specifically, new biological 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. The sponsor of a new biologic may request that the FDA designate the biologic as a fast track product at any time during the clinical development of the product. The sponsor of a fast track product has opportunities for more frequent interactions with the applicable FDA review team during product development and, once a BLA is submitted, the product candidate may be eligible for priority review. A fast track product may also be eligible for rolling review, where 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.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product candidate can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product candidate, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any marketing application for a drug or biologic submitted to the FDA for approval, including a product candidate with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product candidate 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 biological product designated for priority review in an effort to facilitate the review. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, product candidates 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 accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing studies or if such studies fail to verify the predicted clinical benefit. 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 2017, the FDA established a new regenerative medicine advanced therapy, or RMAT, designation, which is intended to facilitate an efficient development program for, and expedite review of, any drug or biologic that meets the following criteria: (i) the drug or biologic qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (ii) the drug or biologic is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (iii) preliminary clinical evidence indicates that the drug or biologic has the potential to address unmet medical needs for such a disease or condition. RMAT designation provides all the benefits of breakthrough therapy designation, including more frequent meetings with the FDA to discuss the development plan for the product candidate and eligibility for rolling review and priority review. Product candidates granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of clinical trial sites, including through expansion of trials to additional sites. RMAT-designated products that receive accelerated approval may, as appropriate, fulfill their post-approval requirements through submission of clinical evidence, clinical studies, patient registries, or other sources of real-world evidence (such as electronic health records); through the collection of larger confirmatory data sets; or via post-approval monitoring of all patients treated with such therapy prior to approval of such therapy.

Fast track designation, breakthrough therapy designation, priority review, accelerated approval, and RMAT designation do not change the standards for approval but may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, 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.

Orphan Drug Designation and Exclusivity

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 individuals in the United States, or a patient population greater than 200,000 individuals in the United States and 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. 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. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

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. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for a particular drug or biologic 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 or if the 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. Orphan drug exclusivity does not prevent the 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. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same biological product as defined by the FDA or if our product candidate is determined to be contained within the competitor’s product for the same indication or disease.

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, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if a second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Biologics are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Biologic manufacturers and other entities involved in the manufacture and distribution of approved biological 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 requirements and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain GMP compliance. Changes to the manufacturing process or facility are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting

requirements. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with 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 the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with doctors, debarment, restitution, disgorgement of profits, or civil or criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The Affordable Care Act, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an

individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric 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 study in accordance with an FDA-issued "Written Request" for such a study. The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Government Regulation Outside of the United States

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 studies and any commercial sales and distribution of our products. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries. Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical studies 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 study application much like the IND prior to the commencement of human clinical studies.

In the European Union, for example, a clinical trial application, or CTA, must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved in accordance with the applicable requirements, clinical study development may proceed. The requirements and process governing the conduct of clinical studies, are to a significant extent harmonized at the European Union-level but could vary from country to country. In all cases, the clinical studies are conducted in accordance with Good Clinical Practices, or GCP, and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. The way clinical trials are conducted in the European Union will undergo a major change when the Clinical Trial Regulation (Regulation (EU) No 536/2014) comes into application, probably in 2022. The Regulation harmonizes the assessment and supervision processes for clinical trials throughout the European Union via a Clinical Trials Information System, which will contain a centralized European Union portal and database.

To obtain regulatory approval of an investigational biological product under European Union regulatory systems, we must submit a marketing authorization application. The application used to file the BLA in the United States is similar to that required in the European Union, with the exception of, among other things, country-specific document requirements. Innovative products that target an unmet medical need may be eligible

for a number of expedited development and review programs in the European Union, such as the PRIME scheme, which provides incentives similar to the breakthrough therapy designation in the United States. Such products are generally eligible for accelerated assessment and may also benefit from different types of fast track approvals, such as a conditional marketing authorization or a marketing authorization under exceptional circumstances granted on the basis of less comprehensive clinical data than normally required (respectively in the likelihood that the sponsor will provide such data within an agreed timeframe or when comprehensive data cannot be obtained even after authorization).

The European Union also provides opportunities for market exclusivity. For example, in the European Union, upon receiving marketing authorization, new chemical entities generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic or biosimilar application. During the additional two-year period of market exclusivity, a generic or biosimilar marketing authorization can be submitted, and the innovator's data may be referenced, but no generic or biosimilar product can be marketed until the expiration of the market exclusivity. However, there is no guarantee that a product will be considered by the European Union's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity. Products receiving orphan designation in the European Union can receive ten years of market exclusivity, during which time no similar medicinal product for the same indication may be placed on the market. An orphan product can also obtain an additional two years of market exclusivity in the European Union for pediatric studies. No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications.

The criteria for designating an "orphan medicinal product" in the European Union are similar in principle to those in the United States. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the European Union when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the European Union to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the European Union, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication. The application for orphan drug designation must be submitted before the application for marketing authorization. The applicant will receive a fee reduction for the marketing authorization application if the orphan drug designation has been granted, but not if the designation is still pending at the time the marketing authorization is submitted. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if:

- The second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- The applicant consents to a second orphan medicinal product application; or
- The applicant cannot supply enough orphan medicinal product.

The medicinal products we are developing, which are based on genes, cells or tissues, may be considered advanced therapy medicinal products, or ATMPs, in the European Union if they meet the scientific criteria for defining an ATMP. The principles of the aforementioned medicines legislation apply to ATMPs. All ATMPs

must obtain a marketing authorization from the EMA and are regulated through the centralized authorization procedure. Regulation (EC) No 1394/2007, or the ATMP Regulation, provides specific incentives to accelerate the development of such products, including fee reductions for scientific advice, an ATMP classification procedure (for all developers) and a certification procedure for quality and non-clinical data (for SMEs only).

If tissues and cells are being used as starting materials in a medicinal product we may also need to comply with the requirements of Directive 2004/23/EC, or the European Tissues and Cells Directive, covering standards for donation, procurement and testing, processing, preservation, storage and distribution of human tissues and cells, as well as its technical implementing directives; and Directive 2015/566, as regards the procedures for verifying the equivalent standards of quality and safety of imported tissues and cells.

In the European Union, early access mechanisms for innovative medicines (such as compassionate use programs and named patient supplies), pricing and reimbursement, and promotion and advertising are subject to national regulations and oversight by national competent authorities and therefore significantly vary from country to country.

Sanctions for non-compliance with the aforementioned requirements, which may include administrative and criminal penalties, are generally determined and enforced at national level. However, under the European Union financial penalties regime, the EMA can investigate and report on alleged breaches of the European Union pharmaceutical rules by holders of a marketing authorization for centrally authorized medicinal products and the European Commission could adopt decisions imposing significant financial penalties on infringing marketing authorization holders.

The United Kingdom has left the European Union on January 31, 2020. Following the Transition Period which ended on December 31, 2020, Brexit could materially impact the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our product candidates in the United Kingdom in the coming years.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical studies, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical studies are 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 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.

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business and may constrain the financial arrangements and relationships through which we research, as well as, sell, market and distribute any products for which we obtain marketing approval. Such laws include, without limitation, federal and state anti-kickback, fraud and abuse, false claims, data privacy and security and physician and other health care provider transparency laws and regulations. If our significant operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and imprisonment.

Coverage and Reimbursement

Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed

healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. These third-party payors are increasingly reducing coverage and reimbursement for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Healthcare Reform

In the United States, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, each as amended, collectively known as the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA contained a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and changes to fraud and abuse laws. For example, the ACA:

- increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the average manufacturer price;
- required collection of rebates for drugs paid by Medicaid managed care organizations;
- required manufacturers to participate in a coverage gap discount program, under which they must agree to offer 70 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer’s outpatient drugs to be covered under Medicare Part D; and
- imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell “branded prescription drugs” to specified federal government programs.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA. For example, the United States Supreme Court is currently reviewing the U.S. Court of Appeals for the 5th Circuit ruling that the individual mandate was unconstitutional and to determine the constitutionality of the ACA in its entirety. Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year, which was temporarily suspended from May 1, 2020 through March 31, 2021 due to the COVID-19 pandemic, and reduced payments to several types of Medicare providers. Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries, proposed and enacted legislation and executive orders issued by the President designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. It is also possible that additional governmental action is taken in response to the COVID-19 pandemic. Individual states in the United States have also become increasingly active in 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.

Facilities

We control and operate our manufacturing site in Manchester, United Kingdom, which consists of 12,630 total square feet of leased laboratory and office space under four leases that each expire in July 2022. We also

own and are developing our manufacturing facility in Tarzana, California, which is expected to include approximately 95,294 square feet of laboratory and office space. Our Tarzana facility is expected to be operational in 2021.

Our headquarters is currently located in Dallas, Texas and consists of 6,481 square feet of leased office space under a lease that expires in March 2026. We also lease 10,008 square feet of laboratory and office space in Thousand Oaks, California, under a lease that expires in October 2025, and 6,867 square feet of leased laboratory and office space in Alderley Park, United Kingdom, under a lease that expires in November 2025, which in each case is subject to renewal. We believe that our facilities are adequate for our current needs, and that suitable additional alternative spaces will be available in the future on commercially reasonable terms.

Employees and Human Capital Resources

As of December 31, 2020, we had 151 full-time employees. Of these employees, 120 were engaged in research and development activities. Substantially all of our employees are based in Dallas, Texas, Tarzana, California and Manchester, United Kingdom. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not currently subject to any material legal proceedings.

MANAGEMENT

Executive Officers and Directors

The following table provides information regarding our current executive officers and directors, including their ages as of December 31, 2020:

Name	Age	Position(s)
Executive Officers		
Bronson Crouch	47	Chief Executive Officer and Chairman
Zachary Roberts, M.D.	43	Chief Medical Officer
Vijay Chiruvolu, Ph.D.	58	Chief Technical Officer
Sandeep Laumas, M.D.	52	Chief Business Officer
Non-Employee Directors		
Gwendolyn Binder, Ph.D.	46	Director
Neil Gibson, Ph.D.	64	Director
George Matcham, Ph.D.	68	Director
R. Kent McGaughy, Jr.	49	Director
Jack Nielsen	57	Director
Nimish Shah	43	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Bronson Crouch has served as our Chief Executive Officer and Chairman of our board of directors since November 2018. In addition to serving as our Chief Executive Officer and Chairman, Mr. Crouch has served as Founding Partner of Curative Ventures Management LLC since January 2014. Our board of directors believes that Mr. Crouch is qualified to serve as a director based on his extensive experience in venture capital and in the biotechnology industry.

Zachary Roberts, M.D., Ph.D. has served as our Chief Medical Officer since March 2020. Prior to joining us, he served in various roles for Kite Pharma, Inc./Gilead Sciences, most recently as Vice President, Clinical Development from February 2018 to May 2019. Prior to joining Kite, Dr. Roberts served as Clinical Research Medical Director for Amgen Oncology from January 2015 to July 2015. Dr. Roberts completed his training in internal medicine and hematology/oncology at the Massachusetts General Hospital and Dana Farber Cancer Institute. He earned his B.S. in microbiology and immunology from the University of Maryland, College Park and both his Ph.D. in immunology and his M.D from the University of Maryland, Baltimore.

Vijay Chiruvolu, Ph.D. has served as our Chief Technical Officer since July 2020. Prior to joining us, he served as the Senior Vice President, Global Process Development–Cell Therapy of Kite Pharma, Inc./Gilead Sciences, from September 2014 to July 2020. During his time at Kite, Dr. Chiruvolu was responsible for the CMC/process development leading to the regulatory approval of two cell therapy products, Yescarta and Tecartus. Prior to joining Kite, from 1996 to 2014, Dr. Chiruvolu spent 18 years in positions of increasing responsibility in Process Development, Manufacturing, Supply Chain and Quality at Scios, Avigen, Hoffmann-La Roche, Johnson & Johnson and Amgen. Dr. Chiruvolu holds a Ph.D. in Engineering (Biochemical) from University of Nebraska and M.B.A. from Pennsylvania State University.

Sandeep Laumas, M.D. has served as our Chief Business Officer since June 2020. He also serves as our principal financial and accounting officer. He currently serves a member of the board of directors of 9 Meters Biopharma, Inc. since May 2020 and previously served as the Executive Chairman from January 2014 to April 2020, including as the Chief Executive Officer from February 2019 to April 2020. Dr. Laumas has served as a member of the board of directors and chairman of the audit committee of BioXcel Therapeutics, Inc. since September 2017. Dr. Laumas received his A.B. in chemistry from Cornell University and M.D. from Albany Medical College, and he completed a medical internship at the Yale University School of Medicine.

Non-Employee Directors

Gwendolyn Binder, Ph.D. has served as a member of our board of directors since July 2020. Dr. Binder has served as Executive Vice President of Science and Technology of Cabaletta Bio, Inc. since February 2019. Dr. Binder previously served in various roles for Adaptimmune Therapeutics PLC from March 2011 to January 2019, most recently as Chief Technology Officer from March 2016 to January 2019 and Executive Vice President, Head of Translational Sciences from March 2011 to February 2016. Ms. Binder earned her B.A. from Wells College in biochemistry and molecular biology and Ph.D. in cellular and molecular medicine from the John Hopkins University. Our board of directors believes that Dr. Binder is qualified to serve as a director based upon her extensive experience in the biotechnology industry.

Neil Gibson, Ph.D. has served as a member of our board of directors since June 2020. Dr. Gibson has served as President and Chief Executive Officer of Adanate, a COI Pharmaceuticals, Inc. company, since 2017. Dr. Gibson has held various senior positions within the biotechnology and pharmaceutical industry, including President and Chief Executive Officer of PDI Therapeutics from 2017 to 2020, Senior Vice President of BioAtla, Inc. from 2015 to 2016 and Chief Scientific Officer of Regulus Therapeutics from 2011 to 2015. Dr. Gibson has served on the board of TCR2 and Causeway Therapeutics since 2017 and previously served on the board of Cytosen Therapeutics from 2016 to 2019. Dr. Gibson earned his B.Sc. in Pharmacy from the University of Strathclyde and his Ph.D. from the University of Aston. We believe Dr. Gibson is qualified to serve on our Board because of his extensive experience as an executive officer in the biopharmaceutical industry.

George Matcham, Ph.D. has served as a member of our board of directors since September 2018. He previously served in various roles for Celgene Corporation since 1988, most recently as Senior Vice President, CAR T CMC & Technology Development from August 2017 to June 2018 and Senior Vice President, Biologics Development and Manufacturing from May 2013 to August 2017, with responsibility for CAR T CMC & Manufacturing from September 2015. Mr. Matcham received his B.Sc. and Ph.D. in biochemistry from Cardiff University. Our board of directors believes that Mr. Matcham is qualified to serve as a director based upon his extensive experience in the biotechnology industry.

R. Kent McGaughy, Jr. has served as a member of our board of directors since June 2020. He has served as a Partner of CPMG, Inc. since 2006. Mr. McGaughty has served on the board of directors of Apollo Endosurgery since January 2012 and Reata Pharmaceuticals Inc. since December 2004. He earned a B.A. from the University of Texas and an M.B.A. from Harvard Business School. Our board of directors believes that Mr. McGaughy is qualified to serve as a director based upon his extensive leadership as an investor in the medical technologies industry and his financial expertise.

Jack Nielsen has served as a member of our board of directors since June 2020. He has served as the Managing Director of Vivo Capital, LLC since August 2017, and previously served as a consultant from March 2017 to July 2017. Prior to joining Vivo Capital, LLC, Mr. Nielsen worked within the Novo Holdings A/S organization and its venture activities since 2001 in several roles, most recently as a Senior Partner from until February 2017. He has served on the boards of directors of Apollo Endosurgery from February 2012 to May 2017, Crinetics Pharmaceuticals, Inc. from February 2017 to November 2019, Merus N.V. from August 2015 to June 2017, ALX Oncology Holdings Inc. since February 2020, Aligos Therapeutics, Inc. since August 2018,

Harmony Biosciences Holdings, Inc. since September 2017 and Reata Pharmaceuticals Inc. since June 2006. Mr. Nielsen earned a master's degree in management of technology from the Center for Technology, Economics and Management at the Technical University of Denmark and a M.Sc. in chemical engineering from the Technical University of Denmark. Our board of directors believes that Mr. Nielsen is qualified to serve as a director based upon his extensive industry experience, his experience as a venture capital investor and his board service for several companies in the biotechnology industry.

Nimish Shah has served as a member of our board of directors since July 2020. Mr. Shah has served as a Partner at Venrock since July 2013. Mr. Shah received his B.S. from Rutgers College of Pharmacy, M.B.A. from Columbia University and M.P.H. from Columbia University. Our board of directors believes that Mr. Shah is qualified to serve as a director based upon his extensive experience as an investor in the biotechnology industry.

Board Composition

Our business and affairs are managed under the direction of our board of directors, which currently consists of seven members. Our directors were elected to, and currently serve on, the board pursuant to a voting agreement among us and all of our stockholders and voting rights granted by our current amended and restated certificate of incorporation. The voting agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors.

In accordance with our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering, our board of directors will be divided into three classes, each of which will consist, as nearly as possible, of one-third of the total number of directors constituting our entire board and which will serve staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- Class I, which will consist of and , and their terms will expire at our first annual meeting of stockholders to be held after the closing of this offering;
- Class II, which will consist of and , and their terms will expire at our second annual meeting of stockholders to be held after the closing of this offering; and
- Class III, which will consist of and , and their terms will expire at our third annual meeting of stockholders to be held after the closing of this offering.

Our amended and restated bylaws, which will become effective upon the closing of this offering, will provide that the authorized number of directors may be changed only by resolution approved by a majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change of control.

Director Independence

Applicable Nasdaq rules, or the Nasdaq Listing Rules, require a majority of a listed company's board of directors to be composed of independent directors within one year of listing. In addition, the Nasdaq Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act of 1934, as amended, or the Exchange Act. The Nasdaq independence definition includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees, that neither the director nor any of his family members

has engaged in various types of business dealings with us and that the director is not associated with the holders of more than 5% of our common stock. In addition, under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Our board of directors has determined that all of our directors other than , representing of our directors, are "independent directors" as defined under applicable Nasdaq rules. In making such determination, our board of directors considered the current and prior relationships that each such director has with our company and all other facts and circumstances that our board of directors deemed relevant in determining his or her independence, including the beneficial ownership of our capital stock by each director and the transactions described in the section titled "Certain Relationships and Related Party Transactions."

There are no family relationships among any of our directors or executive officers.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure. Following the completion of this offering, we intend for our audit committee to have the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee will also monitor compliance with legal and regulatory requirements.

Board Committees

Our board of directors has established an audit committee, compensation committee and a nominating and corporate governance committee, each of which operate pursuant to a committee charter. Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below.

Audit Committee

Upon the completion of this offering, our audit committee will consist of , and , with serving as chair of the audit committee. Our board of directors has determined that each of these individuals meets the independence requirements of Rule 10A-3 under the Securities Exchange Act of 1934, or the Exchange Act, and the applicable listing standards of Nasdaq. Each member of our audit committee can read and understand fundamental financial statements in accordance with Nasdaq audit committee requirements. Our board of directors has also determined that 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 arriving at these determinations, the board has examined each audit committee member's scope of experience and the nature of their prior and/or current employment.

The functions of this committee include, among other things:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;

- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually that describes our internal quality control procedures, any material issues with such procedures and any steps taken to deal with such issues when required by applicable law; and
- approving or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

We believe that the composition and functioning of our audit committee will comply with 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

Upon the completion of this offering, our compensation committee will consist of , and , with serving as chair of the compensation committee. Each of these individuals is a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act. Our board of directors has determined that each of these individuals is ‘‘independent’’ as defined under the applicable listing standards of Nasdaq, including the standards specific to members of a compensation committee. 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;
- making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and 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 to the extent required by Section 14A of the Exchange Act and, if applicable, determining our recommendations regarding the frequency of advisory votes on executive compensation;
- 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 evaluating 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 will comply with 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

Upon the completion of this offering, our nominating and corporate governance committee will consist of , and , with serving as chair of the nominating and corporate governance committee. Our board of directors has determined that each of these individuals is ''independent'' as defined under the applicable listing standards of Nasdaq and SEC rules and regulations. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on 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 and recommending to our board of directors any changes to such policies and principles;
- reviewing and making recommendations to the board of directors with respect to management succession planning;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and evaluating 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 will comply with 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 directors who serve as a member of our compensation committee is, or has at any time during the past year been, one of our officers or employees. None of our executive officers currently serves, or in the

past year has served, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

Effective upon the closing of this offering, we will adopt a Code of Business Conduct and Ethics, or the Code of Conduct, applicable to all of our employees, executive officers and directors. This includes our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. Following the closing of this offering, the full text of the Code of Conduct will be available on our website at instilbio.com. We intend to post on our website all disclosures that are required by law or the listing standards of the Nasdaq Stock Market concerning any amendments to, or waivers from, any provision of the Code of Conduct. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

Non-Employee Director Compensation

During the year ended December 31, 2020, we paid each non-employee director an annual cash retainer of $45,000 for serving on our board of directors. In addition, effective January 6, 2021, each non-employee director, and each new non-employee director who joins our board of directors after January 6, 2021, is entitled to be granted a stock option to purchase 60,000 shares of our common stock under our 2018 Plan, with the shares vesting in 36 equal monthly installments, subject to continued service as a director through the vesting date, which we refer to as the initial grant. Each subsequent fiscal year after a non-employee director receives an initial grant and subject to the approval of the board of directors, each non-employee director is entitled to be granted a stock option to purchase 30,000 shares of our common stock under our 2018 Plan, with the shares vesting in 12 equal monthly installments, subject to continued service as a director through the vesting date, which we refer to as the annual grant. The exercise price per share of each of the initial grant and annual grant will be equal to the fair market value of the underlying shares of our common stock, as determined by the board of directors, with a term of ten years from the date of grant, subject to earlier termination in connection with a termination of the eligible director's continuous service with us.

Dr. Gwendolyn Binder, a current member of our board of directors, provided advisory services to our company during 2020 pursuant to an advisory agreement. Under that agreement, we paid Dr. Binder $20,000 during 2020.

Dr. Neil Gibson, a current member of our board of directors, provided advisory services to our company during 2020 pursuant to an advisory agreement. Under that agreement, we paid Dr. Gibson $59,400 during 2020.

Dr. George Matcham, a current member of our board of directors, provided consulting services to our company during 2020 pursuant to a consulting agreement with Matcham, LLC, an entity controlled by Dr. Matcham. Under that agreement, we issued Matcham, LLC 500,000 shares of common stock on September 20, 2018 at a purchase price of $0.000001 per share as compensation for consulting services to be provided to the Company by Dr. Matcham. We retained a right to repurchase unvested shares under this award. 20% of these shares vested on the date of purchase, and the remaining 80% vest monthly in substantially equal installments over a 36-month period, subject to Dr. Matcham's continuous service as an employee, director or consultant as of each such vesting date. In the event of a change in control transaction, the vesting of the shares accelerates and our right to repurchase any unvested shares terminates with respect to any unvested shares.

Dr. Robert Hawkins, a former member of our board of directors, served as our Chief Strategy Advisor during 2020 pursuant to an advisory agreement. Under that agreement, we paid Dr. Hawkins $218,720 during 2020, and the board of directors granted Dr. Hawkins an option to purchase 336,847 shares, at an exercise price

of $1.38 per share, on August 6, 2020. 25% of the shares subject to this option vest July 1, 2021, and the remaining 75% of the shares subject to the option vest over the subsequent 3-year period in substantially equal monthly installments at a rate of 1/48th of the total shares subject to the option each month, subject to Dr. Hawkins' continuous service as of each such vesting date.

Dr. Margo Roberts, a former member of our board of directors, provided consulting services to our company during 2020 pursuant to a consulting agreement. Under that agreement, we issued Dr. Roberts 500,000 shares of common stock on September 13, 2018 at a purchase price of $0.000001 per share as compensation for her consulting services. We retained a right to repurchase unvested shares under this award. 20% of the shares vested on the date of the award, and the remaining 80% vest monthly in substantially equal installments over a 36-month period, subject to Dr. Roberts' continuous service as an employee, director or consultant as of each such vesting date. In the event of a change in control transaction, the vesting of the shares accelerates and our right to repurchase any unvested shares terminates with respect to any unvested shares. We terminated this consulting agreement upon Dr. Roberts' resignation from the board of directors in April 2020, and the shares subject to Dr. Roberts' award ceased vesting as of that date.

2020 Director Compensation Table

The following table sets forth information regarding the compensation earned for service on our board of directors in 2020 by our non-employee directors. Bronson Crouch, our Chief Executive Officer, is also a member of our board of directors but did not receive any additional compensation for service as a director.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)(2)	All Other Compensation ($)(3)	Total ($)
Gwendolyn Binder, Ph.D.	22,500	—	20,000	42,500
Neil Gibson, Ph.D.	22,500	—	59,400	81,900
Robert Hawkins, MBBS FRCP, Ph.D. (4)	—	464,848	218,720	683,568
George Matcham, Ph.D.	22,500	—	—	22,500
R. Kent McGaughy, Jr.	22,500	—	—	22,500
Jack Nielsen	22,500	—	—	22,500
Margo Roberts, Ph.D. (5)	—	—	—	—
Nimish Shah	—	—	—	—

(1) The amounts disclosed represent the aggregate grant date fair value of the stock options granted under our 2018 Plan, computed in accordance with ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock options are set forth in the notes to our financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the named executive officers.

(2) The table below shows the aggregate number of option awards outstanding for each of our directors who is not a named executive officer, as of December 31, 2020:

Name	Number of Outstanding Options
Gwendolyn Binder, Ph.D.	10,000
Neil Gibson, Ph.D.	—
Robert Hawkins, MBBS FRCP, Ph.D.	336,847
George Matcham, Ph.D.	—
R. Kent McGaughy, Jr.	—
Jack Nielsen	—
Margo Roberts, Ph.D.	—
Nimish Shah	—

(3) This amount represents cash consulting fees paid during 2020, as described above.
(4) Dr. Hawkins resigned from our board of directors on June 30, 2020.
(5) Dr. Roberts resigned from our board of directors on April 9, 2020.

EXECUTIVE COMPENSATION

This section provides a summary of the compensation of our "named executive officers," who are the three executive officers listed in the "Summary Compensation Table" below. In addition to presenting quantitative compensation information in the tables below, this section also provides a qualitative description of the material factors helpful to an understanding of such data.

Summary Compensation Table

The following table sets forth information regarding compensation awarded to, earned by and paid to our named executive officers with respect to the year ended December 31, 2020.

Name and Principal Position	Salary ($)(1)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation ($)(3)	All Other Compensation ($)(4)	Total ($)
Bronson Crouch (5)					
Chief Executive Officer and Chairman	437,500	3,360,350	1,552,500	9,583	5,359,933
Zachary Roberts, M.D., Ph.D.					
Chief Medical Officer	348,438	1,385,060	275,475	—	2,008,973
Sandeep Laumas, M.D.					
Chief Business Officer	245,833	726,560	269,338	—	1,241,731

(1) Each named executive officer's base salary is a fixed component of annual compensation for performing specific duties and functions, and has been established taking into account each individual's roles, responsibilities, skills and expertise. In 2020, we paid annual base salaries of $300,000, $450,000 and $425,000 to each of Mr. Crouch and Drs. Roberts and Laumas, respectively. For Drs. Roberts and Laumas, the amounts shown represent the pro rata portion of each named executive officer's annual salary earned during 2020 from commencement of his employment in March 2020 and June 2020, respectively, through December 31, 2020. Mr. Crouch's base salary was increased to $575,000 effective July 1, 2020.

(2) This column reflects the aggregate grant date fair value of option awards granted during the year measured pursuant to Financial Accounting Standard Board Accounting Standards Codification Topic 718, the basis for computing stock-based compensation in our financial statements. This calculation assumes that the named executive officer will perform the requisite service for the award to vest in full as required by SEC rules. The assumptions we used in valuing options are described in note to our audited financial statements appearing elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options.

(3) Represents special performance-based bonuses awarded based upon the achievement of certain individual and company performance milestones as determined by our board of directors. Each of our named executive officers are also entitled to bonuses calculated as a target percentage of their annual base salary based upon our board of directors' assessment of their performance and our company's attainment of targeted goals as set by the board of directors in their sole discretion. As of the date of this prospectus, the amounts of these bonuses, if any, earned for 2020 performance have not been determined. The board expects to make such determination in the first quarter of 2021. See "—Agreements with our Named Executive Officers and Potential Payments Upon Termination of Employment."

(4) Represents employer contributions to retirement plans. See "—Retirement Benefits and Other Compensation."

(5) Mr. Crouch is also our Chairman, but he did not receive any additional compensation in his capacity as a director in 2020.

Outstanding Equity Awards at December 31, 2020

The following table sets forth certain information about outstanding equity awards granted to our named executive officers that were outstanding as of December 31, 2020.

	Option Awards(1)				
Name	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price($)(2)	Option Expiration Date
Bronson Crouch	9/16/2019	37,812	794,063(3)	0.41	9/5/2029
	7/1/2020	—	2,435,036(4)	1.38	7/1/2030
Zachary Roberts, M.D., Ph.D.	5/9/2020	100,000	800,000(5)	1.00	5/8/2030
	7/1/2020	—	351,493(4)	1.38	7/1/2030
Sandeep Laumas, M.D.	9/6/2019	995,834	262,500(6)	0.41	9/5/2029
	7/1/2020	—	526,493(4)	1.38	7/1/2030

(1) All of the awards listed in this table were granted under our 2018 Plan.

(2) All of the option awards listed in the table were granted with a per share exercise price equal to or above the estimated fair value of our common stock on the date of grant, as determined in good faith by our board of directors.

(3) 25% of the shares subject to this award vested upon the date of grant, with the remaining shares vesting in equal monthly installments over the three years thereafter, in each case subject to Mr. Crouch's continued service, and subject to accelerated vesting in specified circumstances pursuant to Mr. Crouch's employment agreement, as described below.

(4) 25% of the shares subject to this award will vest on June 30, 2021, with the remaining shares vesting in equal monthly installments over the three years thereafter, in each case subject to the named executive officer's continued service.

(5) 100,000 of the shares subject to this award vested in full upon the closing of the Series B convertible preferred stock financing in June 2020. 450,000 of the shares subject to this award vest, with respect to the first 25% of such shares upon Dr. Roberts' completion of 12 months of continuous service after March 3, 2020, with the remainder of such shares vesting in equal monthly installments over the three years thereafter, in each case subject to Dr. Roberts' continued service. 100,000 of the shares subject to this award will vest in full upon the acceptance of an investigational new drug application or equivalent by regulatory authorities before June 30, 2021 using unmodified TILs in metastatic melanoma. 75,000 of the shares subject to this award will vest in full upon the acceptance of an investigational new drug application or equivalent by regulatory authorities before June 30, 2021 using engineered TILs in an oncology indication if we make a strategic decision to not pursue a near-term clinical program using unmodified TILs in metastatic melanoma. 100,000 of the shares subject to this award will vest in full upon the enrollment of the first patient in a registrational clinical trial or a registrational cohort of a product candidate of unmodified TILs in metastatic melanoma before June 30, 2021. 75,000 of the shares subject to this award will vest in full upon the enrollment of the first patient into a clinical trial using engineered TILs in a solid or hematologic tumor indication before December 31, 2021 if we make the strategic decision to not pursue a near-term clinical program using unmodified TIL in metastatic melanoma.

(6) 600,000 of the shares subject to this award vested with respect to the first 25% of such shares immediately on the date of grant, with the remainder of such shares vesting in equal monthly installments over the three years thereafter, in each case subject to Dr. Laumas' continued service. 658,334 of the shares subject to this award vested in full upon the closing of the Series B convertible preferred stock financing in June 2020.

Agreements with our Named Executive Officers and Potential Payments upon Termination of Employment

We have entered into employment agreements with each of our named executive officers. The agreements generally provide for employment without any specific term and set forth the named executive officer's base salary, bonus potential, eligibility for employee benefits and severance benefits upon a qualifying termination of employment, subject to certain confidentiality, non-solicitation and non-competition provisions. Any potential payments and benefits due upon a qualifying termination of employment or a change in control are further described below.

Bronson Crouch

In June 2020, we entered into an amended and restated executive employment agreement with Mr. Crouch that was effective as of the closing of the first sale of our Series B convertible preferred stock, or the Crouch Effective Date, pursuant to which Mr. Crouch serves as our Chief Executive Officer and as an employee at-will. Under his amended and restated executive employment agreement, Mr. Crouch is entitled to an annual base salary of $575,000, which base salary will be reviewed and may be adjusted by the board of directors on an annual basis. Additionally, Mr. Crouch is eligible to receive an annual performance bonus with a target equal to 65% of his then-current base salary, contingent upon satisfaction of individual performance goals. As contemplated by his amended and restated executive employment agreement, Mr. Crouch was granted an option to acquire 2,435,036 shares of our common stock in June 2020 pursuant to our 2018 Plan, which grant vests as to 25% of the shares on the one-year anniversary of the Crouch Effective Date, with the remainder vesting monthly over the following 36 months such that it will be vested in full on the four-year anniversary of the Crouch Effective Date, subject to Mr. Crouch's continuous service through such vesting dates. Under Mr. Crouch's amended and restated executive employment agreement, 100% of the unvested shares subject to all stock options vest immediately prior to the closing of a change in control as defined in the 2018 Plan.

Under Mr. Crouch's amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Mr. Crouch's employment without "cause" not in connection with a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Mr. Crouch's death or disability), Mr. Crouch shall be eligible to receive the following severance benefits:

- an amount equal to 18 months of his annual base salary;
- payment for health premiums until the earlier of (i) 18 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (iii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date; and
- 12 months of accelerated vesting of all outstanding unvested time-based equity awards.

Under Mr. Crouch's amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Mr. Crouch's employment without "cause" within three months prior to or twelve months following the effective date of a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Mr. Crouch's death or disability), Mr. Crouch shall be eligible to receive the following severance benefits:

- an amount equal to 18 months of his annual base salary;
- payment for health premiums until the earlier of (i) 18 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (iii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date;
- 12 months of accelerated vesting of all outstanding unvested time-based equity awards;
- an amount equal to 1.5 times his full target bonus for the calendar year in which his termination occurs (which shall be equivalent to 97.5% of his then-current base salary); and

- effective as of the later of his change in control termination date or the effective date of the change in control, the vesting and exercisability of all outstanding unvested equity awards held by Mr. Crouch shall be accelerated in full.

As a condition to receiving the foregoing severance benefits, Mr. Crouch must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Mr. Crouch's amended and restated employment agreement, if payments and benefits payable to Mr. Crouch in connection with a change in control are subject to Section 4999 of the Internal Revenue Code of 1986, as amended, or the Code, then such payments and benefits will either be reduced to an amount determined by us in good faith to be the maximum amount that may be provided to Mr. Crouch so that the Section 4999 excise tax does not apply or provided in full, such that Mr. Crouch receives the greater economic benefit notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Zachary Roberts, M.D., Ph.D.

In June 2020, we entered into an amended and restated executive employment agreement with Dr. Roberts that was effective as of the closing of the first sale of our Series B convertible preferred stock, or the Roberts Effective Date, pursuant to which Dr. Roberts serves as our Chief Medical Officer and as an employee at-will. Under his amended and restated executive employment agreement, Dr. Roberts is entitled to an annual base salary of $450,000, which base salary will be reviewed and may be adjusted by the board of directors on an annual basis. Additionally, Dr. Roberts is eligible to receive an annual performance bonus with a target equal to 50% of his then-current base salary, contingent upon satisfaction of individual performance goals. Further, Dr. Roberts is eligible for milestones bonuses as follows:

- if, prior to June 30, 2021, our investigational new drug application or equivalent is accepted by a regulatory authority using unmodified TILs in metastatic melanoma, Dr. Roberts shall be paid a bonus of $50,000, subject to taxes and withholdings, and paid on the first payroll date following such acceptance of the investigational new drug application or equivalent;
- if, prior to June 30, 2021, a first patient is enrolled in a registrational clinical trial or a registrational cohort using unmodified TILs in metastatic melanoma, Dr. Roberts shall be paid a bonus of $50,000, subject to taxes and withholdings, and paid on the first payroll date following such patient's enrollment.

As contemplated by his amended and restated executive employment agreement, Dr. Roberts was granted an option to acquire 351,493 shares of our common stock in June 2020 pursuant to our 2018 Plan, which grant vests as to 25% of the shares on the one-year anniversary of the Roberts Effective Date, with the remainder vesting monthly over the following 36 months such that it will be vested in full on the four-year anniversary of the Roberts Effective Date, subject to Dr. Roberts's continuous service through such vesting dates.

Under Dr. Roberts's amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Dr. Roberts's employment without "cause" not in connection with a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Dr. Roberts's death or disability), Dr. Roberts shall be eligible to receive the following severance benefits:

- an amount equal to 12 months of his annual base salary;
- payment for health premiums until the earlier of (i) 12 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (iii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date; and
- 6 months of accelerated vesting of all outstanding unvested time-based equity awards.

Under Dr. Roberts's amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Dr. Roberts's employment without "cause" within three months prior to or twelve months following the effective date of a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Dr. Roberts's death or disability), Dr. Roberts shall be eligible to receive the following severance benefits:

- an amount equal to 12 months of his annual base salary;
- payment for health premiums until the earlier of (i) 12 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (ii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date;
- 6 months of accelerated vesting of all outstanding unvested time-based equity awards;
- an amount equal to his full target bonus for the calendar year in which his termination occurs (which shall be equivalent to 50% of his then-current base salary); and
- effective as of the later of his change in control termination date or the effective date of the change in control, the vesting and exercisability of all outstanding unvested equity awards held by Dr. Roberts shall be accelerated in full.

As a condition to receiving the foregoing severance benefits, Dr. Roberts must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Dr. Roberts's amended and restated employment agreement, if payments and benefits payable to Dr. Roberts in connection with a change in control are subject to Section 4999 of the Code, then such payments and benefits will either be reduced to an amount determined by us in good faith to be the maximum amount that may be provided to Dr. Roberts so that the Section 4999 excise tax does not apply or provided in full, such that Dr. Roberts receives the greater economic benefit notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Sandeep Laumas, M.D.

In June 2020, we entered into an amended and restated executive employment agreement with Dr. Laumas that was effective as of the closing of the first sale of our Series B convertible preferred stock, or the Laumas Effective Date, pursuant to which Dr. Laumas serves as our Chief Business Officer and Executive Vice President and as an employee at-will. Under his amended and restated executive employment agreement, Dr. Laumas is entitled to an annual base salary of $425,000, which base salary will be reviewed and may be adjusted by the board of directors on an annual basis. Additionally, Dr. Laumas is eligible to receive an annual performance bonus with a target equal to 50% of his then-current base salary, contingent upon satisfaction of individual performance goals. As contemplated by his amended and restated executive employment agreement, Dr. Laumas was granted an option to acquire 526,493 shares of our common shares in June 2020 pursuant to our 2018 Plan, which grant vests as to 25% of the shares on the one-year anniversary of the Laumas Effective Date, with the remainder vesting monthly over the following 36 months such that it will be vested in full on the four-year anniversary of the Laumas Effective Date, subject to Dr. Laumas' continuous service through such vesting dates.

Under Dr. Laumas' amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Dr. Laumas' employment without "cause" not in connection with a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Dr. Laumas' death or disability), Dr. Laumas shall be eligible to receive the following severance benefits:

- an amount equal to 12 months of his annual base salary;
- payment for health premiums until the earlier of (i) 12 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (iii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date; and
- 6 months of accelerated vesting of all outstanding unvested time-based equity awards.

Under Dr. Laumas' amended and restated executive employment agreement, if he resigns for "good reason" or we terminate Dr. Laumas' employment without "cause" within three months prior to or twelve months following the effective date of a change in control (each as defined in the amended and restated executive employment agreement, and excluding a termination on account of Dr. Laumas' death or disability), Dr. Laumas shall be eligible to receive the following severance benefits:

- an amount equal to 12 months of his annual base salary;
- payment for health premiums until the earlier of (i) 12 months; (ii) the date he becomes eligible for substantially equivalent health benefits; or (ii) the date he ceases to be eligible for COBRA continuation coverage at the level existing on the termination date;
- 6 months of accelerated vesting of all outstanding unvested time-based equity awards;
- an amount equal to his full target bonus for the calendar year in which his termination occurs (which shall be equivalent to 50% of his then-current base salary); and
- effective as of the later of his change in control termination date or the effective date of the change in control, the vesting and exercisability of all outstanding unvested equity awards held by Dr. Laumas shall be accelerated in full.

As a condition to receiving the foregoing severance benefits, Dr. Laumas must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Dr. Laumas' amended and restated employment agreement, if payments and benefits payable to Dr. Laumas in connection with a change in control are subject to Section 4999 of the Code, then such payments and benefits will either be reduced to an amount determined by us in good faith to be the maximum amount that may be provided to Dr. Laumas so that the Section 4999 excise tax does not apply or provided in full, such that Dr. Laumas receives the greater economic benefit notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Retirement Benefits and Other Compensation

Our named executive officers were eligible to participate in our employee benefits, including health insurance and group life insurance benefits, on the same basis as our other employees. We maintain an employee savings plan pursuant to Section 401(k) of the Code covering all eligible employees. We have elected to make non-elective contributions totaling to 3% of an eligible employee's gross salary. Mr. Crouch received 3% non-elective contributions once the plan became active in 2020. We generally do not provide other perquisites or personal benefits except in limited circumstances, and we did not provide any such perquisites or personal benefits to our named executive officers in 2020.

Equity Incentive Plans

2021 Equity Incentive Plan

Our board of directors adopted, and our stockholders approved, our 2021 Equity Incentive Plan, or the 2021 Plan, in , 2021. Our 2021 Plan provides for the grant of incentive stock options, or ISOs, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of stock awards to employees, directors, and consultants, including employees and consultants of our affiliates. Our 2021 Plan is a successor to the 2018 Plan, and will become effective on the execution of the underwriting agreement related to this offering.

Authorized Shares. Initially, the maximum number of shares of our common stock that may be issued under our 2021 Plan after it becomes effective will be shares, which is the sum of (i) new shares; plus (ii) the number of shares that remain available for issuance under the 2018 Plan at the time our 2021 Plan becomes effective; and (iii) any shares subject to outstanding stock options or other stock awards that were granted under the 2018 Plan that are forfeited, terminate, expire or are otherwise not issued. In addition, the number of shares of our common stock reserved for issuance under our 2021 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2022 and continuing through January 1, 2031, in an amount equal to % 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 2021 Plan is .

Shares subject to stock awards granted under our 2021 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 2021 Plan. Additionally, shares become available for future grant under our 2021 Plan if they were issued under stock awards under our 2021 Plan if we repurchase them or they are forfeited. 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 2021 Plan. Our board of directors may also delegate to one or more of our officers the authority to (i) designate employees (other than officers) to receive specified stock awards and (ii) determine the number of shares subject to such stock awards. Under our 2021 Plan, our board of directors has the authority to determine and amend the terms of awards and underlying agreements, including:

- recipients;
- the exercise, purchase or strike price of stock awards, if any; the number of shares subject to each stock award;
- the vesting schedule applicable to the awards, together with any vesting acceleration; and
- the form of consideration, if any, payable on exercise or settlement of the award.

Under the 2021 Plan, the board of directors also generally has the authority to effect, with the consent of any adversely affected participant:

- the reduction of the exercise, purchase, or strike price of any outstanding award;
- the cancellation of any outstanding award and the grant in substitution therefore of other awards, cash, or other consideration; or
- 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 2021 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 2021 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

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 option 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 (i) 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 (ii) the option is not exercisable after the expiration of five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock units are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock units 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 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 agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit. Except as otherwise provided in the applicable award agreement, restricted stock units 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 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 grant 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 2021 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

Performance Awards. The 2021 Plan permits the grant of performance-based stock and cash awards. The plan administrator may structure awards so that the shares of our stock, cash, or other property will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period. The performance criteria that will be used to establish such performance goals may be based on any measure of performance selected by the plan administrator. The 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. Unless specified otherwise (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) 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; (9) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any

other regulatory body. In addition, we retain the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the goals. The performance goals may differ from participant to participant and from award to award.

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.

Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid to any non-employee director with respect to any calendar year, including stock awards granted and cash fees paid by us to such non-employee director, will not exceed $ in total value, or in the event such non-employee director is first appointed or elected to the board during such annual period, $ in total value (in each case, calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes).

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 (i) the class and maximum number of shares reserved for issuance under the 2021 Plan, (ii) the class and maximum number of shares by which the share reserve may increase automatically each year, (iii) the class and maximum number of shares that may be issued on the exercise of incentive stock options, and (iv) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. The following applies to stock awards under the 2021 Plan in the event of a corporate transaction, unless otherwise provided in a participant's stock award agreement or other written agreement with us or one of our affiliates or unless otherwise expressly provided by the plan administrator at the time of grant.

In the event of a corporate transaction, any stock awards outstanding under the 2021 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by us with respect to the stock award may be assigned to the successor (or its parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full to a date prior to the effective time of the transaction (contingent upon the effectiveness of the transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the transaction, and any reacquisition or repurchase rights held by us with respect to such stock awards will lapse (contingent upon the effectiveness of the transaction). With respect to performance awards with multiple vesting levels depending on performance level, unless otherwise provided by an award agreement or by the administrator, the award will accelerate at 100% of target. If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by persons other than current participants, such awards will terminate if not exercised (if applicable) prior to the effective time of the transaction, except that any reacquisition or repurchase rights held by us with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the transaction. 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.

In the event a stock award will terminate if not exercised prior to the effective time of a transaction, the plan administrator may provide, in its sole discretion, that the holder of such stock award may not exercise such stock award but instead will receive a payment equal in value to the excess (if any) of (i) the value of the property the participant would have received upon the exercise of the stock award over (ii) any exercise price payable by such holder in connection with such exercise.

Change in Control. In the event of a change in control, as defined under our 2021 Plan, awards granted under our 2021 Plan will not receive automatic acceleration of vesting and exercisability, although this treatment may be provided for in an award agreement.

Under our 2021 Plan, a corporate transaction is defined to include: (i) a sale of all or substantially all of our assets; (ii) the sale or disposition of more than 50% of our outstanding securities; (iii) the consummation of a merger or consolidation where we do not survive the transaction; and (iv) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding before such transaction are converted or exchanged into other property by virtue of the transaction, unless otherwise provided in an award agreement or other written agreement between us and the award holder. Under the 2021 Plan, a change in control is defined to include (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); (3) the approval by the stockholders or the board of directors of a plan of complete dissolution or liquidation of the company, or the occurrence of a complete dissolution or liquidation of the company, except for a liquidation into a parent corporation; (4) 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; and (5) an unapproved change in the majority of the board of directors.

Transferability. A participant may not transfer stock awards under our 2021 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2021 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2021 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 incentive stock options may be granted after the tenth anniversary of the date our board of directors adopted our 2021 Plan. No stock awards may be granted under our 2021 Plan while it is suspended or after it is terminated.

2018 Stock Incentive Plan

Our 2018 Stock Incentive Plan, or the 2018 Plan, was originally adopted by our board of directors on September 20, 2018 and approved by our stockholders on October 3, 2018. The 2018 Plan allows for the grant of ISOs to employees, including employees of any parent or subsidiary, and for the grant of NSOs, restricted stock awards, stock appreciation rights, restricted stock units and other forms of stock awards to employees, directors, and consultants, including employees and consultants of our affiliates. Once our 2021 Plan becomes effective, no further grants will be made under the 2018 Plan. Any outstanding awards granted under the 2018 Plan will remain subject to the terms of the 2018 Plan and applicable award agreements.

Authorized Shares. The maximum number of shares of our common stock that may be issued under the 2018 Plan is 5,666,667 shares. Shares subject to stock awards granted under the 2018 Plan that are cancelled, forfeited, settled in cash or that expire by their terms do not reduce the number of shares available for issuance under the 2018 Plan. Additionally, shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award become available for future grant under the 2018 Plan.

Administration. Our board of directors, or a duly authorized committee thereof, administers the 2018 Plan. Our board of directors may also delegate to one or more of our officers the authority to designate employees, other than such authorized officers, to receive stock awards or to determine the number of shares of our common stock to be subject to such stock awards. Under the 2018 Plan, the plan administrator has the full authority and discretion to take any actions it deems necessary or advisable for the 2018 Plan's administration.

Stock Options. ISOs and NSOs are granted pursuant to award agreements adopted by the plan administrator. Each award agreement specifies the number of shares subject to the option and the exercise price, provided that the exercise price of a stock option generally cannot be less than 100% (or 110% in the case of ISOs granted to certain stockholders) 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 applicable award agreement. Payment for the purchase of common stock issued upon the exercise of a stock option may be made in cash or cash equivalents. However, the plan administrator may also allow for other forms of consideration, including (i) surrendering shares of common stock already owned by a participant, (ii) delivery of a promissory note, (iii) a broker-assisted cashless exercise, (iv) by a "net exercise" arrangement, or (v) by other forms consistent with applicable law. The award agreements specify the term of stock options granted under the 2018 Plan, up to a maximum of 10 years (or five years in the case of ISOs granted to certain stockholders). The plan administrator shall determine the effect on a stock award of the disability, death, retirement, authorized leave of absence, or any other change or purported change in a holder's status. Unless the plan administrator provides otherwise, stock options generally are not transferable except by will, the laws of descent and distribution.

Changes to Capital Structure. In the event of a subdivision of our outstanding common stock, a declaration of a dividend payable in shares, a declaration of an extraordinary dividend payable in a form other than shares in an amount that has a material effect on the fair market value of our common stock, a combination or consolidation of our outstanding common stock into a lesser number of shares, a recapitalization, a spin-off, a reclassification or similar occurrence, the plan administrator will make appropriate adjustments to the following: (i) the number and class of shares available for future stock awards, (ii) the number and class of shares covered by each outstanding stock award, (iii) the exercise price under each outstanding stock award, and (iv) the price of shares subject to our right of repurchase.

Corporate Transactions. The 2018 Plan provides that in the event of a specified corporate transaction, including without limitation a merger or other consolidation, or the sale or other disposition of all or substantially all of our stock or assets, or in the event of such other corporate transaction, such as a separation or reorganization, the plan administrator will determine how to treat each outstanding stock award. The plan administrator may provide for the:

- continuation of stock awards, if we are the surviving corporation;
- assumption or substitution, in whole or in part, of a stock award by a successor corporation;
- exercisability and settlement, in whole or in part, of stock awards to the extent vested and exercisable under the terms of the award agreement followed by the cancellation of such stock awards (whether or not then vested or exercisable) upon or immediately prior to the effectiveness of the transaction; or
- settlement of the intrinsic value of stock awards to the extent vested and exercisable under the terms of the award agreement, with payment made in cash, cash equivalents or property, followed by the cancellation of such stock awards (whether or not then vested or exercisable).

The plan administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner. The plan administrator may take different actions with respect to the vested and unvested portions of a stock award.

Amendment or Termination. Our board has the authority to amend, suspend, or terminate the 2018 Plan at any time and for any reason, provided that such action may not have a material adverse effect on any stock award previously granted under the 2018 Plan without the participant's consent. Amendment does not require stockholder approval unless such amendment (i) increases the number of shares available for issuance under the 2018 Plan, or (ii) materially changes the class of persons who are eligible for the grant of awards.

2021 Employee Stock Purchase Plan

Our board of directors adopted, and our stockholders approved, our 2021 Employee Stock Purchase Plan, or the ESPP, in , 2021. The ESPP will become effective on the execution 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 shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The ESPP will initially provide participating employees with the opportunity to purchase up to an aggregate of shares of our common stock. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, starting on January 1, 2022 and continuing through January 1, 2031, by the lesser of (i) % 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 (ii) 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 (i) and (ii). As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors intends to delegate concurrent 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 % 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 (i) 85% of the fair market value of a share of our common stock on the first date of an offering; or (ii) 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: (i) being customarily employed for more than 20 hours per week; (ii) being customarily employed for more than five months per calendar year; or (iii) 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 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: (i) the number of shares reserved under the ESPP; (ii) the maximum number of shares by which the share reserve may increase automatically each year; (iii) the number of shares and purchase price of all outstanding purchase rights; and (iv) the number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, including: (i) a sale of all or substantially all of our assets; (ii) the sale or disposition of more than 50% of our outstanding securities;

(iii) the consummation of a merger or consolidation where we do not survive the transaction; and (iv) the consummation of 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, 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 ten business days before such corporate transaction, and such purchase rights will terminate immediately.

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.

Limitations on Liability and Indemnification Matters

Upon the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any 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
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we are required to indemnify our directors to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we are required to advance expenses incurred by a director in advance of the final disposition of any action or proceeding, and 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 that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

We have entered into indemnification agreements with each of our directors and expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers. We also maintain customary directors' and officers' liability insurance.

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 our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against

our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for our directors, executive officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since our inception in August 2018 to which we have been a participant in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or holders of more than 5% of our voting securities, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements that are described under "Management—Non-Employee Director Compensation" and "Executive Compensation."

Private Placements of Our Securities

Series A Convertible Preferred Stock Financing

In March 2019, we entered into a preferred stock purchase agreement with Curative Ventures V LLC, which was amended in May 2020, pursuant to which we issued and sold to Curative Ventures V LLC an aggregate of 25,000,000 shares of our Series A convertible preferred stock at a purchase price of $1.00 per share for aggregate gross proceeds of $25.0 million. The financing closed in March 2019, September 2019 and May 2020.

The table below sets forth the aggregate number of shares of Series A convertible preferred stock issued to our related parties in this financing:

Name	Series A Convertible Preferred Stock (#)	Aggregate Purchase Price ($)
Curative Ventures V LLC (1)	25,000,000	25,000,000

(1) Bronson Crouch, our Chief Executive Officer and Chairman, is the Chief Executive Officer of Curative Ventures V LLC and has sole voting and investment power with respect to the shares held by Curative Ventures V LLC. Entities affiliated with Curative Ventures V LLC collectively hold more than 5% of our capital stock prior to this offering.

Series B Convertible Preferred Stock Financing

In June 2020, we entered into a preferred stock purchase agreement with certain investors, including beneficial owners of greater than 5% of our capital stock, members of our board of directors and affiliates of members of our board of directors, pursuant to which we issued and sold to such investors an aggregate of 34,600,523 shares of our Series B convertible preferred stock at a purchase price of $4.92 per share for aggregate gross proceeds of $170.2 million. The financing closed in June 2020.

The table below sets forth the aggregate number of shares of Series B convertible preferred stock issued to our related parties in this financing:

Name	Series B Convertible Preferred Stock (#)	Aggregate Purchase Price ($)
Curative Ventures V LLC (1)	5,082,333	24,999,996
Entities affiliated with Venrock (2)	4,675,747	22,999,999
Ibisbill, LP (3)	5,895,507	28,999,999
Vivo Capital Fund IX, L.P. (4)	9,758,080	47,999,996

(1) Bronson Crouch, our Chief Executive Officer and Chairman, is the Chief Executive Officer of Curative Ventures V LLC and has sole voting and investment power with respect to the shares held by Curative Ventures V LLC. Entities affiliated with Curative Ventures V LLC collectively hold more than 5% of our capital stock prior to this offering.

(2) Nimish Shah, a member of our board of directors, is a partner at Venrock. Entities affiliated with Venrock collectively hold more than 5% of our capital stock prior to this offering.
(3) R. Kent McGaughy, Jr., a member of our board of directors, is affiliated with Ibisbill, LP.
(4) Jack Nielsen, a member of our board of directors, is affiliated with Vivo Capital Fund IX, L.P.

Series C Convertible Preferred Stock Financing

In December 2020, we entered into a preferred stock purchase agreement with certain investors, including beneficial owners of greater than 5% of our capital stock, members of our board of directors and affiliates of members of our board of directors, pursuant to which we issued and sold to such investors an aggregate of 10,575,523 shares of our Series C convertible preferred stock at a purchase price of $12.58 per share for aggregate net proceeds of $133.0 million. In January and February 2021, we issued and sold an additional 4,174,550 shares of Series C convertible preferred stock for aggregate net proceeds of $52.5 million. The financing closed in December 2020, January 2021 and February 2021.

The table below sets forth the aggregate number of shares of Series C convertible preferred stock issued to our related parties in this financing:

Name	Series C Convertible Preferred Stock (#)	Aggregate Purchase Price ($)
Curative Ventures V LLC (1)	1,192,728	$ 14,999,986
Entities associated with Venrock (2)	795,151	$ 9,999,978
Ibisbill, LP (3)	795,152	$ 9,999,991
Vivo Capital Fund IX, L.P. (4)	397,576	$ 4,999,995

(1) Bronson Crouch, our Chief Executive Officer and Chairman, is the Chief Executive Officer of Curative Ventures V LLC and has sole voting and investment power with respect to the shares held by Curative Ventures V LLC. Entities affiliated with Curative Ventures V LLC collectively hold more than 5% of our capital stock prior to this offering.
(2) Nimish Shah, a member of our board of directors, is a partner at Venrock. Entities affiliated with Venrock collectively hold more than 5% of our capital stock prior to this offering.
(3) R. Kent McGaughy, Jr., a member of our board of directors, is affiliated with Ibisbill, LP.
(4) Jack Nielsen, a member of our board of directors, is affiliated with Vivo Capital Fund IX, L.P.

Promissory Note with Bronson Crouch

In November 2020, we entered into a partial recourse promissory note with Mr. Crouch, our Chief Executive Officer and Chairman, pursuant to which we loaned him the principal amount of $1,079,581 to early exercise stock options. The note accrued interest at 2.5% compounding annually and could be repaid at any time without penalty. Mr. Crouch repaid the principal amount and accrued interest under this promissory note in full in January 2021.

Investors' Rights, Voting and Right of First Refusal Agreements

In connection with the sales of convertible preferred stock described above, we entered into an amended and restated investors' rights agreement, an amended and restated voting agreement and an amended and restated right of first refusal and co-sale agreement containing registration rights, information rights, voting rights and rights of first refusal, among other things, with the holders of our convertible preferred stock. These agreements will terminate upon the closing of this offering, except for the registration rights granted under our amended and restated investors' rights agreement, as more fully described in the section of this prospectus titled "Description of Capital Stock—Registration Rights."

Consulting Agreements

We have entered into consulting agreements with certain of our non-employee directors. For more information regarding our employment agreements with our named executive officers, see “Management—Non-Employee Director Compensation.”

Employment Arrangements

We have entered into employment agreements or offer letter agreements with certain of our executive officers. For more information regarding our employment agreements with our named executive officers, see “Executive Compensation.”

Indemnification Agreements

Our amended and restated certificate of incorporation that will be in effect upon the closing of this offering will contain provisions limiting the liability of directors, and our amended and restated bylaws will provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

In addition, we have entered into indemnification agreements with each of our directors, and we expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. For more information regarding these agreements, see “Executive Compensation—Limitations on Liability and Indemnification Matters.”

Related Person Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. In connection with this offering, we have adopted a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions, which policy will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction will be a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director will not be covered by this policy. A related person will be any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our Code of Conduct that we expect to adopt prior to the closing of this offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our

audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- 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 or to or from employees generally.

The policy will require that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

All of the transactions described in this section were entered into prior to the adoption of this policy. Although we have not had a written policy for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our stockholders.

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;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC. Under these rules, beneficial ownership includes any shares of common stock as to which the individual or entity has sole or shared voting power or investment power. Applicable percentage ownership is based on shares of common stock outstanding as of , 2021, after giving effect to the conversion of all of our convertible preferred stock. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options held by such person that are currently exercisable or will become exercisable within 60 days of , 2021 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless noted otherwise, the address of all listed stockholders is c/o Instil Bio, Inc., 3963 Maple Avenue, Suite 350, Dallas, Texas 75219.

Except as indicated by the footnotes below, we believe, based on information furnished to us, that each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% stockholders			
Curative Ventures V LLC			%
Vivo Capital Fund IX, L.P.			
Ibisbill, LP			
Entities associated with Venrock			
Named Executive Officers and Directors			
Bronson Crouch			
Zachary Roberts, M.D., Ph.D.			
Sandeep Laumas, M.D.			
Gwendolyn Binder, Ph.D.			
Neil Gibson, Ph.D.			
George Matcham, Ph.D.			
R. Kent McGaughy, Jr.			
Jack Nielsen			
Nimish Shah			
All current executive officers and directors as a group (10 persons)			

* Represents beneficial ownership of less than one percent.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock, certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as each will be in effect following the completion of this offering, and certain provisions of Delaware law are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the completion of this offering, our amended and restated certificate of incorporation will authorize us to issue up to shares of common stock, $0.000001 par value per share, and shares of preferred stock, $0.000001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time.

As of December 31, 2020, we had outstanding shares of common stock, held by stockholders of record. As of December 31, 2020, after giving effect to the conversion of all of the outstanding shares of our convertible preferred stock, there would have been shares of common stock issued and outstanding, held by stockholders of record.

In March 2020, we issued 4,700,000 shares of our common stock to the shareholders of Immetacyte pursuant to our acquisition of Immetacyte. Of these shares, 2,636,667 shares are subject to restrictions on transfer and achievement of certain regulatory approval and development milestones.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. The affirmative vote of holders of at least $66^{2}/_{3}$% of the voting power of all of the then-outstanding shares of capital stock, voting as a single class, will be required to amend certain provisions of our amended and restated certificate of incorporation, including provisions relating to amending our amended and restated bylaws, the classified board, the size of our board, removal of directors, director liability, vacancies on our board, special meetings, stockholder notices, actions by written consent and exclusive forum.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of 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 and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the right of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

As of December 31, 2020, there were shares of our preferred stock outstanding consisting of 25,000,000 shares of our Series A convertible preferred stock, 34,600,523 shares of our Series B convertible preferred stock and shares of our Series C convertible preferred stock. We issued shares of our Series C convertible preferred stock subsequent to December 31, 2020. All currently outstanding shares of convertible preferred stock will be converted into an aggregate of shares of common stock upon the closing of this offering.

Following the closing of this offering, our board of directors will have the authority under our amended and restated certificate of incorporation, without further action by our stockholders, to issue up to shares of 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 our common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. 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 control of us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock.

We have no present plans to issue any shares of preferred stock following the completion of this offering.

Options

As of December 31, 2020, there were options to purchase shares of common stock outstanding. For additional information regarding the terms of our 2018 Equity Incentive Plan, see “Executive Compensation—Equity Incentive Plans.”

Registration Rights

We, the holders of our existing convertible preferred stock and certain holders of our existing common stock have entered into an amended and restated investors’ rights agreement. The registration rights provisions of this agreement provide those holders with demand, piggyback and Form S-3 registration rights with respect to the shares of common stock currently held by them and issuable to them upon conversion of our convertible preferred stock in connection with our initial public offering. These shares are collectively referred to herein as registrable securities.

Demand Registration Rights

At any time beginning 180 days following the effective date of the registration statement of which this prospectus is a part, the holders of a majority of registrable securities then outstanding have the right to demand that we file a registration statement covering at least 40% of the registrable securities then outstanding. These registration rights are subject to specified conditions and limitations, including the right of the underwriters, if any, to limit the number of shares included in any such registration under specified circumstances. Upon such a request, we are required to effect the registration as soon as practicable, but in any event no later than 60 days after the receipt of such request. An aggregate of 74,350,596 shares of common stock will be entitled to these demand registration rights.

Piggyback Registration Rights

If we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the holders of registrable securities will each be entitled to notice of the registration and will be entitled to include their shares of common stock in the registration statement. These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under specified circumstances. An aggregate of 74,350,596 shares of common stock will be entitled to these piggyback registration rights.

Registration on Form S-3

At any time after we become eligible to file a registration statement on Form S-3, the holders of at least 30% of the registrable securities then outstanding will be entitled to request to have such shares registered by us on a Form S-3 registration statement. These Form S-3 registration rights are subject to other specified conditions and limitations, including the condition that the anticipated aggregate offering price, net of certain selling expenses, is at least $5.0 million. Upon receipt of this request, the holders of registrable securities will each be entitled to participate in this registration. An aggregate of 74,350,596 shares of common stock will be entitled to these Form S-3 registration rights.

Expenses of Registration

We are required to pay all expenses, including fees and expenses of one counsel to represent the selling stockholders (up to $50,000 total), relating to any demand, piggyback or Form S-3 registration, other than underwriting discounts and commissions, stock transfer taxes and any additional fees of counsel for the selling stockholders, subject to specified conditions and limitations. We are not required to pay registration expenses if a demand registration request is withdrawn at the request of a majority of holders of registrable securities to be registered, unless holders of a majority of the registrable securities agree to forfeit their right to one demand registration.

The amended and restated investors' rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the applicable registration statement attributable to us, and the selling stockholders are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them, subject to certain limitations.

Termination of Registration Rights

The registration rights granted under the investors' rights agreement will terminate with respect to any particular stockholder upon the earlier of (a) the closing of a deemed liquidation event, as defined in our certificate of incorporation, (b) with respect to each stockholder, at such time such stockholder is able to sell all of its shares pursuant to Rule 144 or another similar exemption under the Securities Act during a three-month period without registration and (c) the fifth anniversary of the closing of this offering.

Anti-Takeover Provisions

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon completion of the transaction that 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 began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) 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
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include the following:

- any merger or consolidation involving the corporation or any direct or indirect majority-owned subsidiary of the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder (in one transaction or a series of transactions);
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation or by any direct or indirect majority-owned subsidiary of the corporation of any stock of the corporation or of such subsidiary to the interested stockholder;
- any transaction involving the corporation or any direct or indirect majority-owned subsidiary of the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Our amended and restated certificate of incorporation to be in effect upon the completion of this offering, or our restated certificate, will provide for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our restated certificate and our amended and restated bylaws to be effective upon the completion of this offering, or our restated bylaws, will also provide that directors may be removed by the stockholders only for cause upon the vote of $66^{2}/_{3}\%$ or more of our outstanding common stock. Furthermore, the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum.

Under our restated certificate of incorporation and amended and restated bylaws our stockholders will not have cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Our restated certificate and restated bylaws will also provide that all stockholder actions must be effected at a duly called meeting of stockholders and will eliminate the right of stockholders to act by written consent without a meeting. Our restated bylaws will also provide that only our Chairman of the board, Chief Executive Officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors may call a special meeting of stockholders.

Our restated bylaws will also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and will specify requirements as to the form and content of a stockholder's notice.

Our restated certificate and restated bylaws will provide that the stockholders cannot amend many of the provisions described above except by a vote of 66$^{2}/_{3}$% or more of our outstanding common stock.

As described in "—Preferred Stock" above, our restated certificate will give our board of directors the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, with any rights, preferences and privileges as they may designate, including the right to approve an acquisition or other change in control.

The combination of these provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Choice of Forum

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the state of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate, or our amended and restated bylaws; or
- any action asserting a claim against us that is 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. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims.

To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business.

Our amended and restated certificate of incorporation will further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent's address is .

Listing

We have applied to list our common stock on the Nasdaq Global Market under the trading symbol "TIL."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market existed for our common stock. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares outstanding as of December 31, 2020, upon the closing of this offering and assuming no exercise of the underwriters' option to purchase additional shares, shares of common stock will be outstanding, assuming no outstanding options are exercised. All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our "affiliates," as that term is defined under Rule 144 under the Securities Act. The remaining shares of common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if their resale qualifies for exemption from registration described below under Rule 144 promulgated under the Securities Act or another available exemption.

As a result of the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, the shares of common stock that will be deemed restricted securities after this offering will be available for sale in the public market as follows:

- none of the existing restricted shares will be eligible for immediate sale upon the completion of this offering; and
- restricted shares will be eligible for sale in the public market upon expiration of lock-up agreements 180 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701 under the Securities Act, which are summarized below.

Rule 144

In general, non-affiliate persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates (subject to certain exceptions);
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted

securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting. Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after the completion of this offering based on the number of shares outstanding as of December 31, 2020; or
- the average weekly trading volume of our common stock on the stock exchange on which our shares are listed during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six-month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and in the section titled “Underwriting” and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our equity plans. We expect to file the registration statement covering shares offered pursuant to our stock plans as soon as practicable after the closing of this offering, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market, subject to compliance with the resale provisions of Rule 144 and expiration or release from the terms of the lock-up agreements described above.

Lock-Up Agreements

We, our executive officers and directors and substantially all of the holders of our common stock outstanding on the date of this prospectus have entered into lock-up agreements with the underwriters or otherwise agreed, subject to certain exceptions, that we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or otherwise dispose of or hedge any of our shares of common stock, any options or warrants to purchase shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock,

without the prior written consent of Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC for a period of 180 days from the date of this prospectus.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into an agreement with the holders of our convertible preferred stock that contains market stand-off provisions imposing restrictions on the ability of such security holders to sell or otherwise transfer or dispose of any registrable securities for a period of 180 days following the date of this prospectus.

Registration Rights

Upon the closing of this offering, the holders of 74,350,596 shares of our common stock, including common stock issuable upon the conversion of our convertible preferred stock, or their transferees, will be entitled to specified rights with respect to the registration of their registrable shares under the Securities Act, subject to certain limitations and the expiration, waiver or termination of the lock-up agreements. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon effectiveness of the registration. See “Description of Capital Stock—Registration Rights” for additional information.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of certain material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the ownership and disposition of our common stock offered pursuant to this prospectus. This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, does not address the potential application of the Medicare contribution tax on net investment income, the alternative minimum tax, or the special tax accounting rules under Section 451(b) of the Code, and does not address any U.S. federal non-income tax consequences such as estate or gift tax consequences or any tax consequences arising under any state, local, or non-U.S. tax laws, or any other U.S. federal tax laws. This discussion is based on the Code and applicable Treasury Regulations promulgated thereunder, judicial decisions and published rulings, and administrative pronouncements of the Internal Revenue Service, or IRS, all as in effect as of the date hereof. These authorities are subject to differing interpretations and may change, possibly retroactively, resulting in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This discussion is limited to non-U.S. holders who purchase our common stock offered by this prospectus and who hold 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 of the U.S. federal income tax consequences that may be relevant to a particular holder in light of such holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to holders subject to special rules under the U.S. federal income tax laws, including:

- certain former citizens or long-term residents of the United States;
- partnerships or other entities or arrangements treated as partnerships, pass-throughs, or disregarded entities for U.S. federal income tax purposes (and investors therein), S corporations or other pass-through entities (including hybrid entities);
- "controlled foreign corporations;"
- "passive foreign investment companies;"
- corporations that accumulate earnings to avoid U.S. federal income tax;
- banks, financial institutions, investment funds, insurance companies, brokers or dealers in securities;
- persons who have elected to mark securities to market;
- tax-exempt organizations and governmental organizations;
- tax-qualified retirement plans;
- persons that acquired our common stock through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan;
- persons that acquired our common stock pursuant to the exercise of warrants or conversion rights under convertible instruments;
- persons who hold common stock that constitutes "qualified small business stock" under Section 1202 of the Code, or "Section 1244 stock" under Section 1244 of the Code;
- persons who acquired our common stock in a transaction subject to the gain rollover provisions of the Code (including Section 1045 of the Code);
- persons that own, or have owned, actually or constructively, more than 5% of our common stock;

- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds; and
- persons holding our common stock as part of a hedging or conversion transaction or straddle, or a constructive sale, or other risk reduction strategy or integrated investment.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. Partnerships holding our common stock and the partners in such partnerships are urged to consult their tax advisors about the particular U.S. federal income tax consequences to them of holding and disposing of our common stock.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING, AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, OR NON-U.S. TAX LAWS AND ANY U.S. FEDERAL NON-INCOME TAX LAWS, OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of Non-U.S. Holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is not a "U.S. person" or a partnership (including any entity or arrangement treated as a partnership) for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or entity treated as a corporation for U.S. federal income tax purposes) created or organized 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 (1) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (2) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions on Our Common Stock

As described in the section titled "Dividend Policy," we have not paid and do not anticipate paying dividends in the foreseeable future. However, if we make cash or other property distributions on our common stock, such distributions 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. Amounts that exceed such current and accumulated earnings and profits and, therefore, are not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and will first be applied against and reduce a holder's tax basis in our common stock, but not below zero. Any amount distributed in excess of basis will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described under the section titled "—Gain on Disposition of Our Common Stock" below.

Subject to the discussions below regarding effectively connected income, backup withholding, and Sections 1471 through 1474 of the Code, or FATCA, dividends paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish us or the applicable withholding agent with a valid IRS Form W-8BEN or IRS

Form W-8BEN-E (or applicable successor form) certifying such holder's qualification for the reduced rate. This certification must be provided to us or the applicable withholding agent before the payment of dividends and must be updated periodically. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or the applicable withholding agent, either directly or through other intermediaries.

Non-U.S. holders that do not provide the required certification on a timely basis, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on our common stock are effectively connected with such holder's U.S. trade or business (and are attributable to such holder's permanent establishment in the United States, if required by an applicable tax treaty), the non-U.S. holder will generally be exempt from U.S. federal withholding tax. To claim the exemption, the non-U.S. holder must generally furnish a valid IRS Form W-8ECI (or applicable successor form) to the applicable withholding agent.

However, any such effectively connected dividends paid on our common stock generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Gain on Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and FATCA, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized on the sale or other disposition of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States and, if required by an applicable income tax treaty, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States;
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition, and certain other requirements are met; or
- our common stock constitutes a "United States real property interest" by reason of our status as a United States real property holding corporation, or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition or the non-U.S. holder's holding period for our common stock, and our common stock is not regularly traded on an established securities market as defined by applicable Treasury Regulations.

Determining whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other trade or business assets and our foreign real property interests. We do not believe that we are, or have been, and do not anticipate becoming a USRPHC for U.S. federal income tax purposes, although there can be no assurance we will not in the future become a USRPHC. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder of our common stock may not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. Gain described in the second bullet point above will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), but may be offset by certain U.S.-source capital losses (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Annual reports are required to be filed with the IRS and provided to each non-U.S. holder indicating the amount of distributions on our common stock paid to such holder and the amount of any tax withheld with respect to those distributions. These information reporting requirements apply even if no withholding was required (because the distributions were effectively connected with the holder's conduct of a U.S. trade or business, or withholding was reduced or eliminated by an applicable income tax treaty) and regardless of whether such distributions constitute dividends. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, currently at a 24% rate, generally will not apply to payments to a non-U.S. holder of dividends on or the gross proceeds of a disposition of our common stock provided the non-U.S. holder furnishes the required certification for its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E, or IRS Form W-8ECI, or certain other requirements are met. Backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Backup withholding is not an additional tax. If any amount is withheld under the backup withholding rules, the non-U.S. holder should consult with a U.S. tax advisor regarding the possibility of and procedure for obtaining a refund or a credit against the non-U.S. holder's U.S. federal income tax liability, if any.

Withholding on Foreign Entities

FATCA imposes a U.S. federal withholding tax of 30% on certain payments made to a "foreign financial institution" (as specially defined under these rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding certain U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or an exemption applies. FATCA also generally will impose a U.S. federal withholding tax of 30% on certain payments made to a non-financial foreign entity unless such entity provides the withholding agent a certification identifying certain direct and indirect U.S. owners of the entity or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. FATCA applies to dividends paid on our common stock and, subject to the proposed Treasury Regulations described below, also applies to gross proceeds from sales or other dispositions of our common stock. The U.S. Treasury Department released proposed Treasury Regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our common stock. In its preamble to such proposed Treasury Regulations, the U.S. Treasury Department stated that taxpayers may generally rely on the proposed Treasury Regulations until final regulations are issued.

Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of this legislation on their investment in our common stock.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Jefferies LLC	
Cowen and Company, LLC	
Truist Securities, Inc.	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us	$	$	$
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We have applied to list our common stock on Nasdaq under the symbol “TIL.”

We and all directors and officers and the holders of substantially all of our outstanding stock and stock options have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- 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 to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock.

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph to do not apply to:

- transactions of shares of common stock or any other securities acquired in this offer or in open market transactions after the completion of the offering, provided that no filing under Section 16(a) of the Exchange Act is required or voluntarily made during the restricted period in connection with subsequent sales of our common stock or other securities acquired in this offering or in such open market transactions;
- transfers of common stock or any security convertible into or exercisable or exchangeable for common stock (i) as a bona fide gift or charitable contribution, (ii) by will or intestacy or to any immediate family of such person or to a trust whose beneficiaries consist exclusively of one or more of such person and/or any immediate family, (iii) to limited partners, members, stockholders or holders of similar equity interests of such person or (iv) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of such person, or to any investment fund or other entity controlled or managed by such person or affiliates of such person; provided that (A) each transferee or distributee shall sign and deliver a lock-up agreement and (B) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock, shall be required or shall be voluntarily made during the restricted period;
- transfers of common stock or any security convertible into or exercisable or exchangeable for common stock by operation of law pursuant to a qualified domestic order or other court order or in connection with a divorce settlement; provided that (i) any filing under Section 16(a) of the Exchange Act made during the restricted period shall clearly indicate in the footnotes thereto that (A) the filing relates to the circumstances described herein and (B) no securities were sold by such person and (ii) such person does not otherwise voluntarily effect any other public filing or report regarding such transfers during the restricted period;

- the receipt by such person from the company of shares of common stock upon the transfer or disposition of shares of common stock or any securities convertible into common stock to the company upon a vesting or settlement event of the company's securities or vesting of restricted stock unit awards or upon the exercise of options to purchase the company's securities on a "cashless" or "net exercise" basis, in each case pursuant to any equity incentive plan of the company described herein and to the extent permitted by the instruments representing such restricted stock unit awards or options outstanding as of the date of the hereof (and solely to cover withholding tax obligations in connection with such transaction and any transfer to the company for the payment of taxes as a result of such transaction), provided that (i) the shares received upon exercise or settlement of the option are subject to the terms of a lock-up agreement, (ii) no public disclosure or filing under Section 16(a) of the Exchange Act shall be voluntarily made during the restricted period and (iii) to the extent a filing under Section 16(a) of the Exchange Act is required during the restricted period as a result of transfers described herein, it shall (A) clearly indicate that the filing relates to the circumstances described herein, including that the securities remain subject to the terms of a lock-up agreement and (B) no securities were sold by such person other than as contemplated hereby;
- transfers to the company in connection with the repurchase of common stock in connection with the termination of such person's employment with the company pursuant to contractual agreements with the company as in effect as of the date of this prospectus and disclosed to the representatives, provided that no public disclosure or filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made during the restricted period;
- the conversion of the outstanding preferred stock of the company described herein into shares of common stock of the company, provided that such shares of common stock remain subject to the terms of a lock-up agreement;
- facilitating the establishment of a trading plan on behalf of a stockholder, officer or director of the company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of such person or the company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period; or
- transfers pursuant to a bona fide third-party tender offer for all outstanding common stock or securities convertible into or exchangeable for common stock of the company, merger, consolidation or other similar transaction approved by the company's board of directors and made to all holders of the company's securities involving a change of control of the company; provided that in the event that such tender offer, merger, consolidation or other such transaction is not completed, such securities held by such person shall remain subject to the provisions of the lock-up agreement.

Morgan Stanley & Co. LLC, Jefferies LLC and Cowen and Company, LLC, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any 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 this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a “Relevant State”), no securities have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and

notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of securities may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 ("FSMA")) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Canada

The shares may be sold 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 shares must be made in accordance with an exemption from, 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 prospectus (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 for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) 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.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Switzerland

This document is not intended to constitute an offer or solicitation to purchase or invest in the securities. The securities may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act ("FinSA") and no application has or will be made to admit the securities to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this document nor any other offering or marketing material relating to the securities constitutes a prospectus pursuant to the FinSA, and neither this document nor any other offering or marketing material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the "FIEL") has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, 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, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors ("QII")

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

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), or the 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), or the 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, or 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, or 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.

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the Securities and Futures (Capital Markets Products) Regulations 2018 (the "CMP Regulations 2018"), the Company has determined, and hereby notifies all relevant persons (as defined in the CMP Regulations 2018), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 – 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the "Addressed Investors"); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 – 1968, subject to certain conditions (the "Qualified Investors"). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 – 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 – 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 – 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 – 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 – 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor’s name, address and passport number or Israeli identification number.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Cooley LLP, New York, New York. Certain legal matters will be passed upon for the underwriters by Latham and Watkins, LLP, New York, New York. As of the date of this prospectus, GC&H Investments, LLC, an entity consisting of current and former partners and associates of Cooley LLP, beneficially holds an aggregate of 120,173 shares of our common stock on an as-converted basis.

EXPERTS

The financial statements included in this Prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE 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, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to our company 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*. Upon 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 at *www.sec.gov*.

We also maintain a website at instilbio.com, at which 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 part of, and is not incorporated into, this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Instil Bio, Inc.:

Opinion on the Financial Statements

We have audited the accompanying balance sheet of Instil Bio, Inc. (the "Company") as of December 31, 2019, the related statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit, and cash flows for the year ended December 31, 2019, 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 as of December 31, 2019, and the results of its operations and its cash flows for the year ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

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 and in accordance with auditing standards generally accepted in the United States of America. 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/ Deloitte & Touche LLP

San Diego, California
January 11, 2021

We have served as the Company's auditor since 2020.

INSTIL BIO INC.

BALANCE SHEET
(in thousands, except share and per share amounts)

	December 31, 2019
ASSETS	
Current assets:	
Cash and cash equivalents	$ 8,895
Prepaid expenses and other current assets	391
Total current assets	9,286
Property and equipment, net	190
Total assets	$ 9,476
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT	
Current liabilities:	
Accounts payable	$ 979
Accrued expenses and other current liabilities	441
Total current liabilities	1,420
Total liabilities	1,420
Commitments and contingencies (Note 5)	
Convertible preferred stock, $0.000001 par value; 15,000,000 shares authorized, issued and outstanding as of December 31, 2019; $15,000 aggregate liquidation preference as of December 31, 2019	14,948
Stockholders' deficit:	
Common stock, $0.000001 par value; 150,000,000 shares authorized, 9,333,330 shares issued and outstanding as of December 31, 2019	—
Additional paid-in capital	293
Accumulated deficit	(7,185)
Total stockholders' deficit	(6,892)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 9,476

The accompanying notes are an integral part of these financial statements.

INSTIL BIO INC.

STATEMENT OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except share and per share amounts)

	Year ended December 31, 2019
Operating expenses:	
Research and development	$ 4,027
General and administrative	2,558
Total operating expenses	6,585
Loss from operations	(6,585)
Interest income	68
Other expense	(5)
Net loss and comprehensive loss	$ (6,522)
Net loss per share, basic and diluted	$ (0.66)
Weighted-average shares used in computing net loss per share, basic and diluted	9,872,144

The accompanying notes are an integral part of these financial statements.

INSTIL BIO INC.

STATEMENT OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(in thousands, except share and per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance—December 31, 2018	—	$ —	12,666,664	$ —	$ —	$ (663)	$ (663)
Issuance of Series A convertible preferred shares at $1.00 per share, net of issuance costs of $52	15,000,000	14,948	—	—	—	—	—
Repurchase and retirement of common stock	—	—	(3,333,334)	—	—	—	—
Stock-based compensation	—	—	—	—	293	—	293
Net loss	—	—	—	—	—	(6,522)	(6,522)
Balance—December 31, 2019	15,000,000	$ 14,948	9,333,330	$ —	$ 293	$ (7,185)	$ (6,892)

The accompanying notes are an integral part of these financial statements.

INSTIL BIO INC.

STATEMENT OF CASH FLOWS
(in thousands)

	Year ended December 31, 2019
Cash flows from operating activities:	
Net loss	$ (6,522)
Adjustments to reconcile net loss to net cash used in operating activities:	
Depreciation and amortization	20
Stock-based compensation	293
In-process research and development expenses	550
Changes in operating assets and liabilities:	
Prepaid expenses and other current assets	(384)
Accounts payable	309
Accrued expenses and other current liabilities	441
Net cash used in operating activities	(5,293)
Cash flows from investing activities:	
Acquired in-process research and development	(550)
Purchases of property and equipment	(210)
Net cash used in investing activities	(760)
Cash flows from financing activities:	
Proceeds from issuance of convertible preferred stock, net of issuance costs	14,948
Net cash provided by financing activities	14,948
Net increase in cash and cash equivalents	8,895
Cash and cash equivalents—beginning of year	—
Cash and cash equivalents—end of year	$ 8,895

The accompanying notes are an integral part of these financial statements.

INSTIL BIO INC

Notes to Financial Statements

1. Organization and Description of Business

Instil Bio Inc. (the "Company" or "Instil Bio") is headquartered in Dallas, Texas and was incorporated in the state of Delaware in August 2018. The Company is a clinical-stage biopharmaceutical company focused on developing an innovative cell therapy pipeline of autologous tumor infiltrating lymphocyte ("TIL") therapies for the treatment of patients with cancer. Principal operations commenced during the first quarter of 2019 when the Company in-licensed its foundational TIL technology and subsequently closed its first round of funding with the issuance and sale of its Series A convertible preferred stock.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP").

Liquidity

From its inception, the Company has devoted substantially all its efforts to organizational activities, raising capital, building infrastructure, developing intellectual property and conducting product development. The Company's operations have been financed primarily through the issuance of convertible preferred stock. The Company's ultimate success depends on the outcome of its research and development activities. Since inception, the Company has incurred losses and negative cash flows from operations as it has expended significant resources in research and development and other activities. These activities have resulted in losses from operations, which are expected to continue for the foreseeable future, and an accumulated deficit. The Company will require additional financing to continue its research and development activities and fund operations to meet its business plan. As of December 31, 2019, the Company had an accumulated deficit of $7.2 million and cash and cash equivalents of $8.9 million.

The Company intends to raise additional capital through public or private equity offerings or debt financings or other capital sources, which may include strategic collaborations or other arrangements with third parties. If the Company fails to obtain necessary capital when needed on acceptable terms, or at all, it could force the Company to delay, limit, reduce or terminate its product development programs, commercialization efforts or other operations. In May 2020, the Company completed a second closing of its Series A convertible preferred stock financing at a price per share of $1.00 for net proceeds of $10 million. In June 2020, the Company completed its Series B convertible preferred stock financing at a price per share of $4.92 for net proceeds of $170.2 million. In December 2020, the Company completed a portion of its first closing of Series C convertible preferred stock financing at a price per share of $12.58 for net proceeds of $133 million. In January 2021, the Company completed the remainder of its first closing of Series C convertible preferred stock financing at a price per share of $12.58 for net proceeds of $7.5 million. Additionally, in January 2021, the Company issued and sold an additional 397,576 shares of Series C convertible preferred stock, at the same terms as the first closing, for net proceeds of $5.0 million. Based upon the Company's current operating plan, management believes that the Company's existing cash and cash equivalents as of December 31, 2019, plus the net proceeds from its (i) second closing of Series A convertible preferred stock financing in May 2020, (ii) closing of its Series B convertible preferred stock financing in June 2020 and (iii) closing of its Series C convertible preferred stock financing in December 2020 and January 2021, is sufficient to support operations for at least the next 12 months following issuance of these financial statements. Management expects to continue to incur losses and negative cash flows from operations for at least the next several years.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported 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 and stock-based compensation. 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.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company's cash and cash equivalents are held by one financial institution in the United States, which management believes to be financially sound, and, accordingly, minimal credit risk exists with respect to the financial institution. At times, the Company's deposits may exceed the Federal Depository Insurance Corporation insured limits.

Risks and Uncertainties

The Company is subject to a number of risks similar to other development-stage biopharmaceutical companies, including but not limited to, dependency on the clinical and commercial success of its product candidates, ability to obtain regulatory approval of its product candidates, uncertainty of broad adoption of its approved products, if any, by physicians and patients, manufacturing, the need to obtain adequate additional funding, significant competition, and protection of its intellectual property portfolio.

Segments

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment.

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 include amounts invested in money market accounts and are stated at fair value in Level 1 of the fair value hierarchy, as described below, due to their short-term maturities. As of December 31, 2019, the Company held $8.0 million in money market accounts.

Fair Value Measurement

Assets and liabilities recorded at fair value on a recurring basis in the balance sheet 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 Company measures fair value based on a three-tier hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value as follows:

Level 1—Observable inputs such as unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2—Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the assets or liabilities. 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.

In determining fair value, the Company utilizes quoted market prices, or valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considers counterparty credit risk in its assessment of fair value.

Property and Equipment, Net

Property and equipment consists of manufacturing equipment and is 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. 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 the statement of operations and comprehensive loss. The estimated useful lives of the Company's manufacturing equipment are 3-7 years.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable or that the useful life is shorter than originally estimated. Recoverability of assets is measured by comparing the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset over its remaining useful life. If such assets are impaired, the impairment recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. If the useful life is shorter than originally estimated, the Company depreciates or amortizes the remaining carrying value over the revised shorter useful life. Assets to be disposed of by sale are reflected at the lower of their carrying amount or fair value less cost to sell.

Research and Development Expenses

Research and development costs are expensed as incurred. Research and development costs consist primarily of research services and license payments to Immetacyte, Ltd. ("Immetacyte") (see Note 4) and, to a lesser extent, salaries, benefits, and other personnel related costs, including stock-based compensation, professional service fees and facility and other related costs. Non-refundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized as prepaid expenses until the related goods are delivered or services are performed. Research and development expenses for the year ended December 31, 2019 also include in process research and development acquired and recognized as an expense in connection with the license of technology from Immetacyte in February 2019, as described in Note 4.

Stock-Based Compensation

The Company measures its stock-based awards granted to employees, non-employee directors, consultants and independent advisors based on the estimated grant date fair value of the awards and recognizes the compensation over the requisite service period using the straight-line method. The Company uses the Black-Scholes option pricing model to estimate the fair value of its stock-based awards. The Black-Scholes option pricing model requires the Company to make assumptions and judgements about the variables used in the calculations, including the fair value of common stock, expected term, expected volatility of the Company's

common stock, risk-free interest rate and expected dividend yield. As the stock-based compensation is based on awards ultimately expected to vest, it is reduced by forfeitures. The Company accounts for forfeitures of stock-based awards as they occur.

Income Taxes

Income taxes are accounted for using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts or existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period of enactment. The Company records a valuation allowance to reduce deferred tax assets to an amount expected to be realized.

The Company recognizes the tax benefit from an uncertain tax position if it is more likely than not that the tax position will be sustained upon examination by the tax authorities, based on the merits of the position. The Company's policy is to recognize interest and penalties related to the underpayment of income taxes as a component of income tax expense or benefit. To date, there have been no interest or penalties charged in relation to the unrecognized tax benefits.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of the Company's common stock outstanding for the period, without consideration for potential dilutive shares of common stock. For purposes of the diluted net loss per share calculation, convertible preferred stock and common stock options are considered to be potentially dilutive securities. Diluted net loss per share is the same as basic net loss per share for each period presented since the effects of potentially dilutive securities are antidilutive given the net loss of the Company.

Comprehensive Loss

Comprehensive loss is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources. The Company's comprehensive loss was the same as its reported net loss for the year ended December 31, 2019.

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 avail itself of 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 (i) is no longer an emerging growth company or (ii) affirmatively and irrevocably opts 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.

As described in "Recently Adopted Accounting Pronouncements" below, the Company early adopted the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 606 and Accounting Standards Update ("ASU") 2018-17 as the JOBS Act does not preclude an emerging growth company from adopting a new or revised accounting standard earlier than the time that such standard applies to private companies.

Recently Adopted Accounting Pronouncements

In June 2018, the FASB issued ASU No. 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting. This standard is intended to reduce the cost and complexity and to improve financial reporting for nonemployee share-based payments. The ASU expands the scope of Topic 718 to include share-based payments issued to nonemployees for goods or services. Consequently, the accounting for share-based payments to nonemployees and employees is substantially aligned. The Company has issued stock options to both employees and non-employee consultants. The standard is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted, but no earlier than a company's adoption date of Topic 606, Revenue Recognition.

Pursuant to Topic 606, entities recognize revenue in a manner that depicts the transfer of goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled to receive in exchange for those goods or services. The model provides that entities follow five steps: (i) identify the contract with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to each performance obligation, and (v) recognize revenue when or as each performance obligation is satisfied. The Company early adopted ASU 2018-07 and Topic 606 on January 1, 2019 and there was no material impact on the accompanying financial statements from these adopted standards.

Recent Accounting Pronouncements Not Yet Adopted

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. The standard simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and also improves consistent application by clarifying and amending existing guidance. The standard is effective for fiscal years beginning after December 15, 2021 and interim periods within fiscal years beginning after December 15, 2022. The Company currently is assessing the impact of this guidance and on its financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) which supersedes FASB ASC Topic 840, Leases (Topic 840) and provides principles for the recognition, measurement, presentation, and disclosure of leases for both lessees and lessors. The new standard requires the lessees to classify leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee, and such classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than twelve months regardless of classification. Leases with a term of twelve months or less will be accounted for similar to existing guidance for operating leases. In November 2019, the FASB issued ASU No. 2019-10, Financial Instruments—Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842): Effective Dates, which revised the effective date for ASU No. 2016-02, Leases (Topic 842) for fiscal years beginning after December 15, 2020. In June 2020, the FASB issued ASU No. 2020-05, Revenue From Contracts With Customers (Topic 606) and Leases (Topic 842): Effective Dates for Certain Entities, further delaying the effective date for ASU No. 2016-02, Leases (Topic 842) to fiscal years beginning after December 15, 2021 and interim periods within fiscal years beginning after December 15, 2022. The Company immediately adopted ASU No. 2019-10 and ASU No. 2020-05 upon issuance by the FASB. The Company currently is assessing the impact of this guidance and on its financial statements.

3. Balance Sheet Components

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	December 31, 2019
Prepaid research and development expenses	$ 334
Other assets	57
Total prepaid expenses and other current assets	$ 391

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

	December 31, 2019
Accrued research and development expenses	$ 256
Accrued compensation and benefits	185
Total accrued expenses and other current liabilities	$ 441

4. In-License Agreement with Immetacyte

In February 2019, the Company entered into an Exclusive License & Research Services Agreement (the "License Agreement") with Immetacyte, whose key founders are also shareholders of the Company, pursuant to which the Company obtained a worldwide license to Immetacyte's proprietary technology, know-how and intellectual property for the research, development and manufacture of TIL therapies obtained from tumors using Immetacyte's technology.

Under the License Agreement, the Company is obligated to make payments for the license of the TIL technology which include: (i) an upfront license fee of $0.3 million, (ii) development milestone payments ranging from $0.3 million upon initial approval of a distinct product to $10 million upon first commercial sale in the U.S., European Union or Asia, (iii) sales milestone payments of up to an aggregate of $37.5 million based on tiered cumulative net sales of all products and (iv) royalty payments on net sales of each distinct product at a rate of 3% of net sales up to $250 million and 5% of net sales over $250 million.

The payments made for the license of the TIL technology were accounted for as in-process research and development ("IPR&D") as part of an asset acquisition and were expensed as it was determined that there was no alternative future use for the license. The Company accounts for contingent consideration payable upon achievement of certain development or commercial milestones when the underlying contingency is resolved. For the year ended December 31, 2019, the Company recognized $0.6 million of IPR&D, which consisted of $0.3 million paid up front for the license and $0.3 million paid for achievement of a development milestone, which was recognized as a component of research and development expense in the Company's statement of operations and comprehensive loss. As of December 31, 2019, no additional milestones were accrued as the underlying contingencies had not yet been resolved.

Additionally, the Company is obligated to make payments for the research and development, manufacturing, monitoring and general services which include: (i) research and development services payments of $1.9 million annually for each of the first three years, (ii) manufacturing services payments of $1.2 million for the first annual period and $1.6 million for two years thereafter, and (iii) $0.3 million for monitoring and general services.

For the year ended December 31, 2019, the Company recorded $2.9 million of research and development expense in the statement of operations and comprehensive loss as part of these services.

5. Commitments and Contingencies

Operating Leases

The Company leases office and laboratory space on a month-to-month basis. Rent is expensed as incurred. The Company incurred rent expense of $0.3 million for the year ended December 31, 2019. As of December 31, 2019, the Company had no future lease commitments.

Legal Proceedings

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of its business activities. The Company accrues a liability for such matters when it is probable that future expenditures will be made and that such expenditures can be reasonably estimated. Significant judgment is required to determine both probability and the estimated amount. The Company does not expect that the resolution of these matters will have a material adverse effect on its financial position, results of operations or cash flows.

Indemnifications

The Company has entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by Delaware corporate law. The Company currently has directors' and officers' insurance coverage that reduces its exposure and enables the Company to recover a portion of any future amounts paid. No liability associated with such indemnifications was recorded as of December 31, 2019.

6. Common Stock

Each share of common stock has the right to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and if declared by the board of directors, subject to the prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No cash dividends have been declared by the board of directors from inception.

In September and October 2018, the Company issued a total of 12.7 million shares of common stock through Founder's Stock Purchase Agreements at a purchase price of $0.000001 per share (collectively, the "Founders' Stock Purchase Agreements"). As part of the Founders' Stock Purchase Agreements, 4.1 million shares were subject to vesting over a 36-month period, subject to certain conditions. For the unvested shares, the Company retained a right to repurchase such unvested shares if certain conditions were not met. As certain vesting conditions were not met, in February of 2019, the Company exercised the repurchase right and repurchased 3.3 million shares of unvested common stock at a price per share equal to the original purchase price.

7. Convertible Preferred Stock

In March 2019, the Company entered into a Series A convertible Preferred Stock Purchase Agreement, pursuant to which the Company issued 10.1 million shares of its Series A convertible preferred stock at a purchase price of $1.00 per share for net proceeds of $10.1 million. In September 2019, the Company issued 4.9 million additional shares of Series A convertible preferred stock in a second closing on the same terms as the initial closing for net proceeds of $4.9 million.

Convertible preferred stock as of December 31, 2019 consisted of the following (in thousands, except shares):

	Shares Authorized	Shares Issued and Outstanding	Aggregate Liquidation Preference
Series A . . .	15,000,000	15,000,000	$ 15,000

The Company classifies the convertible preferred stock outside of total stockholders' deficit because, in the event of certain deemed liquidation events that are not solely within the control of the Company, 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 values of such shares since a liquidation event was not probable of occurring at December 31, 2019. 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.

As of December 31, 2019, the holders of the Company's convertible preferred stock have various rights, preferences and privileges as follows:

Voting Rights

The holders of convertible preferred stock are entitled to cast the number of votes equal to the number of shares of common stock into which the shares of convertible preferred stock held by such holder are convertible as of the record date at any shareholder meeting of the Company. Except as provided by law or by the other provisions of the Company's amended and restated certification of incorporation, holders of convertible preferred stock and common stock vote together as a single class. Holders of Series A convertible preferred stock, exclusively and as a separate class, are entitled to elect two members of the Company's board of directors.

Dividends

Holders of convertible preferred stock are entitled to receive noncumulative cash dividends in an amount equal to 8% of their respective original issue price of $1.00 for Series A convertible preferred stock per annum per share (subject to appropriate adjustment in the event of any stock dividends, stock splits, stock combinations, recapitalizations or similar events), when and if declared by the Company's board of directors, prior and in preference to the holders of common stock. As of December 31, 2019, no dividends had been declared.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company or deemed liquidation event, the holders of shares of Series A convertible preferred stock are entitled to receive, prior and in preference to any distribution to the holders of common stock, an amount equal to the greater of (i) $1.00 per share, plus any dividends declared but unpaid or (ii) such amount per share as would have been payable in respect of each share of Series A convertible preferred stock had all shares of Series A convertible preferred stock been converted into common stock immediately prior to such liquidation, dissolution, winding up or deemed liquidation event. After the required payment is made to the preferred stockholders, the remaining assets of the Company, if any, are to be distributed to the holders of common stock pro rata based on the number of shares held by each such holder.

Optional Conversion Rights

Each share of convertible preferred stock is convertible, at the option of the holder, into such number of shares of common stock as is determined by dividing the original issue price for that series by the conversion price for such series in effect at the time of conversion. The conversion price is $1.00 per share with respect to the shares of Series A convertible preferred stock, and is subject to certain anti-dilution adjustments.

Mandatory Conversion

Each share of convertible preferred stock will automatically be converted into shares of common stock at the then effective conversion ratio for such share upon the earlier of (i) immediately prior to the closing of the sale of shares of common stock in a firm commitment underwritten public offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least a majority of outstanding shares of Series A convertible preferred stock.

8. Stock-Based Compensation

In September 2018, the Company adopted the 2018 Stock Incentive Plan (the "2018 Plan"). The 2018 Plan provides for the Company to grant options, restricted stock awards, stock appreciation rights and restricted stock units to employees, non-employee directors and consultants of the Company under terms and provisions established by the board of directors. Under the terms of the 2018 Plan, options are granted at an exercise price no less than fair value of the Company's common stock on the grant date. However, for any employee who is a 10% or greater stockholder, options are granted at an exercise price no less than 110% of the fair value of the Company's common stock on the grant date. Under the terms of the 2018 Plan, options can be granted with vesting conditions that include either a service condition and/or performance condition. Awards with vesting conditions typically include either vesting 25% on the first anniversary of the grant date with the remainder vesting monthly over the following three years or vesting a portion immediately on the grant date (typically 25%) with the remainder vesting monthly over the following three-year period. Option awards granted typically have 10-year terms measured from the option grant date. However, if any employee is a 10% or greater stockholder, the awards have 5-year terms measured from the option grant date. As of December 31, 2019, the total number of shares authorized for issuance under the 2018 Plan was 8,666,667. The following summarizes option activity under the 2018 Plan:

	Shares Available for Grant	Shares Issuable Under Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contract Term (in years)	Aggregate Intrinsic Value (in thousands)
Balance, December 31, 2018	5,666,667	—	$ —		
Additional Shares Authorized	3,000,000				
Options granted(1)	(5,423,334)	5,423,334	0.41		
Balance, December 31, 2019	3,243,333	5,423,334	0.41	9.68	$ 1,106
Exercisable, December 31, 2019		841,559	0.41	9.68	$ 172
Vested and expected to vest, December 31, 2019		3,065,000	0.41	9.68	$ 625

(1) Includes 2,358,334 stock options subject to only performance conditions.

The aggregate intrinsic value disclosed in the above table is based on the difference between the exercise price of the stock option and the estimated fair value of the Company's common stock as of the respective period-end dates. There were no stock options exercised during the year ended December 31, 2019. The weighted-average grant date fair value of stock options granted during the year ended December 31, 2019 was $0.26 per share.

The fair value of the Company's stock option awards was estimated at the date of grant using a Black-Scholes option pricing model with the following assumptions:

	Year Ended December 31, 2019
Expected term (in years)	5.27 - 6.25
Expected volatility	69.69% - 73.51%
Risk-free interest rate	1.43% - 1.46%
Expected dividend yield	0%

The fair value of the shares of common stock underlying stock options has historically been determined by the Company's board of directors. Because there has been no public market for the Company's common stock, the board of directors has determined fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including important developments in the Company's operations, contemporaneous valuations performed by an independent third party firm, sales of the Company's convertible preferred stock, the Company's operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price volatility of similar public companies and the lack of marketability of the Company's common stock, among other factors.

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

Expected term—The expected term represents the period that stock-based awards are expected to be outstanding and is determined as the average of the time-to-vesting and the contractual life of the awards.

Expected volatility—Since the Company is privately held and does not have any trading history for its common stock, the expected volatility was 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.

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 awards.

Expected dividend yield—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.

Performance Awards

During the year ended December 31, 2019 the Company granted 2,358,334 stock options to both employees and non-employees that are subject to a performance condition and will vest upon the consummation of a strategic transaction by the Company prior to December 31, 2022. A strategic transaction has been defined as (a) a change in control, (b) the Company's next capital raise or (c) an initial public offering of the Company's shares, in which the Company receives at least $50 million in gross proceeds. As of December 31, 2019, this performance condition was determined to not be probable of being achieved, and the Company has recognized no stock-based compensation expense relating to these performance awards. As of December 31, 2019, the Company had $0.6 million of unrecognized compensation cost relating to these performance awards, calculated using the accelerated attribution method and the grant date fair value of the awards.

During June 2020, the Company's Series B financing (see Note 11) met the definition of a strategic transaction, triggering the immediate vesting of the performance awards. The Company recognized $0.6 million in compensation expense relating to the performance awards as of the closing of the Series B convertible preferred stock financing.

The following table sets forth stock-based compensation included in the Company's statement of operations and comprehensive loss (in thousands):

	Year Ended December 31, 2019
Research and development expense	$ 33
General and administrative expense	260
Total stock-based compensation expense	$ 293

As of December 31, 2019, there was $0.5 million of total unrecognized compensation cost related to unvested stock options granted under the 2018 Plan (excluding performance awards), which is expected to be recognized over a weighted average period of 1.34 years.

9. 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:

	Year Ended December 31, 2019
Convertible preferred stock	15,000,000
Stock options to purchase common stock	5,423,334
Total	20,423,334

10. Income Taxes

For the year ended December 31, 2019, the Company recorded no income tax expense and has incurred net operating losses for the period 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 following table presents a reconciliation of the Company's statutory federal income tax rate and the effective tax rate for income tax provision:

	Year Ended December 31, 2019
U.S. federal taxes at statutory rate	21.0%
Change in valuation allowance	(21.0)
Total	—%

As of December 31, 2019, components of deferred income tax balances consist of the following (in thousands):

	December 31, 2019
Deferred tax assets:	
Net operating loss carryforwards	$ 1,339
Intangible assets	111
Stock-based compensation	61
Other	34
Total gross deferred tax assets	1,545
Less: valuation allowance	(1,505)
Total deferred tax assets, net	40
Deferred tax liabilities:	
Fixed assets	(40)
Total gross deferred tax liabilities	(40)
Net deferred tax assets	$ —

In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Due to the uncertainty of the business in which the Company operates, projections of future profitability are difficult and past profitability is not necessarily indicative of future profitability. The Company does not believe it is more likely than not that the deferred tax assets will be realized, and accordingly, a valuation allowance at December 31, 2019 of $1.5 million has been established and no deferred tax asset and related tax benefit have been recognized. As of December 31, 2019, the Company had net operating loss carryforwards for federal income tax purposes of approximately $1.3 million (tax effected), which will carryforward indefinitely.

The Company files income tax returns in the U.S. federal jurisdiction as well as the state of Texas. As of December 31, 2019, the Company's federal and state returns through 2019 are still open to examination. The Company did not have any uncertain tax positions as of December 31, 2019.

The Company has not completed a Section 382 study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since the Company's formation. Pursuant to Internal Revenue Code Sections 382 and 383, annual use of the Company's net operating loss and research and development tax credit carryforwards may be limited in the event a cumulative change in ownership of more than 50% occurs within a three-year period. If eliminated, the related asset would be removed from the deferred tax asset schedule with a corresponding reduction in the valuation allowance. Due to the existence of the valuation allowance, limitations created by future ownership changes, if any, will not impact the Company's effective tax rate.

11. Subsequent Events

Subsequent events have been evaluated through January 11, 2021, which is the date that the financial statements were available to be issued.

COVID-19 Pandemic

On March 11, 2020, the World Health Organization characterized the outbreak of COVID-19 as a global pandemic and recommended containment and mitigation measures. Since then, extraordinary actions have been taken by international, federal, state, and local public health and governmental authorities to contain and combat the outbreak and spread of COVID-19 in regions throughout the world. These actions include travel bans, quarantines, "stay-at-home" orders and similar mandates for many individuals to substantially restrict daily activities and for many businesses to curtail or cease normal operations. As a result of COVID-19, the Company has taken precautionary measures in order to minimize the risk of the virus to its employees and the communities in which it operates, including the suspension of all non-essential business travel of employees. Although the majority of the Company's workforce now works remotely, there has been minimal disruption in the Company's ability to ensure the effective operation of its business. While the broader implications of the COVID-19 pandemic on the Company's results of operations and overall financial performance remain uncertain, the COVID-19 pandemic has, to date, not had a material adverse impact on its results of operations or our ability to raise funds to sustain operations. The economic effects of the pandemic and resulting societal changes are currently not predictable, and the future financial impacts could vary from those foreseen.

Acquisition of Immetacyte

In March 2020, the Company acquired 100% of the share capital of Immetacyte for $0.8 million in cash consideration, 4.7 million shares of common stock at an estimated fair value of $0.71 per share and up to an aggregate of $14.8 million of cash contingent consideration. The contingent consideration is additional consideration payable to the seller up until January 31, 2040 upon achievement of distinct product development milestones and is payable in the form of non-convertible notes.

Real Estate Acquisition

In October 2020, the Company, through its wholly owned special purpose entity, Complex Therapeutics, LLC, acquired land inclusive of four buildings in Los Angeles, California, for $37.6 million. The Company is in the process of developing this land for its U.S. operations.

Subscriptions Note Receivable

In November 2020, the Company executed a limited recourse promissory note with its Chief Executive Officer, Bronson Crouch, in the amount of $1.1 million which is secured by a pledge of a total of 2,633,125 shares of its common stock issued upon exercise of stock options. The note bears an interest rate of 2.5% per annum with a maturity date of the earlier of (i) five years from the date of the note or (ii) one business day prior to the filing or submission of the Company's first registration statement covering the Company's common stock with the Securities and Exchange Commission. The principal and interest under the note may be prepaid at any time without penalty. As of December 31, 2020, the outstanding balance of the promissory note was $1.1 million. The promissory note was fully repaid in January 2021.

Convertible Preferred Stock

In May 2020, the Company issued an additional 10,000,000 shares of its Series A convertible preferred stock at a purchase price of $1.00 per share for net proceeds of $10 million. In connection of the issuance of Series A convertible preferred stock, the Company amended and restated its certificate of incorporation to, among other things, authorize the issuance of 25,000,000 shares of its preferred stock at $0.000001 per share, all of which are designated as Series A convertible preferred stock.

In June 2020, the Company issued an aggregate of 34,600,523 shares of its Series B convertible preferred stock at a purchase price of $4.92 per share for net proceeds of $170.2 million. In connection of the issuance of

Series B convertible preferred stock, the Company amended and restated its certificate of incorporation to, among other things, authorize the issuance of up to 92,000,000 shares of its common stock, $0.000001 per share, and 59,600,523 shares of its preferred stock, $0.000001 per share, of which 34,600,523 shares were designated as Series B convertible preferred stock, and 25,000,000 shares had previously been designated as Series A convertible preferred stock.

In December 2020, the Company issued an aggregate of 10,575,523 shares of its Series C convertible preferred stock at a purchase price of $12.58 per share for net proceeds of $133 million. In January 2021, an additional 596,364 shares of Series C convertible preferred stock were issued at a purchase price of $12.58 per share for net proceeds of $7.5 million. Additionally, in January 2021, the Company issued and sold an additional 397,576 shares of Series C convertible preferred stock, at the same terms as the first closing, for net proceeds of $5.0 million. In connection of the issuance of Series C convertible preferred stock, the Company amended and restated its certificate of incorporation to, among other things, authorize the issuance of up to 111,000,000 shares of its common stock, $0.000001 per share, and 74,350,598 shares of its preferred stock, $0.000001 per share, of which 14,750,075 shares were designated as Series C convertible preferred stock, 34,600,523 shares had previously been designated as Series B convertible preferred stock, and 25,000,000 shares had previously been designated as Series A convertible preferred stock.

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Shares

Common Stock

PROSPECTUS

Joint Book-Running Managers

MORGAN STANLEY *JEFFERIES* *COWEN*

Lead Manager

TRUIST SECURITIES

Until , 2021 (25 days after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

, 2021

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission, or SEC, registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq Global Market initial listing fee.

	Amount
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq Global Market initial listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue sky fees and expenses	*
Transfer agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* To be provided by amendment

Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and bylaws to be in effect upon the closing of this offering will provide that: (i) we are required to indemnify our directors to the fullest extent permitted by the Delaware General Corporation Law; (ii) we may, in our discretion, indemnify our officers, employees and agents as set forth in the Delaware General Corporation

Law; (iii) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents.

In connection with this offering, we expect to enter into indemnification agreements with each of our directors and executive officers that require us to indemnify them against expenses, judgments, fines, settlements and other amounts that any such person becomes legally obligated to pay (including with respect to a derivative action) in connection with any proceeding, whether actual or threatened, to which such person may be made a party by reason of the fact that such person is or was a director or officer of us or any of our affiliates, provided such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests. The indemnification agreements will also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. We intend to enter into similar indemnification agreements with our executive officers prior to the completion of this offering. At present, no litigation or proceeding is pending that involves any of our directors or officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In addition, the underwriting agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act, or otherwise. Our amended and restated investor rights agreement with certain investors also provides for cross-indemnification in connection with the registration of our common stock on behalf of such investors.

Item 15. Recent Sales of Unregistered Securities.

The following list sets forth information regarding all unregistered securities sold by us since our inception through the date of the prospectus that forms a part of this registration statement.

Issuances of Capital Stock

In September and October 2018, we issued an aggregate of 12,666,664 shares of our common stock subject to a repurchase right to fifteen investors at a purchase price of $0.000001 per share, for aggregate consideration of $12.67. In February 2019, we repurchased 3,333,333 shares of our common stock at a price per share equal to the original purchase price.

In March 2019, we issued 10,100,00 shares of our Series A convertible preferred stock to Curative Ventures V LLC for $1.00 per share, for aggregate consideration of $10.1 million.

In September 2019, we issued 4,900,000 shares of our Series A convertible preferred stock to Curative Ventures V LLC for $1.00 per share, for aggregate consideration of $4.9 million.

In March 2020, we issued an aggregate of 4,700,000 shares of our common stock to the former stockholders of Immetacyte in connection with the share purchase agreement pursuant to which we acquired Immetacyte and it became our wholly owned subsidiary. Of these shares, 2,636,667 shares are subject to restrictions on transfer and achievement of certain regulatory approval and development milestones.

In May 2020, we issued 10,000,000 shares of our Series A convertible preferred stock to Curative Ventures V LLC for $1.00 per share, for aggregate consideration of $10.0 million.

In June 2020, we issued an aggregate of 34,600,523 shares of our Series B convertible preferred stock to fifteen investors at a purchase price of $4.92 per share, for aggregate consideration of $170.2 million.

In December 2020, January 2021 and February 2021, we issued an aggregate of 14,750,073 shares of our Series C convertible preferred stock to 26 investors at a purchase price of $12.58 per share, for aggregate consideration of $185.5 million.

Issuances Pursuant to our Equity Plans

From August 31, 2018 (the date of our inception) through the date of this registration statement, we granted options under our 2018 Stock Incentive Plan to purchase an aggregate of 18,967,196 shares of common stock, at a weighted average exercise price of $2.1781 per share, to our employees and consultants. Of these, 3,226,937 shares have been issued upon the exercise of options, and 1,129,813 options have been forfeited, expired or been cancelled.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise specified above, we believe these transactions were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The exhibits listed below are filed as part of this registration.

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement
3.1	Third Amended and Restated Certificate of Incorporation of the Registrant (as amended and currently in effect)
3.2	Bylaws of the Registrant (currently in effect)
3.3*	Form of Amended and Restated Certificate of Incorporation of the Registrant (to be effective upon the closing of this offering)
3.4*	Form of Amended and Restated Bylaws of the Registrant (to be effective upon the closing of this offering)
4.1	Second Amended and Restated Investors' Rights Agreement, by and among the Registrant and certain of its stockholders, dated December 30, 2020
5.1*	Opinion of Cooley LLP
10.1†*	Share Purchase Agreement, by and between the Registrant and Immetacyte Limited, dated March 2, 2020
10.2+*	2021 Equity Incentive Plan and Forms of Option Grant Notice and Agreement, Exercise Notice, Early Exercise Notice and Restricted Stock Award Notice
10.3+	2018 Stock Incentive Plan and Forms of Stock Option Agreement, Notice of Stock Option Grant and Notice of Exercise and Common Stock Purchase Agreement
10.4+*	2021 Employee Stock Purchase Plan

Exhibit Number	Description of Exhibit
10.5+*	Form of Indemnification Agreement with Executive Officers and Directors
10.6+*	Executive Employment Agreement, by and between the Registrant and Bronson Crouch, dated as of
10.7+*	Executive Employment Agreement, by and between the Registrant and Zachary Roberts, M.D., Ph.D., dated as of
10.8+*	Executive Employment Agreement, by and between the Registrant and Sandeep Laumas, M.D., dated as of
23.1*	Consent of Deloitte & Touche LLP, independent registered public accounting firm
23.2*	Consent of Cooley LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (included on signature page)

+ Indicates management contract or compensatory plan.
† Confidential treatment will be requested for portions of this agreement.
* To be filed by amendment.

(b) Financial Statement Schedules.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or 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:

(1) 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.

(2) 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.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Dallas, State of Texas, on this day of , 2021.

INSTIL BIO, INC.

By: _____
Bronson Crouch
Chief Executive Officer

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Bronson Crouch and , and each of them, as his or her true and lawful agents, proxies and attorneys-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Bronson Crouch	Chief Executive Officer and Director *(Principal Executive Officer)*	, 2021
_____ Sandeep Laumas, M.D.	*(Principal Financial and Accounting Officer)*	, 2021
_____ Gwendolyn Binder, Ph.D	Director	, 2021
_____ Neil Gibson, Ph.D.	Director	, 2021
_____ George Matcham, Ph.D.	Director	, 2021
_____ R. Kent McGaughy, Jr.	Director	, 2021
_____ Jack Nielsen	Director	, 2021
_____ Nimish Shah	Director	, 2021

Exhibit 3.1

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF INSTIL BIO, INC.

(Pursuant to Sections 242 and 245 of the General Corporation Law
of the state of Delaware)

Instil Bio, 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 Instil Bio, Inc. The original Certificate of Incorporation of the Corporation was filed with the Delaware Secretary of State on August 31, 2018. An Amended and Restated Certificate of Incorporation was filed on March 4, 2019, a Certificate of Amendment to the Amended and Restated Certificate of Incorporation was filed on May 28, 2020 and the Second Amended and Restated Certificate of Incorporation was filed on June 30, 2020.

2. That the Board of Directors of the Corporation (the "**Board**") duly adopted resolutions proposing to amend and restate the Amended and Restated 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.

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation by written consent to action without a meeting in accordance with Section 228 of the General Corporation Law.

4. That this Third Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Second Amended and Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

RESOLVED, that the amended and restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Instil Bio, Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the state of Delaware is 3500 S. Dupont Hwy, in the city of Dover, county of Kent, Delaware 19901. The name of its registered agent at such address is Incorporating Services, Ltd.

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) 111,000,000 shares of Common Stock, $0.000001 par value per share ("**Common Stock**") and (ii) 74,350,598 shares of Preferred Stock, $0.000001 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). There is 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 Third 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

14,750,075 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series C Preferred Stock**," 34,600,523 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**" and 25,000,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Preferred Stock**", each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" in this Part B of this Article Fourth refer to sections and Sections of Part B of this Article Fourth.

1. Dividends.

1.1 The holders of Series C Preferred Stock will be entitled to receive dividends, out of any assets legally available therefore, prior and in preference to any declaration of payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock) on Series B Preferred Stock, Series A Preferred Stock or Common Stock, at the rate of 8% of the Series C Original Issue Price (as defined below) per annum, payable when, as and if declared by the Board (the "**Series C Dividend**").

1.2 The holders of Series B Preferred Stock will be entitled to receive dividends, out of any assets legally available therefore, prior and in preference to any declaration of payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock) on Series A Preferred Stock or Common Stock, at the rate of 8% of the Series B Original Issue Price (as defined below) per annum, payable when, as and if declared by the Board and after payment in full of the Series C Dividend (the "**Series B Dividend**").

1.3 The holders of Series A Preferred Stock will be entitled to receive dividends, out of any assets legally available therefore, prior and in preference to any declaration of payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock) on Common Stock, at the rate of 8% of the Series A Original Issue Price (as defined below) per annum, payable when, as and if declared by the Board and after payment in full of the Series C Dividend and the Series B Dividend (the "**Series A Dividend**" and together with the Series C Dividend and the Series B Dividend, the "**Preferred Dividends**"). The Preferred Dividends will be non-cumulative.

1.4 After payment of the Preferred Dividends, any additional dividends will be distributed among the holders of Preferred Stock and Common Stock pro rata based on the number of shares of Common Stock held by each holder (assuming conversion of all Preferred Stock into Common Stock).

1.5 The term "**Series C Original Issue Price**" shall mean $12.5762 per share for each share of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock). The term "**Series B Original Issue Price**" shall mean $4.919 per share for

each share of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock). The term "**Series A Original Issue Price**" shall mean $1.00 per share for each share of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock). The term "**Original Issue Price**" shall mean (i) with respect to the Series C Preferred Stock, the Series C Original Issue Price, (ii) with respect to the Series B Preferred Stock, the Series B Original Issue Price and (iii) with respect to the Series A Preferred Stock, the Series A Original Issue Price.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock.

2.1.1 Series C Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the holders of shares of Series C Preferred Stock then outstanding will be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series C Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable in respect of each share of Series C Preferred Stock had all shares of Series C Preferred Stock been converted into Common Stock pursuant to Section 4 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 "**Series C 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 Series C Preferred Stock the full amount to which they shall be entitled under this Section 2.1.1, the holders of shares of Series C 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.

2.1.2 Series B Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, and after payment in full of all Series C Liquidation Amounts required to be paid to the holders of shares of Series C Preferred Stock, the holders of shares of Series B Preferred Stock then outstanding will be entitled to be paid out of the assets of the Corporation available for

distribution to its stockholders before any payment shall be made to the holders of Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series B Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable in respect of each share of Series B Preferred Stock had all shares of Series B Preferred Stock been converted into Common Stock pursuant to Section 4 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 "**Series B 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 Series B Preferred Stock the full amount to which they shall be entitled under this Section 2.1.2, the holders of shares of Series B 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.

2.1.3 Series A Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, and after payment in full of all Series C Liquidation Amounts and Series B Liquidation Amounts required to be paid to the holders of shares of Series C Preferred Stock and Series B Preferred Stock, the holders of shares of Series A Preferred Stock then outstanding will be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders 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) the Series A Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable in respect of each share of Series A Preferred Stock had all shares of Series A Preferred Stock been converted into Common Stock pursuant to Section 4 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 "**Series 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 Series A Preferred Stock the full amount to which they shall be entitled under this Section 2.1.3, the holders of shares of Series 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. The term "**Liquidation Amount**" shall mean (i) with respect to the Series C Preferred Stock, the Series C Liquidation Amount, (ii) with respect to the Series B Preferred Stock, the Series B Liquidation Amount and (iii) with respect to the Series A Preferred Stock, the Series A Liquidation Amount.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment in full of all Liquidation Amounts required to be paid to the holders of shares of Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders 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 a majority of the outstanding shares of Preferred Stock, voting together as a single class and on an as-converted basis, including the approval of the holders of (i) a majority of the outstanding shares of Series C Preferred Stock (including at least forty five percent (45%) of the shares of Series C Preferred Stock held by holders of shares of Series C Preferred Stock who do not also hold any shares of Series B Preferred Stock) (the "**Requisite Series C Majority**") and (ii) a majority of the outstanding shares of Series B Preferred Stock (the "**Requisite Series B Majority**"; and the holders of a majority of the outstanding shares of Preferred Stock, the Requisite Series C Majority and the Requisite Series B Majority collectively, the "**Requisite Holders**"), elect otherwise by written notice sent to the Corporation at least 7 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, 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 material intellectual property or all or substantially all the 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 all material intellectual property or 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 Section 2.3.l(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 is allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Section 2.3.l(a)(ii) or 2.3.l(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 30 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the 30th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Preferred Stock; and (ii) unless the Requisite Holders request otherwise in a written instrument delivered to the Corporation, the Corporation shall use 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), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the 60th day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the applicable Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall ratably redeem each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds (in proportion to the aggregate Liquidation Amount payable to each such holder), and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Section 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.

(c) Upon redemption of the Preferred Stock pursuant to Section 2.3.2(b), each holder of Preferred Stock shall surrender the certificate or certificates representing such shares (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) to the Corporation, in the manner and at the place designated in the written notice sent by the Corporation pursuant to Section 2.3.2(b), and thereupon the redemption price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

(d) If the notice required by Section 2.3.2(b) shall have been duly given to each holder of shares of Preferred Stock, and if on the redemption date the price payable upon redemption of the shares of Preferred Stock is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, all rights with respect to such shares shall forthwith after such redemption date terminate, except only the right of the holders to receive the redemption price determined in accordance with Section 2.3.2(b) without interest upon surrender of their certificate or certificates therefor.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board, including the approval of a majority of the Series B Directors (as defined below).

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Section 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 Sections 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 that 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 Sections 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 Section 2.3.4, consideration placed into escrow or retained as 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.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Third Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class on an as-converted to Common Stock basis.

3.2 Election of Directors. The holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one director of the Corporation; the holders of record of the shares of the Series A Preferred Stock, exclusively and as a separate series, shall be entitled to elect one director of the Corporation (the "**Series A Director**"); and the holders of record of the shares of the Series B Preferred Stock, exclusively and as a separate series, shall be entitled to elect three directors of the Corporation (each, a "**Series B Director**" and together with the Series A Director, the "**Preferred Directors**"). Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given 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 Series B Preferred Stock, Series 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 or single class pursuant to the first sentence of this Section 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series B Preferred Stock, Series 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 or single class pursuant to the first sentence of this Section 3.2. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the 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 entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Section 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 or by any remaining director or directors elected by the holders of such class or series pursuant to this Section 3.2.

3.3 Preferred Stock Protective Provisions. At any time when shares of 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 Third Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Preferred Stock, including (i) a majority of the then-outstanding shares of Series B Preferred Stock and the then-outstanding shares of Series C Preferred Stock (voting together as a single class on an as-converted basis) and (ii) with respect to subsections 3.3.1, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.11 or 3.3.12(ii), the Requisite Series C Majority, 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, consolidation, or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 alter or change the rights, powers or preferences of any series of Preferred Stock;

3.3.3 amend, alter or repeal any provision of this Third Amended and Restated Certificate of Incorporation or the bylaws of the Corporation;

3.3.4 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 Series C 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 the authorized number of shares of Series C Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock of the Corporation unless the same ranks junior to the Series C 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;

3.3.5 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series C 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 Series C 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 Series C 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 Series C Preferred Stock in respect of any such right, preference or privilege;

3.3.6 (i) purchase or redeem (or permit any subsidiary to purchase or redeem) any shares of capital stock of the Corporation other than (A) redemptions of the Preferred Stock as expressly authorized herein or (B) 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 the lower of the original purchase price or the then-current fair market value thereof or (ii) pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation prior to the payment of dividends on the Series C Preferred Stock as expressly authorized herein;

3.3.7 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, bank lines of credit or trade payables incurred in the ordinary course unless such debt security has received the prior approval of the Board, including the approval of a majority of the Series B Directors;

3.3.8 create, or hold equity interests 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;

3.3.9 increase or decrease the authorized number of directors constituting the Board;

3.3.10 adopt, terminate or amend any employee stock option plan of the Corporation;

3.3.11 otherwise enter into or be a party to any transaction with any director, officer, or employee of the Corporation or any "associate" (as defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934) of any such Person; or

3.3.12 (i) authorize or agree to any of subsections 3.3.2, 3.3.3, 3.3.9 or 3.3.10 or (ii) authorize or agree to any of subsections 3.3.1, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8 or 3.3.11.

3.4 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 any of the following without (in addition to any other vote required by law or this Third Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then-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:

3.4.1 increase or decrease (other than by redemption or conversion) the authorized number of shares of Series A Preferred Stock;

3.4.2 amend, alter or repeal any provision of this Third Amended and Restated Certificate of Incorporation or the bylaws of the Corporation so as to adversely alter or change the preferences, rights, privileges or powers of the Series A Preferred Stock; or

3.4.3 authorize or agree to any of the foregoing.

3.5 Series B Preferred Stock Protective Provisions. At any time when shares of Series B 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 Third Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Series B Majority, 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 increase or decrease (other than by redemption or conversion) the authorized number of shares of Series B Preferred Stock;

3.5.2 amend, alter or repeal any provision of this Third Amended and Restated Certificate of Incorporation or the bylaws of the Corporation so as to adversely alter or change the preferences, rights, privileges or powers of the Series B Preferred Stock;

3.5.3 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock that is both senior to the Series B Preferred Stock and junior to the Series C 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;

3.5.4 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series B 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 Series B 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 Series B 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 Series B Preferred Stock in respect of any such right, preference or privilege; or

3.5.5 authorize or agree to any of the foregoing.

3.6 Series C Preferred Stock Protective Provisions. At any time when shares of Series C 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 Third Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Series C Majority, 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:

3.6.1 increase or decrease (other than by redemption or conversion) the authorized number of shares of Series C Preferred Stock;

3.6.2 amend, alter or repeal any provision of this Third Amended and Restated Certificate of Incorporation or the bylaws of the Corporation so as to adversely alter or change the preferences, rights, privileges or powers of the Series C Preferred Stock; or

3.6.3 authorize or agree to any of the foregoing.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Series C Conversion Ratio. Each share of Series C 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 Series C Original Issue Price by the Series C Conversion Price (as defined below) in effect at the time of conversion. The "**Series C Conversion Price**" shall initially be equal to $12.5762. Such initial Series C Conversion Price, and the rate at which shares of Series C Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Series B Conversion Ratio. Each share of Series B 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 Series B Original Issue Price by the Series B Conversion Price (as defined below) in effect at the time of conversion. The "**Series B Conversion Price**" shall initially be equal to $4.919. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.3 Series A Conversion Ratio. Each share of Series 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 nonassessable shares of Common Stock as is determined by dividing the Series A Original Issue Price by the Series A Conversion Price (as defined below) in effect at the time of conversion. The "**Series A Conversion Price**" shall initially be equal to $1.00. Such initial Series A Conversion Price, and the rate at which shares of Series 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 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 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 Preferred Stock to voluntarily convert shares of 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 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 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 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 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, (x) issue and deliver to such holder of 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 Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (y) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (z) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the 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 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 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 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 Third Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the applicable 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price.

4.3.3 Effect of Conversion. All shares of 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 Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of 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 Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price shall be made for any declared but unpaid dividends on the 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 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 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 Conversion Prices 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) "**Series C Original Issue Date**" shall mean the date on which the first share of Series C 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 Section 4.4.3 below, deemed to be issued) by the Corporation after the Series C 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 issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued 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 approval of a majority of the Series B Directors);

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued upon the conversion or exchange of the Preferred Stock or any debenture, warrant, Option or other Convertible Security outstanding as of the Series C Original Issue Date and pursuant to the terms of such Preferred Stock or debenture, warrant, option or other Convertible Security in effect as of the Series C Original Issue Date;

(vi) 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 approval of a majority of the Series B Directors);

(vii) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers as consideration for the provision of goods or services pursuant to transactions approved by the Board (including the approval of a majority of the Series B Directors);

(viii) shares of Common Stock, Options or Convertible Securities issued as acquisition consideration pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board (including the approval of a majority of the Series B Directors); or

(ix) shares of Common Stock, Options or Convertible Securities issued as consideration for sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board (including the approval of a majority of the Series B Directors).

4.4.2 No Adjustment of Conversion Prices. No adjustment in the Conversion Price for a particular series of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of such series of Preferred Stock, including, with respect to the Series C Preferred Stock the Series C Requisite Majority, agreeing that no such adjustment shall be made to the Conversion Price for such series of Preferred Stock as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series C 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price pursuant to the terms of Section 4.4.4, 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 Series C Conversion Price, Series B Conversion Price or Series 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price as would have been 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price to an amount which exceeds the lower of (i) the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price (as applicable) in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price (as applicable) 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Series C Conversion Price, the Series B Conversion Price or Series A Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series C Original Issue Date), are revised after the Series C 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 Section 4.4.3(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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price pursuant to the terms of Section 4.4.4, the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price shall be readjusted to such Series C Conversion Price, Series B Conversion Price or Series 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price provided for in this Section 4.4.3 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 Section 4.4.3). 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price that would result under the terms of this Section 4.4.3 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Prices Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price in effect immediately prior to such issuance or deemed issuance, then the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price, as applicable, shall be reduced, concurrently with such issue, to a price (calculated to the nearest $0.0001) 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price, as applicable, in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock;

(b) "CP_1" shall mean the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price, as applicable, 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 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 CP1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 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, including the approval of a majority of the Series B Directors.

(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, including the approval of a majority of the Series B Directors.

(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 Section 4.4.3, 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.

4.4.6 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price pursuant to the terms of Section 4.4.4, and such issuance dates occur within a period of no more than 120 days from the first such issuance to the final such issuance, then, upon the final such issuance, the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price 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 Series C Original Issue Date effect a subdivision of the outstanding Common Stock, the Series C Conversion Price, Series B Conversion Price and Series 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 Series C Original Issue Date combine the outstanding shares of Common Stock, the Series C Conversion Price, Series B Conversion Price and Series 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 Section 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 Series C 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 Series C Conversion Price, Series B Conversion Price and Series 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price (as applicable) 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 Series C Conversion Price, Series B Conversion Price or Series A Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Series C Conversion Price, Series B Conversion Price or Series A Conversion Price shall be adjusted pursuant to this Section as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made if the holders of 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 they would have received if all outstanding shares of 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 Series C 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 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 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 Section 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered

by Sections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of 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 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 (as determined in good faith by the Board) 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 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 Series C Conversion Price, Series B Conversion Price or Series 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 Preferred Stock. For the avoidance of doubt, nothing in this Subsection 4.8 shall be construed to prevent the holders of Preferred Stock from seeking any appraisal rights to which they are otherwise entitled under the General Corporation Law in connection with a merger triggering an adjustment hereunder, nor shall this Subsection 4.8 be deemed conclusive evidence of the fair value of the shares of Preferred Stock in any such appraisal proceeding.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series C Conversion Price, Series B Conversion Price or Series 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 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of affected Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the 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 affected Preferred Stock (but in any event not later than ten days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (a) the applicable Conversion Price then in effect, and (b) 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 the applicable 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 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;

(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 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 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 Preferred Stock and the Common Stock. Such notice shall be sent at least ten days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a per share price of at least $15.0915 (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $100,000,000 of proceeds, net of the underwriting discount and commissions, to the Corporation and in connection with such offering the Common Stock is listed for trading on the Nasdaq Stock Market's National Market, the New York Stock Exchange or another exchange or marketplace approved the Board of Directors, including the approval of a majority of the Series B Directors (a "**Qualified Public Offering**") or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (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 (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate for each series of Preferred Stock as calculated pursuant to Section 4.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of 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 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 Preferred Stock converted pursuant to Section 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 Section 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 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 Section 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 Preferred Stock converted. Such converted 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 Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of 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 Preferred Stock following redemption.

7. Waiver. Except where a different vote is specified in this Third Amended and Restated Certificate of Incorporation: (a) any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the Requisite Series C Majority; (b) any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the Requisite Series B Majority; (c) any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A Preferred Stock then outstanding; and (d) any of the rights, powers, preferences and other terms of the Preferred Stock as a class set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the holders of a majority of the voting power of the shares of Preferred Stock then outstanding. For purposes of clarity, for any matter with respect to which the vote in clause (d) of the preceding sentence applies, no additional vote pursuant to clauses (a), (b) or (c) of the preceding sentence shall apply to such matter.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of 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 Third Amended and Restated Certificate of Incorporation or bylaws of the Corporation, 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 Third 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 the 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 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 increase the liability of any director of the Corporation with respect to, any acts or omissions of such director, officer or other agent occurring prior to, such amendment, repeal or modification.

ELEVENTH: 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 Third 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 Third 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.

TWELFTH: 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 an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Series C Preferred Stock, Series B Preferred Stock or Series A Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is 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. Any repeal or modification of this Article Twelfth will only be prospective and will not affect the rights under this Article Twelfth in effect at the time of the occurrence of any actions or omissions to the act giving rise to liability.

* * *

IN WITNESS WHEREOF, this Third Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 29th day of December, 2020.

/s/ Bronson Crouch
Name: Bronson Crouch
Title: Chief Executive Officer

BYLAWS
OF
INSTIL BIO, INC.

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BYLAWS

OF

INSTIL BIO, INC.

ARTICLE I
CORPORATE OFFICES

1.1 Principal Office. The Board of Directors shall fix the location of the principal executive offices of InsTIL Bio, Inc. (the "**Company**") at any place within or outside the State of Delaware.

1.2 Other Offices. The Board of Directors may at any time establish other offices at any place or places where the Company is qualified to do business.

ARTICLE II
MEETINGS OF STOCKHOLDERS

2.1 Place Of Meetings. Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board of Directors. In the absence of any such designation, stockholders' meetings shall be held at the principal office of the Company.

2.2 Annual Meeting. The annual meeting of stockholders shall be held on such date, time and place, either within or outside the State of Delaware, as may be designated by the Board of Directors each year. At the meeting, directors shall be elected and any other proper business may be transacted.

2.3 Special Meeting. Except as provided by applicable law or in the certificate of incorporation, a special meeting of the stockholders may be called at any time by the Board of Directors, the Chairman of the Board, the Chief Executive Officer, the President or by one or more stockholders holding shares in the aggregate entitled to cast not less than ten percent (10%) of the votes at that meeting. If a special meeting is called by any person or persons other than the Board of Directors, the Chairman of the Board, the Chief Executive Officer or the President, the request shall be in writing, specifying the time of such meeting and the general nature of the business proposed to be transacted and shall be delivered personally or sent by certified mail, by facsimile or by electronic transmission to the Chairman of the Board, the Chief Executive Officer, the President, any Vice President or the Secretary of the Company. No business may be transacted at such special meeting otherwise than specified in such notice. The officer receiving the request shall cause notice to be promptly given to the stockholders entitled to vote, in accordance with the provisions of this Article II, that a meeting will be held at the time requested by the person or persons calling the meeting, not less than thirty five (35) nor more than sixty (60) days after the receipt of the request. Nothing contained in this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the Board of Directors may be held.

2.4 Notice of Stockholders' Meetings. All notices of meetings of stockholders shall be in writing and shall be given in accordance with Section 2.5 of these Bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place (if any), date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present and vote at such meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

2.5 Manner of Giving Notice; Affidavit of Notice. Written notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at the stockholder's address as it appears on the records of the Company. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders may be given by electronic mail or other electronic transmission in the manner provided in Section 232 of the General Corporation Law of the State of Delaware (the "DGCL"). An affidavit of the secretary or an assistant secretary or of the transfer agent of the Company that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

2.6 Quorum. Except as provided by applicable law or in the certificate of incorporation, the holders of a majority of the shares of stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by applicable law or by the certificate of incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, either (a) the chairman of the meeting or (b) holders of a majority of the shares of stock entitled to vote who are present, in person or by proxy, shall have power to adjourn the meeting to another place (if any), date or time.

2.7 Adjourned Meeting; Notice. When a meeting is adjourned to another place (if any), date or time, unless these Bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place (if any) thereof and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Company may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the place (if any), date and time of the adjourned 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 such adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.8 Organization; Conduct of Business. The Chairman of the Board or, in his or her absence, the Chief Executive Officer or, in his or her absence, the President or, in his or her absence, such person as the Board of Directors may have designated or, in the absence of such a person, such person as may be chosen by the holders of a majority of the shares entitled to vote who are present, in person or by proxy, shall call to order any meeting of the stockholders and act as chairman of the meeting. In the absence of the Secretary of the Company, the secretary of the meeting shall be such person as the chairman of the meeting appoints. The chairman of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including the manner of voting and the conduct of business. The date and time of opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting.

2.9 Voting. The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Article II of these Bylaws, subject to the provisions of Sections 217 and 218 of the DGCL (relating to voting rights of fiduciaries, pledgors and joint owners of stock and to voting trusts and other voting agreements). Except as may be required by law or otherwise provided in the certificate of incorporation, (a) each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder, (b) all elections shall be determined by a plurality of the votes cast, and (c) all other matters shall be determined by a majority of the votes cast affirmatively or negatively.

2.10 Waiver of Notice. Whenever notice is required to be given under any provision of the DGCL or of the certificate of incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, or waiver by electronic mail or other electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person 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. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice, or any waiver of notice by electronic transmission, unless so required by the certificate of incorporation or these Bylaws.

2.11 Stockholder Action by Written Consent Without a Meeting.

(a) Unless otherwise provided in the certificate of incorporation, any action required to be taken at any annual or special meeting of stockholders of the Company, or any action that may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote if a consent in writing, setting forth the action so taken, is (i) signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted, and (ii) delivered to the Company in accordance with Section 228 of the DGCL.

(b) Every written consent shall bear the date of signature of each stockholder who signs the consent, and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the date the earliest dated consent is delivered to the Company, a written consent or consents signed by a sufficient number of holders to take action are delivered to the Company in the manner prescribed in this Section 2.11. An electronic mail or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, or by a person or persons authorized to act for a stockholder or proxyholder, shall be deemed to be written, signed and dated for purposes of this Section 2.11 to the extent permitted by, and shall be delivered in accordance with, Section 228 of the DGCL.

(c) Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

(d) Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing (including by electronic mail or other electronic transmission as permitted by law). If the action which is consented to is such as would have required the filing of a certificate under any section of the DGCL if such action had been voted on by stockholders at a meeting thereof, the certificate filed under such section shall state, in lieu of any statement required by such section concerning any vote of stockholders, that written notice and written consent have been given as provided in Section 228 of the DGCL.

2.12 Record Date for Stockholder Notice, Voting and Consents.

(a) In order that the Company may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to take action by written consent without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or 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 shall not be less than ten (10) nor more than sixty (60) days before the date of such meeting, nor more than sixty (60) days prior to any other action. 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, if such adjournment is for thirty (30) days or less, provided that the Board of Directors may fix a new record date for the adjourned meeting.

(b) If the Board of Directors does not so fix a record date:

(i) 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.

(ii) The record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is delivered to the Company.

(iii) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

2.13 Proxies. Each stockholder entitled to vote at a meeting of stockholders or to take action by written consent without a meeting may authorize another person or persons to act for such stockholder by an instrument in writing or by an electronic transmission permitted by law filed with the secretary of the Company, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder’s name is placed on the proxy (whether by manual signature, typewriting, facsimile or electronic transmission or otherwise) by the stockholder or the stockholder’s attorney-in-fact. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

2.14 Meetings by Telephone or Similar Communications. If authorized by the Board of Directors, in its sole discretion, and subject to such guidelines and procedures as the Board of Directors may adopt, stockholders and proxyholders not physically present at a meeting of stockholders may, by means of remote communication:

(a) participate in a meeting of stockholders; and

(b) be deemed present in person and vote at a meeting of stockholders, whether such meeting is to be held at a designated place or solely by means of remote communication, provided that (i) the Company shall implement reasonable measures to verify that each person deemed present and permitted to vote at the meeting by means of remote communication is a stockholder or proxyholder, (ii) the Company shall implement reasonable measures to provide such stockholders and proxyholders a reasonable opportunity to participate in the meeting and to vote on matters submitted to the stockholders, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with such proceedings, and (iii) if any stockholder or proxyholder votes or takes other action at the meeting by means of remote communication, a record of such vote or other action shall be maintained by the Company.

ARTICLE III
DIRECTORS

3.1 Powers. Subject to the provisions of the DGCL and any limitations in the certificate of incorporation or these Bylaws relating to action required to be approved by the stockholders, the business and affairs of the Company shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors.

3.2 Number of Directors. Upon the adoption of these Bylaws, the number of directors constituting the entire Board of Directors shall be 2. Thereafter, unless otherwise provided in the certificate of incorporation, this number may be changed by a resolution of the Board of Directors or of the stockholders, subject to Section 3.4 of these Bylaws. No reduction of the authorized number of directors shall have the effect of removing any director before such director's term of office expires.

3.3 Election, Qualification and Term of Office of Directors. Except as provided in Section 3.4 of these Bylaws, and unless otherwise provided in the certificate of incorporation, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Directors need not be stockholders unless so required by the certificate of incorporation or these Bylaws. Each director, including a director elected to fill a vacancy, shall hold office until his or her successor is elected and qualified or until his or her earlier resignation or removal. Unless otherwise specified in the certificate of incorporation, elections of directors need not be by written ballot.

3.4 Resignation and Vacancies.

(a) Any director may resign at any time upon notice given in writing or by electronic transmission to the Board of Directors, the Chief Executive Officer, the President or the Secretary of the Company. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have the 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 as provided in this section in the filling of other vacancies.

(b) Unless otherwise provided in the certificate of incorporation or these Bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class 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 series may be filled by a majority of the directors elected by such class or series thereof then in office, or by a sole remaining director so elected.

(c) If at any time, by reason of death or resignation or other cause, the Company should have no directors in office, any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these Bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

(d) If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

3.5 Place of Meetings; Meetings by Telephone. The Board of Directors of the Company may hold meetings, both regular and special, either within or outside the State of Delaware. Unless otherwise restricted by the certificate of incorporation or these Bylaws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by the Board of Directors.

3.7 Special Meetings; Notice. Special meetings of the Board of Directors for any purpose or purposes may be called at any time by the Chairman of the Board, the Chief Executive Officer, the President, any Vice President, the Secretary or any two directors. Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail, facsimile or electronic transmission, charges prepaid, addressed to each director at that director's address as it is shown on the records of the Company. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by facsimile, electronic transmission or telephone, it shall be delivered at least twenty four (24) hours before the time of the holding of the meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the meeting and need not specify the place of the meeting as long as the meeting is to be held at the principal executive office of the Company. Unless otherwise indicated in the notice thereof, any and all business may be transacted at a special meeting.

3.8 Quorum. A majority of the directors then in office, but in no event less than one-third (1/3) of the total number of authorized directors, shall constitute a quorum for the transaction of business, and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by applicable law or by the certificate of incorporation. If a quorum is not present at any meeting of the Board of Directors, the directors present at the meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors as long as any action taken is approved by at least a majority of the required quorum for that meeting.

3.9 Waiver of Notice. Whenever notice is required to be given under any provision of the DGCL or of the certificate of incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, or waiver by electronic mail or other electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person 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. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice unless so required by the certificate of incorporation or these Bylaws.

3.10 Board Action by Written Consent Without a 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 or committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board 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. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

3.11 Fees and Compensation of Directors. Unless otherwise restricted by the certificate of incorporation or these Bylaws, the Board of Directors shall have the authority to fix the compensation of directors. No such compensation shall preclude any director from serving the Company in any other capacity and receiving compensation therefor.

3.12 Removal of Directors. Unless otherwise restricted by applicable law, by the certificate of incorporation or by these Bylaws, any director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that if the stockholders of the Company are entitled to cumulative voting, if less than the entire Board of Directors is to be removed, no director may be removed without cause if the votes cast against such director's removal would be sufficient to elect such director if then cumulatively voted at an election of the entire Board of Directors.

ARTICLE IV
COMMITTEES

4.1 Committees of Directors. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Company. 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. In the absence or disqualification of a member of a committee, the member or members present at any meeting and not disqualified from voting, whether or not such member or members 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. Any such committee, to the extent provided in the resolution of the Board of Directors, or in these Bylaws, 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 Company and may authorize the seal of the Company to be affixed to all papers which may require it; provided, however, that no such committee shall have the power or authority in reference to the following matters: (a) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval; or (b) adopting, amending or repealing any bylaw of the Company.

4.2 Committee Minutes. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

4.3 Meetings and Action of Committees. Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Section 3.5 (place of meetings and meetings by telephone), Section 3.6 (regular meetings), Section 3.7 (special meetings and notice), Section 3.8 (quorum), Section 3.9 (waiver of notice) and Section 3.10 (action without a meeting) of these Bylaws, with such changes in the context of such provisions as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the Board of Directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the Board of Directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V
OFFICERS

5.1 Officers. The officers of the Company shall be a Chief Executive Officer and/or a President, a Chief Financial Officer and/or a Treasurer and a Secretary. The Company may also have, at the discretion of the Board of Directors, a Chairman of the Board, a Treasurer, one or more Vice Presidents, one or more Assistant Secretaries, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws. Any number of offices may be held by the same person.

5.2 Appointment of Officers. The officers of the Company, except such officers as may be appointed in accordance with the provisions of Sections 5.3 or 5.5 of these Bylaws, shall be appointed by the Board of Directors, and each shall serve at the pleasure of the Board, subject to the rights, if any, of an officer under any contract of employment.

5.3 Subordinate Officers. The Board of Directors may appoint, or empower the Chief Executive Officer or the President to appoint, such other officers and agents as the business of the Company may require, each of whom shall hold office for such period, have such authority and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

5.4 Removal and Resignation of Officers. Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by the Board of Directors or, except in the case of an officer chosen by the Board of Directors, by any officer upon whom the power of removal is conferred by the Board of Directors. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Company. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice, and unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Company under any contract to which the officer is a party.

5.5 Vacancies in Offices. Any vacancy occurring in any office of the Company shall be filled in the manner prescribed by these Bylaws for regular appointment to that office.

5.6 Chairman of the Board. The Chairman of the Board, if such an officer be elected, shall, if present, preside at meetings of the Board of Directors and exercise and perform such other powers and duties as may from time to time be assigned by the Board of Directors or as may be prescribed by these Bylaws.

5.7 Chief Executive Officer. Subject to such powers, if any, as may be given by the Board of Directors to the Chairman of the Board, if any, the Chief Executive Officer of the Company (if such an officer is appointed) shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and the officers of the Company. The Chief Executive Officer shall preside at all meetings of the stockholders and, in the absence or disability of the Chairman of the Board, at all meetings of the Board of Directors and shall have the general powers and duties of management usually vested in the office of Chief Executive Officer of a corporation and such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.8 President. Subject to such powers, if any, as may be given by the Board of Directors to the Chairman of the Board (if any) or the Chief Executive Officer (if any), the President shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and other officers of the Company. The President shall have the general powers and duties of management usually vested in the office of president of a corporation and such other powers and duties as may be prescribed by the Board of Directors or these Bylaws. In the absence or disability of the Chief Executive Officer, the President shall perform all the duties of the Chief Executive Officer and when so acting shall have all the powers of, and be subject to all the restrictions upon, the Chief Executive Officer.

5.9 Vice Presidents. In the absence or disability of the Chief Executive Officer and President, the Vice Presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a Vice President designated by the Board of Directors, shall perform all the duties of the President and when so acting shall have all the powers of, and be subject to all the restrictions upon, the President. The Vice Presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the Chief Executive Officer, President or the Chairman of the Board.

5.10 Secretary. The Secretary shall keep or cause to be kept, at the principal executive office of the Company or such other place as the Board of Directors may direct, a book of minutes of all meetings and actions of directors, committees of directors and stockholders. The minutes shall show the time and place of each meeting, the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings and the proceedings thereof. The Secretary shall keep, or cause to be kept, at the principal executive office of the Company or at the office of the Company's transfer agent or registrar, as determined by resolution of the Board of Directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares and the number and date of cancellation of every certificate surrendered for cancellation. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the Board of Directors required to be given by law or by these Bylaws. The Secretary shall keep the seal of the Company, if one is adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

5.11 Chief Financial Officer. The Chief Financial Officer shall have the custody of the corporate funds and securities and shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the Company, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital retained earnings and shares. The books of account shall at all reasonable times be open to inspection by any director. The Chief Financial Officer shall deposit all moneys and other valuables in the name and to the credit of the Company with such depositories as may be designated by the Board of Directors. The Chief Financial Officer shall disburse the funds of the Company as may be ordered by the Board of Directors, shall render to the Board of Directors, the Chief Executive Officer or the President, upon request, an account of all his or her transactions as Chief Financial Officer and of the financial condition of the Company, and shall have other powers and perform such other duties as may be prescribed by the Board of Directors or the Bylaws.

5.12 Assistant Secretary. The Assistant Secretary or, if there is more than one, the Assistant Secretaries in the order determined by the Board of Directors (or if there is no such determination, then in the order of their election) shall, in the absence or disability of the Secretary, perform the duties and exercise the powers of the Secretary and such other duties and powers as may be prescribed by the Board of Directors or these Bylaws.

5.13 Treasurer. The Treasurer (if one is appointed) shall have such duties as may be specified by the Chief Financial Officer to assist the Chief Financial Officer in the performance of his or her duties and shall perform such other duties and have other powers as may from time to time be prescribed by the Board of Directors or the Chief Executive Officer.

5.14 Representation of Shares of Other Corporations. The Chairman of the Board, the Chief Executive Officer, the President, any Vice President, the Chief Financial Officer, the Secretary or Assistant Secretary of this Company, or any other person authorized by the Board of Directors or the Chief Executive Officer, the President, the Chief Financial Officer or a Vice President, is authorized to vote, represent and exercise on behalf of this Company all rights incident to any and all shares of any other corporation standing in the name of this Company. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by the person having such authority.

5.15 Authority and Duties of Officers. In addition to the foregoing authority and duties, all officers of the Company shall respectively have such authority and perform such duties in the management of the business of the Company as may be designated from time to time by the Board of Directors.

ARTICLE VI
INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS

6.1 Indemnification of Directors and Officers. The Company shall, to the maximum extent and in the manner permitted by the DGCL, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Company. For purposes of this Section 6.1, a "director"

or “officer” of the Company includes any person (a) who is or was a director or officer of the Company, (b) who is or was serving at the request of the Company as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was a director or officer of a corporation which was a predecessor corporation of the Company or of another enterprise at the request of such predecessor corporation.

6.2 Indemnification of Others. The Company shall have the power, to the maximum extent and in the manner permitted by the DGCL, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys’ fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Company. For purposes of this Section 6.2, an “employee” or “agent” of the Company (other than a director or officer) includes any person (a) who is or was an employee or agent of the Company, (b) who is or was serving at the request of the Company as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was an employee or agent of a corporation which was a predecessor corporation of the Company or of another enterprise at the request of such predecessor corporation.

6.3 Payment of Expenses in Advance. Expenses incurred in defending any action or proceeding for which indemnification is required pursuant to Section 6.1 of these Bylaws or for which indemnification is permitted pursuant to Section 6.2 of these Bylaws, following authorization thereof by the Board of Directors, shall be paid by the Company in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that the indemnified party is not entitled to be indemnified as authorized in this Article VI.

6.4 Indemnity Not Exclusive. The indemnification provided by this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, to the extent that such additional rights to indemnification are authorized in the certificate of incorporation.

6.5 Insurance. The Company may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent 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 against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Company would have the power to indemnify him or her against such liability under the provisions of the DGCL.

6.6 Conflicts. No indemnification or advance shall be made under this Article VI, except where such indemnification or advance is mandated by law or the order, judgment or decree of any court of competent jurisdiction, in any circumstance where it appears:

(a) that it would be inconsistent with a provision of the certificate of incorporation, these Bylaws, a resolution of the stockholders or an agreement in effect at the time of the accrual of the alleged cause of the action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(b) that it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

ARTICLE VII
RECORDS AND REPORTS

7.1 Maintenance and Inspection of Records.

(a) The Company shall, either at its principal executive offices or at such place or places as designated by the Board of Directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books and other records.

(b) Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the Company's stock ledger, a list of its stockholders and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the Company at its registered office in Delaware or at its principal place of business.

(c) A complete list of stockholders entitled to vote at any meeting of stockholders, arranged in alphabetical order for each class and series of stock and showing the address of each such stockholder and the number of shares registered in each such stockholder's name, shall be open to the examination of any such stockholder for a period of at least ten (10) days prior to the meeting in the manner provided by law. The stock list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law. This list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

(d) The application and requirements of Section 1501 of the California Corporations Code, to the extent applicable, are hereby expressly waived to the fullest extent permitted thereunder.

7.2 Inspection by Directors. Any director shall have the right to examine the Company's stock ledger, a list of its stockholders and its other books and records for a purpose reasonably related to his or her position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the Company to permit the director to inspect any and all books and records, the stock ledger and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection or award such other and further relief as the Court may deem just and proper.

ARTICLE VIII
GENERAL MATTERS

8.1 Checks. From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the Company, and only the persons so authorized shall sign or endorse those instruments.

8.2 Execution of Corporate Contracts and Instruments. The Board of Directors, except as otherwise provided by applicable law, the certificate of incorporation or in these Bylaws, may authorize any officers or agents to enter into any contract or execute any instrument in the name of and on behalf of the Company, and such authority may be general or confined to specific instances. Unless so 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 Company by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.3 Stock Certificates; Partly Paid Shares.

(a) The shares of the Company shall be represented by certificates, provided that the Board of Directors of the Company may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Company. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Company with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

(b) The Company may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the Company in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Company shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.4 Special Designation on Certificates. If the Company is authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof, and the qualifications, limitations or restrictions of such preferences and/or rights, shall be set forth in full or summarized on the face or back of the certificate that the Company shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202

of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the Company shall issue to represent such class or series of stock a statement that the Company will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5 Lost Certificates. Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Company and cancelled at the same time. The Company may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it that is alleged to have been lost, stolen or destroyed and may require the owner of the lost, stolen or destroyed certificate, or the owner's legal representative, to make an affidavit stating that the certificate has been lost, stolen or destroyed and/or to give the Company a bond sufficient to indemnify the Company against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6 Construction; Definitions. Unless the context requires otherwise, the general provisions, rules of construction and definitions in the DGCL shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular and the term "person" includes both a corporation and a natural person.

8.7 Dividends. Subject to any restrictions contained in the DGCL or the certificate of incorporation, the Board of Directors may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property or in shares of the Company's capital stock. The Board of Directors may set apart, out of any of the funds of the Company available for dividends, a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Company and meeting contingencies.

8.8 Fiscal Year. The fiscal year of the Company shall be fixed by resolution of the Board of Directors and may be changed by the Board of Directors.

8.9 Seal. The Company may adopt a corporate seal, which may be altered by the Board of Directors, and may use the same by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

8.10 Transfer of Stock. Upon surrender to the Company or the transfer agent of the Company of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Company to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction in its books.

8.11 Stock Transfer Agreements. The Company shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes or series of stock of the Company to restrict the transfer of shares of stock of the Company of any one or more classes or series owned by such stockholders in any manner not prohibited by the DGCL.

8.12 Registered Stockholders. The Company 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, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by applicable law.

8.13 Facsimile Signature. In addition to the provisions for use of facsimile signatures elsewhere specifically authorized in these Bylaws, facsimile signatures of any officer or officers of the Company may be used whenever and as authorized by the Board of Directors or a committee thereof.

8.14 Conflicts With Certificate of Incorporation. In the event of any conflict between the provisions of the Company's certificate of incorporation and these Bylaws, the provisions of the certificate of incorporation shall govern.

ARTICLE IX
RIGHT OF FIRST REFUSAL

9.1 Right of First Refusal. No stockholder shall sell, assign, pledge or otherwise transfer (a "**transfer**") any of the shares of common stock of the Company or any right or interest therein, whether voluntarily, involuntarily, by operation of law, by gift or otherwise, except by a transfer which meets the requirements hereinafter set forth in this Article IX:

(a) If the stockholder desires to transfer any shares of common stock, the stockholder shall first give written notice thereof to the Company. The notice shall name the proposed transferee and state the number of shares to be transferred, the proposed consideration and all other terms and conditions of the proposed transfer.

(b) For thirty (30) days following receipt of such notice, the Company shall have the option to purchase all or any portion of the shares specified in the notice at the price and upon the terms set forth in such notice. In the event of a gift, property settlement or other transfer in which the proposed transferee is not paying the full price for the shares, and that is not otherwise exempted from the provisions of this Article IX, the price shall be deemed to be the fair market value of the stock at such time as determined in good faith by the Board of Directors. If the Company elects to purchase any of the shares, it shall give written notice to the transferring stockholder of its election, and the closing of the Company's purchase of such shares shall be made as provided below.

(c) If the Company elects to acquire any of the shares of the transferring stockholder as specified in such transferring stockholder's notice, the Secretary of the Company shall so notify the transferring stockholder (including notice as to the number of shares to be acquired) and settlement thereof shall be made in cash within fifteen (15) days after the Secretary delivers such notice to the transferring stockholder; provided, however, that if the terms of payment set forth in the transferring stockholder's notice were other than cash or evidences of

indebtedness against delivery, then the Company shall have the right to pay the purchase price in the form of cash equal in amount to the value of such property. If the transferring stockholder and the Company cannot agree on such cash value within twenty (20) days after the Company's receipt of the transferring stockholder's notice, the valuation shall be made by an appraiser of recognized standing selected by the transferring stockholder and the Company, or, if they cannot agree on an appraiser within thirty (30) days after the Company's receipt of the transferring stockholder's notice, each shall select an appraiser of recognized standing and the two appraisers shall designate a third appraiser of recognized standing, whose appraisal shall be determinative of such cash value. The cost of such appraisal shall be shared equally by the transferring stockholder and the Company. The closing shall then be held within fifteen (15) days after such cash valuation has been determined.

(d) If the Company does not elect to acquire all of the shares specified in the transferring stockholder's notice, such transferring stockholder may, within the thirty (30) day period following the expiration of the option rights granted to the Company herein, transfer the shares specified in such transferring stockholder's notice which were not acquired by the Company on terms and conditions (including the purchase price) no more favorable to the proposed transferee than those specified in such transferring stockholder's notice. All shares so sold by such transferring stockholder shall continue to be subject to the provisions of this Article IX in the same manner as before such transfer.

(e) Notwithstanding anything to the contrary contained herein, the following transactions shall be exempt from the provisions of this Article IX:

(i) A stockholder's transfer of any or all shares held either during such stockholder's lifetime or on death by will or intestacy (A) to such stockholder's immediate family, (B) to any custodian or trustee for the account or the benefit of such stockholder or such stockholder's immediate family, or (C) to any limited partnership or limited liability company with respect to which the ownership interests are wholly owned by the stockholder, members of such stockholder's immediate family or any trust for the account or benefit of such stockholder or such stockholder's immediate family. "Immediate family" as used herein shall mean child, stepchild, grandchild, parent, stepparent, grandparent, spouse, domestic partner, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships.

(ii) A stockholder's bona fide pledge or mortgage of any shares with a commercial lending institution that creates a mere security interest, provided that any subsequent transfer of such shares by such institution shall be subject to this Article IX.

(iii) A stockholder's transfer of any or all of such stockholder's shares to the Company.

(iv) A stockholder's transfer of any or all of such stockholder's shares to a person who, at the time of such transfer, is an officer or director of the Company.

(v) A corporate stockholder's transfer of any or all of its shares to any or all of its stockholders.

(vi) A transfer by a stockholder that is a limited or general partnership or limited liability company of any or all of its shares to any or all of its partners or former partners, or members of former members (as the case may be).

(vii) A transfer of common stock issued upon the conversion of preferred stock of the Company or any right or interest in such common stock (including without limitation the right to receive common stock on conversion of any preferred stock).

In any such case, the transferee shall receive and hold such stock subject to the provisions of this Article IX, and there shall be no further transfer of such stock except in accord with this Article IX; provided, however, that common stock transferred pursuant to subparagraph (vii)9.1(e)(vii) above shall not be subject to this paragraph.

9.2 Amendment and Waiver; Termination.

(a) The provisions of this Article IX may be waived with respect to any transfer either by the Company, upon duly authorized action of the Board of Directors, or by the stockholders, upon the written consent of the owners of a majority of the voting power of the Company (excluding the votes represented by those shares to be transferred by the transferring stockholder).

(b) The provisions of this Article IX may be amended or repealed either by a duly authorized action of the Board of Directors or by the stockholders upon the written consent of the owners of a majority of the voting power of the Company, but subject to any additional requirements of the certificate of incorporation.

(c) The provisions of this Article IX shall terminate immediately prior to the date of the closing of a firm commitment underwritten public offering of common stock of the Company pursuant to a registration statement filed with, and declared effective by, the Securities and Exchange Commission under the Securities Act of 1933, as amended.

9.3 Void Transfers. Any transfer, or purported transfer, of shares of the Company shall be null and void unless the terms, conditions and provisions of this Article IX are strictly observed and followed.

9.4 Assignment of Rights. The Company may assign its rights hereunder in whole or in part to any director, officer, employee, stockholder or other person or entity.

9.5 Legends. The certificates representing shares of stock of the Company subject to this Article IX shall bear on their face the following legend so long as this Article IX remains in effect:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL IN FAVOR OF THE COMPANY AND/OR ITS ASSIGNEE(S), AS PROVIDED IN THE BYLAWS OF THE COMPANY."

ARTICLE X
AMENDMENTS

These Bylaws may be adopted, amended or repealed by the stockholders or, to the extent such power is conferred on the Board of Directors in the Company's certificate of incorporation, by the Board of Directors. The fact that such power has been so conferred upon the Board of Directors shall not divest the stockholders of the power, nor limit their power, to adopt, amend or repeal these Bylaws.

CERTIFICATE OF SECRETARY

The undersigned hereby certifies that the undersigned is the duly elected, qualified, and acting Secretary or Assistant Secretary of InsTIL Bio, Inc., a Delaware corporation, and that the foregoing Bylaws were adopted as the Bylaws of the Company on September 20, 2018, by the Board of Directors.

Executed on September 20, 2018.

/s/ Bronson Crouch

Bronson Crouch, Secretary

Exhibit 4.1

INSTIL BIO, INC.

SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of December 30, 2020, by and among Instil Bio, Inc., a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto (together with any subsequent investors, or transferees who become parties hereto as "Investors" pursuant to Section 6.9, the "**Investors**").

RECITALS

WHEREAS, certain of the Investors (the "**Existing Investors**") hold shares of the Company's Preferred Stock and possess registration rights, information rights, rights of first offer and other rights pursuant to that certain Amended and Restated Investors' Rights Agreement, dated as of June 30, 2020, by and among the Company and such Investors (the "**Prior Agreement**");

WHEREAS, the Existing Investors are holders of a majority of the Registrable Securities of the Company (as defined in the Prior Agreement), and desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement; and

WHEREAS, certain of the Investors are parties to that certain Series C Preferred Stock Purchase Agreement of even date herewith by and among the Company and certain of the Investors (the "**Purchase Agreement**"), under which certain of the Company's and such Investors' obligations are conditioned upon the execution and delivery of this Agreement.

NOW, THEREFORE, the Company and the Investors, including the Existing Investors, hereby agree that the Prior Agreement shall be amended, restated and replaced in its entirety by this Agreement, and the parties to this Agreement further agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital, registered investment company or other investment fund now or hereafter existing that is controlled by one or more general partners, managing members or investment advisers of, or shares the same management company or investment adviser with, such Person.

1.2 "**Common Stock**" means shares of the Company's common stock, par value $0.000001 per share.

1.3 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (a) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (b) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (c) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law

1.4 "**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.5 "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.6 "**Excluded Registration**" means (a) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase or similar plan, (b) a registration relating to an SEC Rule 145 transaction, (c) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or (d) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.7 "**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.8 "**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.9 "**GAAP**" means generally accepted accounting principles in the United States.

1.10 "**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

1.11 "**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships, of a natural person referred to herein.

1.12 "**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.13 "**IPO**" means the Company's first firm underwritten public offering of its Common Stock pursuant to a registration statement filed and declared effective under the Securities Act.

1.14 "**Key Employee**" means any executive-level employee (including division director and vice president-level positions) as well as any employee who, either alone or in concert with others, develops, invents, programs or designs any Company Intellectual Property (as defined in the Purchase Agreement).

1.15 "**Major Investor**" means any Investor that, individually or together with such Investor's Affiliates, holds at least 795,152 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination or other recapitalization or reclassification effected after the date hereof).

1.16 "**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.17 "**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.18 "**Preferred Directors**" means, collectively, the Series A Director and the Series B Directors.

1.19 "**Preferred Stock**" means, collectively, shares of the Company's Series C Preferred Stock, Series B Preferred Stock and Series A Preferred Stock.

1.20 "**Registrable Securities**" means (a) the Common Stock issuable or issued upon conversion of the Preferred Stock; (b) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; and (c) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (a) and (b) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement.

1.21 "**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.22 "**Restricted Securities**" means the securities of the Company required to be notated with the legend set forth in Section 2.12(b) hereof.

1.23 "**SEC**" means the Securities and Exchange Commission.

1.24 "**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

1.25 "**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

1.26 "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.27 "**Selling Expenses**" means all underwriting discounts, selling commissions and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.28 "**Series A Director**" means any director of the Company that the holders of record of the Series A Preferred Stock are entitled to elect pursuant to the Restated Certificate (as defined below).

1.29 "**Series A Preferred Stock**" means shares of the Company's Series A Preferred Stock, par value $0.000001 per share.

1.30 "**Series B Director**" means any director of the Company that the holders of record of the Series B Preferred Stock are entitled to elect pursuant to the Restated Certificate.

1.31 "**Series B Preferred Stock**" means shares of the Company's Series B Preferred Stock, par value $0.000001 per share.

1.32 "**Series C Preferred Stock**" means shares of the Company's Series C Preferred Stock, par value $0.000001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (a) three years after the date of this Agreement or (b) 180 days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of a majority of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement with respect to at least 40% of the Registrable Securities then outstanding, then the Company shall (i) within 10 days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within 60 days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least 30% of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $5 million, then the Company shall (i) within 10 days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within 45 days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's board of directors (the "**Board**") it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly for a period of not more than 30 days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any 12-month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such 30-day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a): (i) during the period that is 60 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b): (i) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company

has effected two registrations pursuant to Section 2.1(b) within the 12-month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(d); provided, that if such withdrawal is during a period the Company has deferred taking action pursuant to Section 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Section 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within 20 days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering or (ii) the number of Registrable Securities included in the offering be reduced below 30% of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Section 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company or corporation, the partners, members, retired partners, retired members, stockholders and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Section 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Section 2.3(a), fewer than 50% of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such

registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to 120 days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such 120-day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such 120-day period shall be extended for up to 45 days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company’s officers, directors, employees and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings or qualifications pursuant to Section 2, including all registration, filing and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $50,000, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company and each of its directors, each of its officers who has signed the registration statement, each Person (if any) who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Sections 2.8(b) and (d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an

indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case; or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions or other actions that resulted in such loss, claim, damage, liability or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after 90 days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies) and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would (a) provide to such holder or prospective holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include, (b) allow such holder or prospective holder to include such securities in any registration unless, under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the number of the Registrable Securities of the Holders that are included, or (c) allow such holder or prospective holder to initiate a demand for registration of any securities held by such holder or prospective holder; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Section 6.9.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company for its own behalf of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement for the IPO, and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days after the effective date of the final prospectus relating to the IPO), (i) lend; 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 to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for the IPO or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall apply only to the IPO, shall not apply to (a) the sale of any shares to an underwriter pursuant to an underwriting agreement, (b) the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder or the transfer of any shares to an Affiliate of the Holder, provided that the trustee of the trust or the Affiliate, as the case may be, agrees to be bound in writing by the restrictions set forth herein, (c) shares purchased by a Holder in the open market, and provided further that any such transfers in the case of (b) shall not involve a disposition for value. The foregoing restrictions of this Section 2.11 shall be applicable to the Holders only if all officers and directors of the Company and all stockholders individually owning more than 1% of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to substantially the same restrictions. The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreements.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged or otherwise transferred, and the Company shall not recognize and shall issue stop- transfer instructions to its transfer agent with respect to any such sale, pledge or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement. For the avoidance of doubt, all shares of Preferred Stock are freely transferable subject to applicable law, compliance with the provisions of Section 2.12(c) and the execution of a joinder to this Agreement by the transferee of such shares of Preferred Stock. Notwithstanding the foregoing, the Company shall not require any transferee of shares pursuant to an effective registration statement or, following the IPO, SEC Rule 144, in each case, to be bound by the terms of this Agreement.

(b) Each certificate, instrument or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction or following the IPO, the transfer is made pursuant to SEC Rule 144, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge or transfer, provided that no such notice shall be required in connection if the intended sale, pledge or transfer complies with SEC Rule 144. Each such notice shall describe the manner and circumstances of the proposed sale, pledge or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act, (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto, or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder transfers Restricted Securities to an Affiliate of such Holder for no consideration; provided that with respect to transfers under the foregoing clause (y), each transferee agrees in writing to be

subject to the terms of this Section 2.12. Each certificate, instrument or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Section 2.12(b), except that such certificate instrument or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Sections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Company's Third Amended and Restated Certificate of Incorporation (the "**Restated Certificate**");

(b) such time after consummation of the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration; and

(c) the fifth anniversary of the IPO.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor:

(a) as soon as practicable, but in any event within 120 days after the end of each fiscal year of the Company, (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within 45 days after the end of each of the first three quarters of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within 45 days after the end of each quarter of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete and correct;

(d) as soon as practicable, but in any event within 30 days after the end of each month, an unaudited income statement and statement of cash flows for such month, and an unaudited balance sheet and statement of stockholders' equity as of the end of such month, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(e) as soon as practicable, but in any event 30 days before the end of each fiscal year, a budget and business plan for the next fiscal year, prepared on a monthly basis, including balance sheets, income statements and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(f) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Section 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in a form reasonably acceptable to the Company) or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date 30 days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor, at such Major Investor's expense, to visit and inspect the Company's properties, examine its books of account and records and discuss the Company's affairs, finances and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information Rights. The covenants set forth in Sections 3.1 and 3.2 shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (c) upon a Deemed Liquidation Event, as such term is defined in the Restated Certificate, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.4 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its and its Affiliates' respective attorneys, accountants, consultants and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company, (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4, (iii) to any existing or prospective Affiliate, partner, partner of partners, member, stockholder or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information, or (iv) as may otherwise be required by law, regulation, rule, court order or subpoena, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Major Investor ("**Investor Beneficial Owners**"); provided that each such Affiliate or Investor Beneficial Owner (x) agrees to enter into this Agreement and each of the Second Amended and Restated Voting Agreement and Second Amended and Restated Right of First Refusal and Co-Sale Agreement of even date herewith among the Company, the Investors and the other parties named therein, as an "**Investor**" under each such agreement and (y) agrees to purchase at least such number of New Securities as are allocable hereunder to the Major Investor holding the fewest number of Preferred Stock and any other Derivative Securities.

(a) The Company shall give notice (the "**Offer Notice**") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within 20 days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Major Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Major Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and any other Derivative Securities then outstanding). At the expiration of such 20 day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Major Investor's failure to do likewise. During the 10 day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of 90 days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the 90 day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within 30 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Restated Certificate) and (ii) shares of Common Stock issued in the IPO.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, in which all of the Preferred Stock is converted into Common Stock, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (c) upon a Deemed Liquidation Event, as such term is defined in the Restated Certificate, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall obtain, within 90 days of the date hereof, from financially sound and reputable insurers Directors and Officers liability insurance in an amount and on terms and conditions satisfactory to the Board, and will use commercially reasonable efforts to cause such insurance policy to be maintained until such time as the Board (including at least two Preferred Directors) determines that such insurance should be discontinued.

5.2 Employee Agreements. The Company will cause (i) each Person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) to enter into a nondisclosure and proprietary rights assignment agreement; and (ii) each Key Employee to enter into a one year noncompetition and nonsolicitation agreement, substantially in the form approved by the Board. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements or any restricted stock agreement between the Company and any employee, without the consent of the Board.

5.3 Employee Stock. Unless otherwise approved by the Board (including at least two Preferred Directors), all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (a) vesting of shares over a four year period, with the first 25% of such shares vesting following 12 months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following 36 months, and (b) a market stand-off provision substantially similar to that in Section 2.11. Without the prior approval by the Board, the Company shall not amend, modify, terminate, waive or otherwise alter, in whole or in part, any stock purchase, stock restriction or option agreement with any existing employee or service provider if such amendment would cause it to be inconsistent with this Section 5.3. In addition, unless otherwise approved by the Board, the Company shall retain a "right of first refusal" on employee transfers until the Company's IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Matters Requiring Investor Director Approval. So long as the holders of Series B Preferred Stock are entitled to elect a Series B Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board, which approval must include the affirmative vote of at least two Preferred Directors:

(a) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity or person unless it is wholly owned by the Company;

(b) make, or permit any subsidiary to make, any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board;

(c) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(d) make any investment inconsistent with any investment policy approved by the Board;

(e) incur any aggregate indebtedness in excess of $1,000,000 that is not already included in a budget approved by the Board, other than trade credit incurred in the ordinary course of business;

(f) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except for transactions contemplated by this Agreement or the Purchase Agreement; transactions resulting in payments to or by the Company in an aggregate amount less than $120,000 per year; or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by a majority of the Board;

(g) hire, terminate, or change the compensation of the executive officers, including approving any option grants or stock awards to executive officers;

(h) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(i) sell, assign, license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business; or

(j) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $1,000,000.

5.5 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board. Each Series B Director shall be entitled, at such person's discretion, to be a member of any committee of the Board.

5.6 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board as in effect immediately before such transaction, whether such obligations are contained in the Company's bylaws, its Restated Certificate or elsewhere, as the case may be.

5.7 Indemnification Matters. The Company hereby acknowledges that one or more of the directors nominated to serve on the Board by the Investors (each a "**Fund Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their Affiliates (collectively, the "**Fund Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (*i.e.*, its obligations to any such Fund Director are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Fund Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Fund Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Fund Director to the extent legally permitted and as required by the Restated Certificate or bylaws of the Company (or any agreement between the Company and such Fund Director), without regard to any rights such Fund Director may have against the Fund Indemnitors, and (c) 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 any such Fund Director with respect to any claim for which such Fund Director 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 such Fund Director against the Company. The Fund Directors and the Fund Indemnitors are intended third-party beneficiaries of this Section 5.7 and shall have the right, power and authority to enforce the provisions of this Section 5.7 as though they were a party to this Agreement.

5.8 Right to Conduct Activities. The Company hereby agrees and acknowledges that each of Curative Ventures V LLC (together with its Affiliates) ("**Curative**"), Vivo Capital Fund IX, L.P. (together with its Affiliates) ("**Vivo**"), Venrock Healthcare Capital Partners III, L.P. (together with its Affiliates) ("**Venrock**"), HBM Healthcare Investments (Cayman) Ltd. (together with its Affiliates) ("**HBM**"), RA Capital Healthcare Fund, L.P. (together with its Affiliates) ("**RA Capital**"), Samsara BioCapital, L.P. (together with its Affiliates) ("**Samsara**"), Baker Brothers Life Sciences, L.P. (together with its Affiliates) ("**Baker**"), ISTL Holdings Limited (together with its Affiliates) ("**ISTL**"), MW XO Health Innovations Fund, LP ("**MW**") and each of Wellington Management Company LLP ("**Wellington**") and Wellington Biomedical Innovation Master Investors (Cayman) I L.P. (together with its affiliates, the "**Wellington Investor**") is a professional investment organization, and as such reviews the business plans and related proprietary information of many enterprises, some of which may compete directly or indirectly with the Company's business (as currently conducted or as currently proposed to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, each of Curative, Vivo, Venrock, HBM, RA Capital, Samsara, Baker, ISTL, MW, Wellington and the Wellington Investor shall not be liable to the Company for any claim arising out of, or based upon, (a) the investment by Curative, Vivo, Venrock, HBM, RA Capital, Samsara, Baker, ISTL, MW, Wellington or the Wellington Investor in any entity competitive with the Company, or (b) actions taken by any partner, officer or other representative of Curative, Vivo, Venrock, HBM, RA Capital, Samsara, Baker, ISTL, MW, Wellington or the Wellington Investor to

assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.9 Foreign Corrupt Practices Act. The Company shall not, and shall not permit any of its subsidiaries or affiliates or any of its or their respective directors, officers, managers, employees, independent contractors, representatives or agents to, promise, authorize or make any payment, or otherwise provide any item of value, directly or indirectly, to any foreign official or any foreign political party or official thereof or candidate for foreign political office in violation of the U.S. Foreign Corrupt Practices Act ("**FCPA**"), the U.K. Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law. The Company shall, and shall cause each of its subsidiaries and affiliates to, cease all of its or their respective activities, as well as remediate any actions taken by the Company, its subsidiaries or affiliates, or any of their respective directors, officers, managers, employees, independent contractors, representatives or agents in violation of the FCPA, the U.K. Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law. The Company shall, and shall cause each of its subsidiaries and affiliates to, maintain systems of internal controls (including, but not limited to, accounting systems, purchasing systems and billing systems) to ensure compliance with the FCPA, the U.K. Bribery Act 2010, or any other applicable anti- bribery or anti-corruption law. Upon request, the Company agrees to provide responsive information and/or certifications concerning its compliance with applicable anti-corruption laws.

5.10 Termination of Covenants. The covenants set forth in this Section 5, except for Sections 5.6 and 5.7, shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, in which all of the Preferred Stock is converted into Common Stock, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (c) upon a Deemed Liquidation Event, as such term is defined in the Restated Certificate, whichever event occurs first.

5.11 No Use of Name. Without a Holder's prior written consent, none of the Company, its subsidiaries, any other Holder or their respective Affiliates shall use, publish, reproduce, or refer to such Holder, its related parties, controlling persons, or any similar name, trademark or logo, in any non-internal discussion, documents or materials, including without limitation for marketing, advertising, publicity or other purposes.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (a) is an Affiliate of a Holder, (b) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members or (c) after such transfer, holds at least 100,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which

such rights are being transferred, and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder, (2) who is a Holder's Immediate Family Member, or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall, as a condition to the applicable transfer, establish a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware without regard for conflict of law principles.

6.3 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 instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the United States 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.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (a) personal delivery to the party to be notified, (b) when sent, if sent by electronic mail during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A, or to the principal office of the Company, in the case of the Company, or to such email address or address as subsequently modified by written notice given in accordance with this Section 6.5.

(b) Consent to Electronic Notice. Each Investor consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "**DGCL**"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address set forth below such Investor's

name on the Schedules hereto, as updated from time to time by notice to the Company, or as on the books of the Company. To the extent that any notice given by means of electronic transmission is returned or undeliverable for any reason, the foregoing consent shall be deemed to have been revoked until a new or corrected electronic mail address has been provided, and such attempted electronic notice shall be ineffective and deemed to not have been given. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

(c) Notwithstanding any of the foregoing, with respect to HBM Healthcare Investments (Cayman) Ltd. ("**HBM**"), only a nationally recognized courier service (such as FedEx or DHL) shall be used to effectuate the delivery of any notices pursuant to this Section 6.5, and such notice or other communication for purpose of this Agreement shall not be treated as effective or having been given if some other delivery method is utilized; provided, however, that if such notice is being sent internationally, it shall not be deemed defective if such courier does not deliver such notice on the next business day following deposit (provided that such notice shall be deemed delivered on the date of delivery by such courier service), and provided further, that HBM may agree to receive notice in some other manner set forth in this Section 6.5 by written election; and a copy (which shall not constitute notice) shall also be sent to Sidley Austin LLP, 1999 Avenue of the Stars, 17th Floor, Los Angeles, California 90067, Attention: Mehdi Khodadad.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of a majority of the Preferred Stock then outstanding (voting together as a single class on an as-converted basis), which majority must include (X) a majority of the Series B Preferred Stock then outstanding and (Y) the Requisite Series C Majority (as defined in the Restated Certificate); provided that the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (a) this Agreement may not be amended, modified or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Major Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction); (b) Sections 3.1 and 3.2, Section 4 and any other section of this Agreement applicable to the Major Investors (including this clause (b) of this Section 6.6) may not be amended, modified, terminated or waived without the written consent of the holders of a majority of the Preferred Stock then outstanding and held by the Major Investors (voting together as a single class on an as-converted basis), which majority must include (A) a majority of the Series B Preferred Stock then outstanding and held by the Major Investors and (B) a majority of the Series C Preferred Stock then outstanding and held by the Major Investors (including at least one-third of the shares of Series C Preferred Stock held by Major Investors

holding shares of Series C Preferred Stock who do not also hold any shares of Series B Preferred Stock); and (c) the definition of "Major Investor" may not be amended to increase the number of shares required to be deemed a "Major Investor" without the written consent of each Major Investor as of the date of this Agreement. Notwithstanding the foregoing, Schedule A hereto may be amended by the Company from time to time to add transferees of any Registrable Securities in compliance with the terms of this Agreement without the consent of the other parties; and Schedule A hereto may also be amended by the Company after the date of this Agreement without the consent of the other parties to add information regarding any additional Investor who becomes a party to this Agreement in accordance with Section 6.9. The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination or waiver. Any amendment, termination or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal or unenforceable provision shall be reformed and construed so that it will be valid, legal and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Series C Preferred Stock after the date hereof, any purchaser of such shares may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled. Upon the effectiveness of this Agreement, the Prior Agreement shall be deemed amended and restated and superseded and replaced in its entirety by this Agreement, and shall be of no further force or effect.

6.11 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the federal or state courts located in the state of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the federal or state courts located in the state of Delaware, (c)

hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court, and (d) agree to be subject to service of process in the state of Delaware by service of process directed to the address to which notices are to be sent as set forth in Section 6.5.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

Each party will bear its own costs in respect of any disputes arising under this Agreement. The prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.

6.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

COMPANY:

INSTIL BIO, INC.

By: */s/ Bronson Crouch*
Name: Bronson Crouch
Title: Chief Executive Officer

Address: 3963 Maple Avenue, Suite 350
Dallas, TX 75219

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

AllianceBernstein L.P., on behalf of its certain discretionary managed accounts:

AB CAP FUND, INC.—AB SMALL CAP GROWTH PORTFOLIO

AB DISCOVERY GROWTH FUND, INC.

By: */s/ Paul A. Emerson*
Name: Paul A. Emerson
Title: Assistant Secretary

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

ArrowMark Fundamental Opportunity Fund, L.P.

By: its Investment Adviser
ArrowMark Colorado Holdings LLC

By: */s/ Kirk Reid*
Name: Kirk Reid
Title: COO

ArrowMark Life Science Fund, LP

By: its Investment Adviser
ArrowMark Colorado Holdings LLC

By: */s/ Kirk Reid*
Name: Kirk Reid
Title: COO

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

ISTL HOLDINGS LIMITED

By: */s/ Colm O'Connell*
Name: Colm O'Connell
Title: Authorized Signatory

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

MW XO HEALTH INNOVATIONS FUND, LP

By: Marshall Wace North America, LP
Its: Investment Manager

By: Marshall Wace LLC
Its: General Partner of the Investment Manager

By: */s/ Michael Sargent*
Name: Michael Sargent
Title: Authorised Signatory

By: */s/ Duncan Ford*
Name: Duncan Ford
Title: Authorised Signatory

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

667, L.P.

By: BAKER BROS. ADVISORS LP, management company and investment adviser to 667, L.P., pursuant to authority granted to it by Baker Biotech Capital, L.P., general partner to 667, L.P., and not as the general partner.

By: */s/ Scott Lessing*
Name: Scott L. Lessing
Title: President

BAKER BROTHERS LIFE SCIENCES, L.P.

By: BAKER BROS. ADVISORS LP, management company and investment adviser to Baker Brothers Life Sciences, L.P., pursuant to authority granted to it by Baker Brothers Life Sciences Capital, L.P., general partner to Baker Brothers Life Sciences, L.P., and not as the general partner

By: */s/ Scott Lessing*
Name: Scott L. Lessing
Title: President

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

CURATIVE VENTURES V LLC

By: */s/ Bronson Crouch*
Name: Bronson Crouch
Title: Partner

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

GC&H INVESTMENTS, LLC

By: */s/ Jim Kindler*
Name: Jim Kindler
Title: Manager

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

HBM HEALTHCARE INVESTMENTS (CAYMAN) LTD.

By: */s/ Jean-Marc LeSieur*
Name: Jean-Marc LeSieur
Title: Director

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

IBISBILL, LP

By: CPMG, Inc.
Its: General Partner

By: */s/ John Bateman*
Name: John E. Bateman
Title: Chief Operating Officer

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

LOGOS OPPORTUNITIES FUND II, L.P.

By: Logos Opportunities GP, LLC
Its General Partner

By: */s/ Graham Walmsley*
Name: Graham Walmsley
Title: Managing Member

Address: 1 Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

By: */s/ Arsani William*
Name: Arsani William
Title: Managing Member

Address: 1 Letterman Drive
Building D, Suite D3-700
San Francisco, CA 94129

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare Fund GP, LLC
Its: General Partner

By: */s/ Peter Kolchinsky*
Name: Peter Kolchinsky
Title: Manager

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

RA CAPITAL NEXUS FUND, L.P.

By: RA Capital Nexus Fund GP, LLC
Its: General Partner

By: */s/ Peter Kolchinsky*
Name: Peter Kolchinsky
Title: Manager

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

SAMSARA BIOCAPITAL, L.P.

By: Samsara BioCapital GP, LLC,
General Partner

By: */s/ Srinivas Akkaraju*
Name: Srinivas Akkaraju, MD, PhD
Title: Managing Member

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

By: VHCP Management III, LLC, its general partner
By: VR Advisor, LLC, its manager

VHCP CO-INVESTMENT HOLDINGS III, LLC

By: VHCP Management III, LLC, its manager
By: VR Advisor, LLC, its manager

By: */s/ Nimish Shah*
Authorized Signatory

VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

By: VHCP Management EG, LLC, its general partner

By: */s/ Nimish Shah*
Authorized Signatory

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

VIVO CAPITAL FUND IX, L.P.

By: Vivo Capital IX, LLC, General Partner

By: */s/ Jack Nielsen*
Name: Jack Nielsen
Title: Managing Member

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

WELLINGTON BIOMEDICAL INNOVATION MASTER INVESTORS (CAYMAN) I L.P.

By: Wellington Management Company LLP, as investment adviser

By: */s/ Peter McIsaac*
Name: Peter McIsaac
Title: Managing Director and Counsel

[SIGNATURE PAGE TO SECOND AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Fidelity Select Portfolios: Biotechnology Portfolio

By: */s/ James Wegmann*
Name: James Wegmann
Title: Authorized Signatory

Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund

By: */s/ James Wegmann*
Name: James Wegmann
Title: Authorized Signatory

Fidelity Securities Fund: Fidelity Small Cap Growth Fund

By: */s/ James Wegmann*
Name: James Wegmann
Title: Authorized Signatory

Fidelity Securities Fund: Fidelity Small Cap Growth K6 Fund

By: */s/ James Wegmann*
Name: James Wegmann
Title: Authorized Signatory

Fidelity Capital Trust: Fidelity Flex Small Cap Fund—Small Cap Growth Subportfolio

By: */s/ James Wegmann*
Name: James Wegmann
Title: Authorized Signatory

SCHEDULE A

INVESTORS

Name, Email and Address

Curative Ventures V LLC
3963 Maple Avenue, #350
Dallas, TX 75219
Email: bc@curativeventures.com

Vivo Capital Fund IX, L.P.
c/o: Vivo Capital, LLC
192 Lytton Avenue
Palo Alto, CA 94301
Attn: General Counsel
Email: legal@vivocapital.com

Venrock Healthcare Capital Partners III, L.P.
7 Bryant Park, 23rd Floor
New York, NY 10018
Email: ssouther@venrock.com

VHCP Co-Investment Holdings III, LLC
7 Bryant Park, 23rd Floor
New York, NY 10018
Email: ssouther@venrock.com

Venrock Healthcare Capital Partners EG, L.P.
7 Bryant Park, 23rd Floor
New York, NY 10018
Email: ssouther@venrock.com

Samsara BioCapital, L.P.
628 Middlefield Road
Palo Alto, CA 94301
Email: srini@samsaracap.com

HBM Healthcare Investments (Cayman) Ltd.
Governors Square
Suite #4-212-2
23 Lime Tree Bay Avenue
West Bay
Grand Cayman, Cayman Islands

Name, Email and Address

RA Capital Healthcare Fund, L.P.
c/o RA Capital Management, L.P.
200 Berkeley Street
18th Floor
Boston, MA 02116
Attn: General Counsel

Blackwell Partners LLC – Series A
280 S. Magnum Street
Suite 210
Durham, NC 27701
Attn: Jannine Lall

RA Capital Nexus Fund, L.P.
c/o RA Capital Management, L.P.
200 Berkeley Street
18th Floor
Boston, MA 02116
Attn: General Counsel

Ibisbill, LP
c/o CPMG, Inc.
2000 McKinney Ave., Suite 2125
Dallas, TX 75201
Attn: John E. Bateman
Email: jb@cpmg-inc.com

Wellington Biomedical Innovation Master Investors (Cayman) I L.P.
c/o Wellington Management Company LLP
Legal and Compliance
280 Congress Street
Boston, MA 02210
Attn: Peter McIsaac, Managing Director and Counsel
Email: #legal-ecm@wellington.com

With a copy (which shall not constitute notice) to:
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Boston, MA 02109
Attn: Jason L. Kropp
Email: jason.kropp@wilmerhale.com

Baker Brothers Life Sciences, L.P.
860 Washington St., 3rd Floor
New York, NY 10014

Name, Email and Address

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New York, NY 10014

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GC&H Investments, LLC
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San Francisco, CA 94111
Attn: Jim Kindler
Email: kindlerjd@cooley.com

AB Cap Fund, Inc. - AB Small Cap Growth Portfolio
c/o AllianceBernstein, L.P.
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AB Discovery Growth Fund, Inc.
c/o AllianceBernstein, L.P.
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Nashville, TN 37219
Email Address: MiddleOffice@alliancebernstein.com

ArrowMark Life Science Fund, LP
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Email: Tyao@arrowmarkpartners.com;
erobinson@arrowmarkpartners.com

ArrowMark Fundamental Opportunity Fund, L.P.
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Attn: Tony Yao and Erin Robinson
Email: Tyao@arrowmarkpartners.com;
erobinson@arrowmarkpartners.com

Name, Email and Address

MW XO Health Innovations Fund, LP
DMS Corporate Services Ltd
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With a copy (which shall not constitute notice) to:
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Washington, DC 20004

ISTL Holdings Limited
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legal@hillhousecap.com

With a copy (which shall not constitute notice) to:

Goodwin Procter, The New York Times Building
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New York, NY 10018
United States
For the attention of: Yash Rana and Chi Pan
Email: yrana@goodwinlaw.com; chipan@goodwinlaw.com

Fidelity Select Portfolios: Biotechnology Portfolio
Mag & Co.
c/o Brown Brothers Harriman & Co.
Attn: Corporate Actions /Vault
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Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund
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Name, Email and Address

Fidelity Securities Fund: Fidelity Small Cap Growth Fund
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fidelitycorporateevents@bnymellon.com

Fidelity Capital Trust: Fidelity Flex Small Cap Fund - Small Cap Growth Subportfolio
State Street Bank & Trust
PO Box 5756
Boston, Massachusetts 02206
Attn: ISLANDMOORING CO FBO Fidelity Capital Trust: Fidelity Flex Small Cap Fund - Small Cap Growth Subportfolio
Email: SSBCORPACTIONS@StateStreet.com
Fax number: 617-988-9110

Exhibit 10.3

INSTIL BIO, INC.
2018 STOCK INCENTIVE PLAN

Adopted by the Board on September 20, 2018
Approved by the Stockholders on October 3, 2018

TABLE OF CONTENTS

INSTIL BIO, INC.
2018 STOCK INCENTIVE PLAN

SECTION 1. PURPOSE.

The Plan was adopted by the Board of Directors effective September 20, 2018. The purpose of the Plan is to offer selected service providers the opportunity to acquire equity in the Company through awards of Options (which may constitute incentive stock options or nonstatutory stock options), Restricted Stock Awards, Stock Appreciation Rights, Restricted Stock Units and Other Stock Awards.

The Awards under the Plan are intended to be exempt from the securities qualification requirements of the California Corporations Code by satisfying the exemption under section 25102(o) of the California Corporations Code. However, Awards may be made in reliance upon other state securities law exemptions. To the extent that other state exemptions are relied upon, the terms of this Plan which are included only to comply with section 25102(o) shall be disregarded to the extent provided in the applicable Award Agreement. In addition, to the extent that section 25102(o) or the regulations promulgated thereunder are amended to delete any requirements set forth in such law or regulations, the terms of this Plan which are included only to comply with section 25102(o) or the regulations promulgated thereunder as in effect prior to any such amendment shall be disregarded to the extent permitted by applicable law.

SECTION 2. DEFINITIONS.

2.1 "*Affiliate*" shall mean any entity other than a Subsidiary, if the Company and/or one or more Subsidiaries own not less than 50% of such entity.

2.2 "*Award*" shall mean, individually or collectively, a grant under the Plan of Options, Restricted Stock Awards, Stock Appreciation Rights, Restricted Stock Units or Other Stock Awards.

2.3 "*Award Agreement*" shall mean the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan, as determined by the Board. The Award Agreement is subject to the terms and conditions of the Plan.

2.4 "*Board*" shall mean the Board of Directors of the Company, as constituted from time to time.

2.5 "*Cause*" shall mean (i) in the case where the Employee, Consultant or Outside Director does not have an employment agreement, consulting agreement or similar agreement in effect with the Company or its affiliate at the time of grant of the Award or where there is such an agreement but it does not define "cause" (or words of like import), conduct related to the Employee's, Consultant's or Outside Director's service to the Company or an affiliate for which either criminal or civil penalties against the Employee, Consultant or Outside Director may be sought, misconduct, insubordination, material violation of the Company's or its affiliate's policies, disclosing or misusing any confidential information or material concerning the Company or an affiliate or material breach of any employment agreement, consulting agreement or similar agreement, or (ii) in the case where the Employee, Consultant or Outside Director has an employment agreement, consulting

agreement or similar agreement in effect with the Company or its affiliate at the time of grant of the Award that defines a termination for "cause" (or words of like import), "cause" as defined in such agreement; provided, however, that with regard to any agreement that defines "cause" on occurrence of or in connection with a change in control, such definition of "cause" shall not apply until a change in control actually occurs and then only with regard to a termination thereafter. Notwithstanding the foregoing, in the case of an Award which is intended to comply with section 25102(o) of the California Corporations Code, such event must also constitute "cause" under applicable law.

2.6 "*Change in Control*" shall mean the occurrence of any of the following events:

(a) The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization fifty percent (50%) or more of the voting power of the outstanding securities of each of (A) the continuing or surviving entity and (B) any direct or indirect parent corporation of such continuing or surviving entity;

(b) The consummation of the sale, transfer or other disposition of all or substantially all of the Company's assets or the stockholders of the Company approve a plan of complete liquidation of the Company; or

(c) Any "person" (as defined below) who, by the acquisition or aggregation of securities, 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 fifty percent (50%) or more of the combined voting power of the Company's then outstanding securities ordinarily (and apart from rights accruing under special circumstances) having the right to vote at elections of directors (the "Base Capital Stock"); except that any change in the relative beneficial ownership of the Company's securities by any person resulting solely from a reduction in the aggregate number of outstanding shares of Base Capital Stock, and any decrease thereafter in such person's ownership of securities, shall be disregarded until such person increases in any manner, directly or indirectly, such person's beneficial ownership of any securities of the Company.

For purposes of Section 2.6(c), the term "person" shall have the same meaning as when used in sections 13(d) and 14(d) of the Exchange Act but shall exclude (1) a trustee or other fiduciary holding securities under an employee benefit plan maintained by the Company or a Parent or Subsidiary and (2) a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of the Stock.

Notwithstanding the foregoing, the term "Change in Control" shall not include (a) a transaction the sole purpose of which is to change the state of the Company's incorporation, (b) a transaction the sole purpose of which is to form a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction, (c) a transaction the sole purpose of which is to make an initial public offering of the Company's capital stock or (d) any change in the beneficial ownership of the securities of the Company as a result of a private financing of the Company that is approved by the Board.

2.7 "*Code*" shall mean the Internal Revenue Code of 1986, as amended.

2.8 *"Committee"* shall mean the committee designated by the Board, which is authorized to administer the Plan, as described in Section 3 hereof.

2.9 *"Company"* shall mean InsTIL Bio, Inc., a Delaware corporation.

2.10 *"Consultant"* shall mean a consultant or advisor who is not an Employee or Outside Director and who performs bona fide services for the Company, a Parent, a Subsidiary or an Affiliate.

2.11 *"Disability"* shall mean a condition that renders an individual unable to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment as determined by the Committee; provided, however, that the Committee has no obligation to investigate whether Disability exists unless the Participant or representative thereof puts the Company on notice within ninety (90) days after the Participant's termination of Service.

2.12 *"Employee"* shall mean any individual who is a common-law employee of the Company, a Parent, a Subsidiary or an Affiliate and who is an "employee" within the meaning of section 3401(c) of the Code and regulations issued thereunder.

2.13 *"Exchange Act"* shall mean the U.S. Securities and Exchange Act of 1934, as amended.

2.14 *"Exercise Price"* shall mean the amount for which one Share may be purchased upon the exercise of an Option, or the amount from which appreciation is measured upon exercise of a Stock Appreciation Right, as specified in an Award Agreement.

2.15 *"Fair Market Value"* means, with respect to a Share, the market price of one Share of Stock, determined by the Board in good faith. Such determination shall be conclusive and binding on all persons.

2.16 *"Immediate Family"* shall mean a person's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, domestic partner, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships.

2.17 *"ISO"* shall mean an incentive stock option described in section 422(b) of the Code.

2.18 *"NSO"* shall mean a stock option that is not an ISO.

2.19 *"Option"* shall mean an ISO or NSO granted under the Plan and entitling the holder to purchase Shares.

2.20 "*Other Stock Award*" shall mean an Award based in whole or in part by reference to Stock which is granted pursuant to the terms and conditions of Section 9.7 of the Plan.

2.21 "*Outside Director*" shall mean a member of the Board of the Company, a Parent or a Subsidiary who is not an Employee.

2.22 "*Parent*" shall mean any corporation (other than the Company) in an unbroken chain of corporations ending with the Company, if each of the corporations other than the Company 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. A corporation that attains the status of a Parent on a date after the adoption of the Plan shall be considered a Parent commencing as of such date.

2.23 "*Participant*" shall mean the holder of an outstanding Award.

2.24 "*Plan*" shall mean the InsTIL Bio, Inc. 2018 Stock Incentive Plan.

2.25 "*Purchase Price*" shall mean the consideration for which one Share may be acquired under the Plan pursuant to a Restricted Stock Award.

2.26 "*Restricted Stock Award*" shall mean an award or sale of Shares pursuant to the terms and conditions of Section 6 of the Plan.

2.27 "*Restricted Stock Unit*" shall mean an Award of an unfunded and unsecured right to receive Shares (or cash or a combination of Shares and cash, as determined in the sole discretion of the Board) upon settlement of the Award, which is granted pursuant to the terms and conditions of Section 9 of the Plan.

2.28 "*Securities Act*" shall mean the U.S. Securities Act of 1933, as amended.

2.29 "*Service*" shall mean service as an Employee, a Consultant or an Outside Director, subject to such further limitations as may be set forth in the applicable Award Agreement. Service shall be deemed to continue during a bona fide leave of absence approved by the Company in writing if and to the extent that continued crediting of Service for purposes of the Plan is expressly required by the terms of such leave or by applicable law, as determined by the Company. However, for purposes of determining whether an Option is entitled to ISO status, and to the extent required under the Code, an Employee's employment will be treated as terminating three (3) months after such Employee went on leave, unless such Employee's right to return to active work is guaranteed by law or by a contract or such Employee immediately returns to active work. The Company determines which leaves count toward Service, and when Service terminates for all purposes under the Plan. In the absence of such determination, vesting of an Award shall be tolled during any unpaid leave (unless otherwise required by applicable law); provided, however, that upon a Participant's return from military leave (under conditions that would entitle the Participant to protection upon such return under the Uniformed Services Employment and Reemployment Rights Act), the Participant shall be given vesting credit with respect to Awards to the same extent as would have applied had the Participant continued to provide services to the Company (or any Parent or Subsidiary, if applicable) throughout the leave on the same terms as the Participant was providing services immediately prior to such leave.

2.30 "*Share*" shall mean one share of Stock, as adjusted in accordance with Section 11 (if applicable).

2.31 *"Stock"* shall mean the common stock of the Company.

2.32 *"Stock Appreciation Right" or "SAR"* shall mean a stock appreciation right which is granted pursuant to the terms and conditions of Section 8 of the Plan.

2.33 *"Subsidiary"* 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. A corporation that attains the status of a Subsidiary on a date after the adoption of the Plan shall be considered a Subsidiary commencing as of such date.

2.34 *"Ten-Percent Stockholder"* means an individual who owns more than ten percent (10%) of the total combined voting power of all classes of outstanding stock of the Company, its Parent or any of its Subsidiaries. In determining stock ownership for purposes of this Section 2.34, the attribution rules of section 424(d) of the Code shall be applied.

SECTION 3. ADMINISTRATION.

3.1 *General Rule*. The Plan shall be administered by the Board. However, the Board may delegate any or all administrative functions under the Plan otherwise exercisable by the Board to one or more Committees. Each Committee shall consist of at least one member of the Board who has been appointed by the Board. Each Committee shall have the authority and be responsible for such functions as the Board has assigned to it. If a Committee has been appointed, any reference to the Board in the Plan shall be construed as a reference to the Committee to whom the Board has assigned a particular function. To the extent permitted by applicable law, the Board may also authorize one or more officers of the Company to designate Employees, other than such authorized officer or officers, to receive Awards and/or to determine the number of such Awards to be received by such persons; provided, however, that the Board shall specify the total number of Awards that such officer or officers may so award.

3.2 *Board Authority and Responsibility*. Subject to the provisions of the Plan, the Board shall have full authority and discretion to take any actions it deems necessary or advisable for the administration of the Plan. All decisions, interpretations and any other actions of the Board with respect to the Plan shall be final and binding on all persons deriving rights under the Plan.

SECTION 4. ELIGIBILITY.

Only Employees of the Company, a Parent or Subsidiary shall be eligible for the grant of ISOs. Employees of an Affiliate shall not be eligible for the grant of ISOs unless such entity is classified as a "disregarded entity" of the Company or the applicable Subsidiary under the Code and such Employees are treated as employees of the Company or applicable Subsidiary for purposes of Section 3401(c) of the Code. Only Employees, Consultants and Outside Directors shall be eligible for the grant of NSOs, Restricted Stock Awards, Stock Appreciation Rights, Restricted Stock Units or Other Stock Awards. Consultants which are entities shall be eligible for the grant of Awards (other than ISOs) subject to compliance with applicable securities law requirements.

SECTION 5. STOCK SUBJECT TO PLAN.

5.1 *Share Limit*. Subject to Section 11, the aggregate number of Shares which may be issued under the Plan shall be 5,666,667 Shares (the "*Authorized Share Limit*"). The number of Shares which are subject to Options or other rights to acquire Shares pursuant to Awards which are outstanding at any time shall not exceed the number of Shares which then remain available for issuance under the Plan. The Company, during the term of the Plan, shall at all times reserve and keep available sufficient Shares to satisfy the requirements of the Plan. Shares offered under the Plan may be authorized but unissued Shares or treasury Shares.

5.2 *Additional Shares*. Shares subject to Awards that are cancelled, forfeited, settled in cash or expire by their terms, and Shares subject to Awards that are used to pay withholding obligations or the Exercise Price of an Option, will again be available for grant and issuance in connection with other Awards. However, Shares that have actually been issued under the Plan will not be added back to the number of Shares available for issuance under the Plan unless reacquired by the Company pursuant to a forfeiture provision.

5.3 *Incentive Stock Option Limit*. Subject to the foregoing limits, the aggregate number of Shares that may be issued under the Plan upon the exercise of ISOs shall not exceed ten times the Authorized Share Limit set forth in Section 5.1 (as amended from time to time and as adjusted pursuant to Section 11), plus, only to the extent allowable under section 422 of the Code, any Shares previously issued under the Plan (other than pursuant to Section 5.4 below) that are reacquired by the Company pursuant to a forfeiture provision.

5.4 *Substitution and Assumption of Awards*. The Board may make Awards under the Plan by assumption, substitution or replacement of stock options, stock appreciation rights, stock units or similar awards granted by another entity (including a Parent or Subsidiary), if such assumption, substitution or replacement is in connection with an asset acquisition, stock acquisition, merger, consolidation or similar transaction involving the Company (and/or its Parent or Subsidiary) and such other entity (and/or its affiliate). The terms of such assumed, substituted or replaced Awards shall be as the Board, in its discretion, determines is appropriate, notwithstanding limitations on Awards in the Plan. Any such substitute or assumed Awards shall not count against the Authorized Share Limit set forth in Section 5.1 (nor shall Shares subject to such Awards be added to the Shares available for Awards under the Plan as provided in Section 5.2 above), except that Shares acquired by exercise of substitute ISOs will count against the maximum number of Shares that may be issued pursuant to the exercise of ISOs under the Plan.

SECTION 6. RESTRICTED STOCK.

6.1 *Restricted Stock Award*. Subject to the terms of the Plan, the Board may grant Restricted Stock Awards to Participants in such amounts as the Board, in its sole discretion, may determine. Each award or sale of Shares pursuant to a Restricted Stock Award under the Plan shall be evidenced by an Award Agreement between the Participant and the Company. Such award or sale shall be subject to all applicable terms and conditions of the Plan and may be subject to any other terms and conditions imposed by the Board, as set forth in the Award Agreement, that are not inconsistent with the Plan. The provisions of such Award Agreements need not be identical.

6.2 *Duration of Offers and Nontransferability of Rights*. Any right to acquire Shares pursuant to a Restricted Stock Award shall automatically expire if not exercised by the Participant within thirty (30) days after the Company communicates the grant of such right to the Participant, unless otherwise determined by the Board. Such right shall be nontransferable and shall be exercisable only by the Purchaser to whom the right was granted, except to the extent otherwise determined by the Board in its sole discretion.

6.3 *Consideration*. To the extent an Award consists of newly issued Shares, the Award recipient shall furnish consideration having a value not less than the par value of such Shares as determined by the Board. Subject to the foregoing in this Section 6.3, the Board shall determine the amount of the Purchase Price in its sole discretion. The Purchase Price shall be payable in a form described in Section 10.

6.4 *Vesting Restrictions*. Each award or sale of Shares shall be subject to such vesting and forfeiture conditions as the Board may determine. Such restrictions shall be set forth in the applicable Award Agreement and, unless otherwise provided in the Award Agreement, shall apply to any dividends paid with respect to such Shares. The vesting of a Restricted Stock Award granted to a Participant for Service as an Outside Director shall be automatically accelerated in full in the event of a Change in Control.

SECTION 7. STOCK OPTIONS.

7.1 *Stock Option Award*. Subject to the terms of the Plan, the Board may grant Options to Participants in such amounts as the Board, in its sole discretion, may determine. Each grant of an Option under the Plan shall be evidenced by an Award Agreement between the Participant and the Company. The Option shall be subject to all applicable terms and conditions of the Plan and may be subject to any other terms and conditions imposed by the Board, as set forth in the Option Award Agreement, which are not inconsistent with the Plan. The provisions of the various Option Award Agreements entered into under the Plan need not be identical.

7.2 *Number of Shares; Kind of Option*. Each Option Award Agreement shall specify the number of Shares that are subject to the Option and shall provide for the adjustment of such number in accordance with Section 11. The Award Agreement shall also specify whether the Option is intended to be an ISO or an NSO.

7.3 *Exercise Price*. Each Award Agreement shall set forth the Exercise Price, which shall be payable in a form described in Section 10. Subject to the following requirements, the Exercise Price under any Option shall be determined by the Board in its sole discretion:

(a) Minimum Exercise Price for ISOs. The Exercise Price per Share of an ISO shall not be less than one hundred percent (100%) of the Fair Market Value of a Share on the date of grant; provided, however, that the Exercise Price per Share of an ISO granted to a Ten-Percent Stockholder shall not be less than one hundred ten percent (110%) of the Fair Market Value of a Share on the date of grant.

(b) Minimum Exercise Price for NSOs. The Exercise Price per Share of an NSO shall not be less than one-hundred percent (100%) of the Fair Market Value of a Share on the date of grant.

7.4 *Term*. Each Award Agreement shall specify the term of the Option. The term of an Option shall in no event exceed ten (10) years from the date of grant. The term of an ISO granted to a Ten-Percent Stockholder shall not exceed five (5) years from the date of grant. Subject to the foregoing, the Board in its sole discretion shall determine when an Option shall expire.

7.5 *Exercisability*. Each Award Agreement shall specify the date when all or any installment of the Option is to become exercisable; provided, however, that no Option shall be exercisable unless the Participant has delivered to the Company an executed copy of the Award Agreement. Subject to the following restrictions, the Board in its sole discretion shall determine when all or any installment of an Option is to become exercisable and may, in its discretion, provide for accelerated exercisability in the event of a Change in Control or other events:

(a) Options Granted to Outside Directors. The vesting and exercisability of an Option granted to a Participant for Service as an Outside Director shall be automatically accelerated in full in the event of a Change in Control.

(b) Early Exercise. An Option Award Agreement may permit the Participant to exercise the Option prior to the time that it has become vested provided that the Shares acquired on exercise will be treated as unvested and subject to a right of repurchase by the Company and any other restrictions that the Board determines appropriate as set forth in the Award Agreement.

7.6 *Transferability of Options*. During a Participant's lifetime, his or her Options shall be exercisable only by the Participant or by the Participant's guardian or legal representatives, and shall not be transferable other than by beneficiary designation, will or the laws of descent and distribution. Notwithstanding the foregoing, however, to the extent permitted by the Board in its sole discretion, an NSO may be transferred by the Participant to a revocable trust or to one or more family members or a trust established for the benefit of the Participant and/or one or more family members to the extent permitted by section 260.140.41(c) of Title 10 of the California Code of Regulations and Rule 701 of the Securities Act.

7.7 *Exercise of Options on Termination of Service*. Each Option shall set forth the extent to which the Participant shall have the right to exercise the Option following termination of the Participant's Service. Each Award Agreement shall provide the Participant with the right to exercise the Option following the Participant's termination of Service during the Option term, to the extent the Option was exercisable for vested Shares upon termination of Service, for at least thirty (30) days if termination of Service is due to any reason other than Cause, death or Disability, and for at least six (6) months after termination of Service if due to death or Disability (but in no event later than the expiration of the Option term). If the Participant's Service is terminated for Cause, the Option Award Agreement may provide that the Participant's right to exercise the Option terminates immediately on the effective date of the Participant's termination. To the extent the Option was not exercisable for vested Shares upon termination of Service, the Option shall terminate when the Participant's Service terminates; provided, however, that if the Board or its duly authorized delegate amends the Option within thirty (30) days following the Participant's termination

of Service other than for Cause (but in no event later than the expiration of the term of the Option) to increase the number of vested Shares for which the Option would be exercisable, the Option shall not be considered to have terminated upon termination of Service with respect to such additional number of vested Shares, and such amendment shall be given effect as of the date of termination of Service. Subject to the foregoing, such provisions shall be determined in the sole discretion of the Board, need not be uniform among all Options issued pursuant to the Plan, and may reflect distinctions based on the reasons for termination of Service.

7.8 *No Rights as a Stockholder*. A Participant, or a transferee of a Participant, shall have no rights as a stockholder with respect to any Shares covered by the Option until such person becomes entitled to receive such Shares by filing a notice of exercise and paying the Exercise Price pursuant to the terms of the Option. No adjustments shall be made, except as provided in Section 11.

7.9 *Modification, Extension and Renewal of Options*. Within the limitations of the Plan, the Board may modify, extend or renew outstanding Options or may accept the cancellation of outstanding Options (to the extent not previously exercised), whether or not granted hereunder, in return for the grant of new Options for the same or a different number of Shares and at the same or a different Exercise Price, or in return for the grant of a different Award for the same or a different number of Shares. The foregoing notwithstanding, except for a modification required to comply with any applicable law, regulation or rule, no modification of an Option shall, without the consent of the Participant, materially impair his or her rights or increase the Participant's obligations under such Option; provided, however, that a modification which may cause an ISO to become an NSO shall not be treated as materially impairing a Participant's rights or increasing a Participant's obligations under an Award.

SECTION 8. STOCK APPRECIATION RIGHTS.

8.1 *Stock Appreciation Right Award*. Subject to the terms of the Plan, the Board may grant Stock Appreciation Rights to Participants in such amounts as the Board, in its sole discretion, may determine. Each grant of a Stock Appreciation Right under the Plan shall be evidenced by an Award Agreement between the Participant and the Company. The Stock Appreciation Right shall be subject to all applicable terms and conditions of the Plan and may be subject to any other terms and conditions imposed by the Board, as set forth in the Award Agreement, which are not inconsistent with the Plan. The provisions of the various Stock Appreciation Right Award Agreements entered into under the Plan need not be identical.

8.2 *Number of Shares*. Each Award Agreement shall specify the number of Shares to which the SAR pertains and shall provide for the adjustment of such number in accordance with Section 11.

8.3 *Exercise Price*. Each Award Agreement shall specify the Exercise Price of the SAR. The Exercise Price shall not be less than 100% of the Fair Market Value of a Share on the date of grant.

8.4 *Term*. Each Award Agreement shall specify the term of the SAR. The term of a SAR shall in no event exceed ten (10) years from the date of grant. Subject to the foregoing, the Board in its sole discretion shall determine when an Option shall expire.

8.5 *Exercisability*. Each Award Agreement shall specify the date when all or any installment of the SAR is to become exercisable; provided, however, that no SAR shall be exercisable unless the Participant has delivered to the Company an executed copy of the Award Agreement. The Board in its sole discretion shall determine when all or any installment of a SAR is to become exercisable and may, in its discretion, provide for accelerated exercisability in the event of a Change in Control or other events. The vesting and exercisability of a SAR granted to a Participant for Service as an Outside Director shall be automatically accelerated in full in the event of a Change in Control. SARs may be awarded in combination with Options, and such Awards may provide that the SARs will not be exercisable unless the related Options are forfeited.

8.6 *Exercise of SARs*. Upon exercise of a SAR, the Participant (or any person having the right to exercise the SAR after his or her death) shall receive from the Company (a) Shares, (b) cash or (c) a combination of Shares and cash, as the Board shall determine. The amount of cash and/or the Fair Market Value of Shares received upon exercise of SARs shall, in the aggregate, be equal to the amount by which the Fair Market Value (on the date of surrender) of the Shares subject to the SARs exceeds the Exercise Price.

8.7 *Transferability of SARs*. During a Participant's lifetime, his or her SARs shall be exercisable only by the Participant or by the Participant's guardian or legal representatives, and shall not be transferable other than by beneficiary designation, will or the laws of descent and distribution. Notwithstanding the foregoing, however, to the extent permitted by the Board in its sole discretion, a SAR may be transferred by the Participant to a revocable trust or to one or more family members or a trust established for the benefit of the Participant and/or one or more family members to the extent permitted by section 260.140.41(c) of Title 10 of the California Code of Regulations and Rule 701 of the Securities Act.

8.8 *Exercise of SARs on Termination of Service*. Each SAR shall set forth the extent to which the Participant shall have the right to exercise the SAR following termination of the Participant's Service. Each Award Agreement shall provide the Participant with the right to exercise the SAR following the Participant's termination of Service during the SAR term, to the extent the SAR was vested upon termination of Service, for at least thirty (30) days if termination of Service is due to any reason other than Cause, death or Disability, and for at least six (6) months after termination of Service if due to death or Disability (but in no event later than the expiration of the SAR term). If the Participant's Service is terminated for Cause, the SAR Award Agreement may provide that the Participant's right to exercise the SAR terminates immediately on the effective date of the Participant's termination. To the extent the SAR was not vested upon termination of Service, the SAR shall terminate when the Participant's Service terminates; provided, however, that if the Board or its duly authorized delegate amends the SAR within thirty (30) days following the Participant's termination of Service other than for Cause (but in no event later than the expiration of the term of the SAR) to increase the number of vested Shares for which the SAR would be exercisable, the SAR shall not be considered to have terminated upon

termination of Service with respect to such additional number of vested Shares, and such amendment shall be given effect as of the date of termination of Service. Subject to the foregoing, such provisions shall be determined in the sole discretion of the Board, need not be uniform among all SARs issued pursuant to the Plan, and may reflect distinctions based on the reasons for termination of Service.

8.9 *No Rights as a Stockholder*. A Participant, or a transferee of a Participant, shall have no rights as a stockholder with respect to any Shares covered by the SAR unless and until such person becomes entitled to receive Shares upon exercise of the SAR. No adjustments shall be made, except as provided in Section 11.

8.10 *Modification, Extension and Renewal of SARs*. Within the limitations of the Plan, the Board may modify, extend or renew outstanding SARs or may accept the cancellation of outstanding SARs (to the extent not previously exercised), whether or not granted hereunder, in return for the grant of new SARs for the same or a different number of Shares and at the same or a different Exercise Price, or in return for the grant of a different Award for the same or a different number of Shares. The foregoing notwithstanding, except for a modification required to comply with any applicable law, regulation or rule, no modification of a SAR shall, without the consent of the Participant, materially impair his or her rights or increase the Participant's obligations under such SAR.

SECTION 9. RESTRICTED STOCK UNITS AND OTHER STOCK AWARDS.

9.1 *Restricted Stock Unit Award*. Subject to the terms of the Plan, the Board may grant Restricted Stock Units to Participants in such amounts as the Board, in its sole discretion, may determine. Each Award of Restricted Stock Units under the Plan shall be evidenced by an Award Agreement between the Participant and the Company. Such Award shall be subject to all applicable terms and conditions of the Plan and any other terms and conditions imposed by the Board, as set forth in the Award Agreement, that are not inconsistent with the Plan. The provisions of the various Restricted Stock Unit Award Agreements entered into under the Plan need not be identical.

9.2 *Number of Shares; Payment* Each Restricted Stock Unit Award Agreement shall specify the number of Shares that are subject to the Award and shall provide for the adjustment of such number in accordance with Section 11. Unless otherwise provided in the Award Agreement, no consideration other than services shall be required of the Participant for a Restricted Stock Unit Award.

9.3 *Vesting Conditions*. Each Award of Restricted Stock Units may or may not be subject to vesting. Vesting shall occur, in full or in installments, upon satisfaction of the conditions specified in the Award Agreement. The Board may determine, at the time of granting Restricted Stock Units or thereafter, that all or part of such Award shall become vested in the event that a Change in Control occurs with respect to the Company. The vesting of a Restricted Stock Unit Award granted to a Participant for Service as an Outside Director shall be automatically accelerated in full in the event of a Change in Control.

9.4 *Settlement of Restricted Stock Units*. Unless otherwise provided in the Award Agreement, Restricted Stock Units shall be settled when they vest. The Award Agreement may provide that settlement may be deferred to any later date, provided that the terms of such deferral satisfy the requirements of section 409A of the Code. Settlement of the Restricted Stock Units may be made in the form of cash or whole Shares or a combination thereof, as determined by the Board in its sole discretion.

9.5 *Transfer Restrictions*. Unless otherwise provided in the Award Agreement, Restricted Stock Units may not be transferred other than by beneficiary designation, will or the laws of descent and distribution.

9.6 *No Rights as a Stockholder*. A Participant, or a transferee of a Participant, shall have no voting, dividend or other rights as a stockholder with respect to any Shares covered by a Restricted Stock Unit Award until such person receives such Shares upon settlement of the Award. Unless the Award Agreement provides otherwise, the Participant shall have no right to be credited with amounts equal to dividends paid on Shares subject to the Restricted Stock Unit Award. A Participant shall have no rights under a Restricted Stock Unit Award other than those of a general creditor of the Company.

9.7 *Other Stock Awards*. The Board may grant other forms of Award under the Plan that are based in whole or in part on Stock or the value thereof. Subject to the provisions of the Plan, the Board shall have authority in its sole discretion to determine the terms and conditions of such Other Stock Awards, including the number of Shares (or the cash equivalent thereof) to be granted pursuant to such Awards.

SECTION 10. PAYMENT FOR SHARES.

10.1 *General*. The entire Purchase Price of Shares or Exercise Price of Options issued under the Plan shall be payable in cash, cash equivalents or one of the other forms provided in this Section 10, to the extent provided under applicable law.

10.2 *Surrender of Stock*. To the extent permitted by the Board in its sole discretion, payment may be made in whole or in part by surrendering (in good form for transfer), or attesting to ownership of, Shares which have already been owned by the Participant; provided, however, that payment may not be made in such form if such action would cause the Company to recognize any (or additional) compensation expense with respect to the Award for financial reporting purposes. Such Shares shall be valued at their Fair Market Value on the date of surrender.

10.3 *Services Rendered*. As determined by the Board in its discretion, Shares may be awarded under the Plan in consideration of past or future services rendered to the Company, a Parent, a Subsidiary or an Affiliate.

10.4 *Promissory Notes*. To the extent permitted by the Board in its sole discretion, payment may be made in whole or in part with a full-recourse promissory note executed by the Participant. The interest rate payable under the promissory note shall not be less than the minimum rate required to avoid the imputation of income for U.S. federal income tax purposes. Shares shall be pledged as security for payment of the principal amount of the promissory note, and interest thereon; provided that if the Participant is a Consultant, such note must be collateralized with such additional security to the extent required by applicable laws. In no event shall the stock certificate(s) representing such Shares be released to the Participant until such note is paid in full. Subject to the foregoing, the Board shall determine the term, interest rate and other provisions of the note.

10.5 *Exercise/Sale*. To the extent permitted by the Board in its sole discretion, and if a public market for the Shares exists, payment may be made in whole or in part by delivery (on a form prescribed by the Company) of an irrevocable direction to a securities broker approved by the Company to sell Shares and to deliver all or part of the sale proceeds to the Company in payment of all or part of the Exercise Price and any withholding taxes.

10.6 *Exercise/Pledge*. To the extent permitted by the Board in its sole discretion, and if a public market for the Shares exists, payment may be made in whole or in part by delivery (on a form prescribed by the Company) of an irrevocable direction to a securities broker or lender approved by the Company to pledge Shares, as security for a loan, and to deliver all or part of the loan proceeds to the Company in payment of all or part of the Exercise Price and any withholding taxes.

10.7 *Net Exercise*. To the extent permitted by the Board in its sole discretion, payment of the Exercise Price may be made by a "net exercise" arrangement pursuant to which the number of Shares issuable upon exercise of the Option shall be reduced by the largest whole number of Shares having an aggregate Fair Market Value that does not exceed the aggregate Exercise Price (plus tax withholdings, if applicable) and any remaining balance of the aggregate Exercise Price (and/or applicable tax withholdings) not satisfied by such reduction in the number of whole Shares to be issued shall be paid by the Participant in cash or other form of payment permitted under the Option Award Agreement.

10.8 *Other Forms of Payment*. To the extent permitted by the Board in its sole discretion, payment may be made in any other form that is consistent with applicable laws, regulations and rules.

SECTION 11. ADJUSTMENT OF SHARES.

11.1 *General*. In the event of a subdivision of the outstanding Stock, a declaration of a dividend payable in Shares, a declaration of an extraordinary dividend payable in a form other than Shares in an amount that has a material effect on the Fair Market Value of the Stock, a combination or consolidation of the outstanding Stock into a lesser number of Shares, a recapitalization, a spin-off, a reclassification, or a similar occurrence, the Board shall make appropriate adjustments to the following: (i) the number and class of Shares available for future Awards under Section 5; (ii) the number and class of Shares covered by each outstanding Award; (iii) the Exercise Price under each outstanding Award; and (iv) the price of Shares subject to the Company's right of repurchase; provided, however, that fractions of a Share will not be issued but will either be paid in cash at the Fair Market Value of such fraction of a Share or will be rounded down to the nearest whole Share, as determined by the Board.

11.2 *Dissolution or Liquidation*. To the extent not previously exercised or settled, Awards shall terminate immediately prior to the dissolution or liquidation of the Company.

11.3 *Mergers, Consolidations and Other Corporate Transactions*. In the event that the Company is a party to a merger or other consolidation, or in the event of a transaction providing for the sale of all or substantially all of the Company's stock or assets, or in the event of such other corporate transaction, such as a separation or reorganization, outstanding Awards shall be treated as the Board determines, in each case without the Participant's consent. Subject to compliance with Section 409A of the Code, the Board may provide, without limitation, for one or more of the following: (i) the continuation of the outstanding Awards by the Company, if the Company is a surviving corporation; (ii) the assumption, in whole or in part, of the outstanding Awards by the surviving corporation or a successor entity or its parent; (iii) the substitution, in whole or in part, by the surviving corporation or a successor entity or its parent of its own awards for such outstanding Awards; (iv) exercisability and settlement, in whole or in part, of outstanding Awards to the extent vested and exercisable (if applicable) under the terms of the Award Agreement followed by the cancellation of such Awards (whether or not then vested or exercisable) upon or immediately prior to the effectiveness of the transaction; or (v) settlement of the intrinsic value of the outstanding Awards to the extent vested and exercisable (if applicable) under the terms of the Award Agreement, with payment made in cash or cash equivalents or property (including cash or property subject to deferred vesting and delivery consistent with the vesting restrictions applicable to such Awards or the underlying Shares) followed by the cancellation of such Awards (whether or not then vested or exercisable) (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Board determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment). For avoidance of doubt, the value of any property, including the value of property provided in settlement of an Award, shall be determined by the Board and, to the extent permitted under Section 409A of the Code, the settlement of an Award may provide for payment to be made on a delayed basis and/or contingent basis in recognition of and a reflection of escrows, earn-outs, or other limitations, conditions, contingencies or holdbacks applicable to holders of Stock in connection with the transaction. Any acceleration of payment of an amount that is subject to section 409A of the Code will be delayed, if necessary, until the earliest time that such payment would be permissible under Section 409A without triggering any additional taxes applicable under Section 409A. The Company will have no obligation to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly. The Board shall also have discretion to suspend the right of Participants to exercise outstanding Awards during a limited period of time preceding the closing of the transaction if such suspension is administratively necessary to facilitate the closing of the transaction, and may terminate the right of holders of Options to exercise Options prior to vesting in the Shares subject to the Option (i.e., "early exercise"), such that following the closing of the transaction the Option may only be exercised to the extent it is vested.

11.4 *Reservation of Rights*. Except as provided in this Section 11, a Participant shall have no rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend or any other increase or decrease in the number of shares of stock of any class. Any issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or Exercise Price of Shares subject to an Award. The grant of an Award pursuant to the Plan shall not affect in any way the right or power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure, to merge or consolidate or to dissolve, liquidate, sell or transfer all or any part of its business or assets.

11.5 *Buyout Provisions*. The Board may at any time (a) offer to buy out for a payment in cash or cash equivalents an Award previously granted, or (b) authorize a Participant to elect to cash out an Award previously granted, in either case at such time and based upon such terms and conditions as the Board shall establish.

SECTION 12. TRANSFER RESTRICTIONS AND REPURCHASE RIGHTS.

12.1 *Transfer Restrictions*. No person who shall have acquired Shares or shall have any right to acquire Shares under the Plan shall sell, assign, pledge or otherwise transfer (each, a "*Transfer*") any such Shares or any right or interest therein (including, without limitation, any Option) (such Shares or right or interest therein, including without limitation any Option, collectively the "*Securities*"), whether voluntarily, involuntarily, by operation of law, by gift or otherwise, without the prior written consent of the Company, evidenced by a writing approved by the Board (the "*Transfer Restriction*"). The Transfer Restriction shall not apply to any of the following exempt Transfers:

(a) A person's Transfer of any or all Securities held either during such person's lifetime or on death by will or intestacy (1) to such person's Immediate Family, (2) to any custodian or trustee for the account or the benefit of such person or such person's Immediate Family, or (3) to any limited partnership or limited liability company with respect to which the ownership interests are wholly owned by the person, members of such person's Immediate Family or any trust for the account or benefit of such person or such person's Immediate Family;

(b) A person's bona fide pledge or mortgage of any Securities with a commercial lending institution that creates a mere security interest, provided that any subsequent Transfer of such Securities by such institution shall be subject to this Section 12; or

(c) A person's Transfer of any or all of such person's Securities to the Company;

provided that with respect to Transfers pursuant to subsections (a) and (b) above, the Transferee shall receive and hold such Shares subject to the provisions of this Section 12.1, and there shall be no further Transfer of such Shares except in accord with this Section 12.1. The provisions of this Section 12.1 may be waived with respect to any Transfer by the stockholders, upon the written consent of the owners of a majority of the voting power of the Company (excluding the votes represented by those Shares to be Transferred by any Transferring stockholder). The provisions of this Section 12.1 shall terminate immediately prior to the date of the closing of a firm commitment underwritten public offering of the Company's Stock pursuant to a registration statement filed with, and declared effective by, the Securities and Exchange Commission under the Securities Act. Any Transfer, or purported Transfer, of Securities of the Company shall be null and void unless the terms, conditions and provisions of this Section 12.1 are strictly observed and followed. The restrictions contained in this Section 12.1 shall be in addition to any restrictions on transfer that may otherwise be applicable, including without limitation those contained in the Company's bylaws or pursuant to applicable securities laws.

12.2 *Company's Right to Repurchase Shares*. Shares acquired through an Award shall also be subject to such forfeiture conditions, rights of repurchase, rights of first refusal and other transfer restrictions as the Board may determine. Such restrictions shall be set forth in the applicable Award Agreement and, unless otherwise provided in the Award Agreement, shall apply to any dividends paid with respect to such Shares. Such restrictions shall apply in addition to any restrictions otherwise applicable to holders of Shares generally.

SECTION 13. WITHHOLDING AND OTHER TAXES.

13.1 *General*. A Participant or his or her successor shall pay, or make arrangements satisfactory to the Board for the satisfaction of, any federal, state, local or foreign withholding tax obligations that may arise in connection with the Plan. The Company shall not be required to issue any Shares or make any cash payment under the Plan if such obligations are not timely satisfied.

13.2 *Share Withholding*. The Board may permit a Participant to satisfy all or part of his or her withholding tax obligations by having the Company withhold all or a portion of any Shares that would otherwise be issued to him or her upon exercise or settlement of an Award, or by surrendering all or a portion of any Shares that he or she previously acquired; provided, however, that in no event may a Participant surrender Shares in excess of the legally required maximum tax withholding amount. Such Shares shall be valued at their Fair Market Value on the date when taxes otherwise would be withheld in cash. Any payment of taxes by assigning Shares to the Company may be subject to restrictions, including any restrictions required by rules of any federal or state regulatory body or other authority. All elections by Participants to have Shares withheld for this purpose shall be made in such form and under such conditions as the Board may deem necessary or advisable.

13.3 *Cashless Exercise/Pledge*. The Board may provide that if Company Shares are publicly traded at the time of exercise, arrangements may be made to meet the Participant's withholding obligation by cashless exercise or pledge.

13.4 *Other Forms of Payment*. The Board may permit such other means of tax withholding as it deems appropriate.

13.5 *Employer Fringe Benefit Taxes*. To the extent permitted by applicable federal, state, local and foreign law, a Participant shall be liable for any fringe benefit tax that may be payable by the Company and/or the Participant's employer in connection with any award granted to the Participant under the Plan, which the Company and/or employer may collect by any reasonable method established by the Company and/or employer.

13.6 *Section 409A*. Each Award that provides for "nonqualified deferred compensation" within the meaning of section 409A of the Code shall be subject to such additional rules and requirements as specified by the Board from time to time in order to comply with Section 409A. If any amount under such an Award is payable upon a "separation from service" (within the meaning of section 409A) to a Participant who is then considered a "specified employee" (within the meaning of section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the Participant's separation from service, or (ii) the Participant's death, but only to the extent such delay is necessary to prevent the Award from being subject to interest, penalties and/or

additional tax imposed pursuant to section 409A. In addition, the settlement of any such Award may not be accelerated except to the extent permitted by section 409A. The provisions of the Plan and each Award Agreement are intended to comply with or be exempt from the provisions of section 409A and shall be interpreted in a manner consistent therewith. Notwithstanding any other provision of the Plan or an Award Agreement to the contrary, the Board may in its sole discretion (but without any obligation to do so) amend the terms of any Award to the extent it determines necessary to comply with section 409A.

SECTION 14. LEGAL AND REGULATORY REQUIREMENTS.

Shares shall not be issued under the Plan unless the issuance and delivery of such Shares complies with (or is exempt from) all applicable requirements of law, including (without limitation) the Securities Act, the rules and regulations promulgated thereunder, state securities laws and regulations and the regulations of any stock exchange on which the Company's securities may then be listed, and the Company has obtained the approval or favorable ruling from any governmental agency which the Company determines is necessary or advisable. The Company shall not be liable to a Participant or other persons as to: (a) the non-issuance or sale of Shares as to which the Company has not obtained from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares under the Plan; and (b) any tax consequences expected, but not realized, by any Participant or other person due to the receipt, exercise or settlement of any Award granted under the Plan.

SECTION 15. NO RETENTION RIGHTS.

No provision of the Plan, or any Award granted under the Plan, shall be construed to give any Participant any right to become an Employee or other Service provider, to be treated as an Employee, or to continue in Service for any period of time, or restrict in any way the rights of the Company (or Parent or Subsidiary to whom the Participant provides Service), which rights are expressly reserved, to terminate the Service of such person at any time and for any reason, with or without cause.

SECTION 16. DURATION AND AMENDMENTS.

16.1 *Term of the Plan*. The Plan, as set forth herein, shall become effective on the date of its adoption by the Board, subject to the approval of the Company's stockholders. In the event that the stockholders fail to approve the Plan within twelve (12) months after its adoption by the Board, any grants, exercises or sales that have already occurred under the Plan shall be rescinded, and no additional grants, exercises or sales shall be made under the Plan after such date. The Plan shall terminate automatically ten (10) years after the later of (i) its adoption by the Board, or (ii) the most recent increase in the number of Shares reserved under Section 5 (other than pursuant to Section 11) that was approved by stockholders on or within twelve (12) months after the Board's approval of such increase. The Plan may be terminated on any earlier date pursuant to Section 16.2 below.

16.2 *Right to Amend or Terminate the Plan*. The Board may amend, suspend, or terminate the Plan at any time and for any reason. An amendment of the Plan shall not be subject to the approval of the Company's stockholders unless it (i) increases the number of Shares available for issuance under the Plan (except as provided in Section 11) or (ii) materially changes the class of persons who are eligible for the grant of Awards. Options may be

granted and Shares may be issued which are in each instance in excess of the number of Shares then available for issuance under the Plan, provided any excess Shares actually issued under those Awards shall be held in escrow until there is obtained stockholder approval of an amendment sufficiently increasing the number of Shares available for issuance under the Plan. If such stockholder approval is not obtained within 12 months after the date the first such excess grants or issuances are made, then (1) any unexercised Options granted on the basis of such excess Shares shall terminate and (2) the Company shall promptly refund to the Participants the exercise or purchase price paid for any excess Shares issued under the Plan and held in escrow, together with interest (at the Internal Revenue Service short term Applicable Federal Rate) for the period the Shares were held in escrow, and such Shares shall thereupon be automatically cancelled and cease to be outstanding.

16.3 *Effect of Amendment or Termination*. No Shares shall be issued or sold under the Plan after the termination thereof, except upon exercise or settlement of an Award granted prior to such termination. Except as otherwise permitted by the Plan or an Award Agreement or as required to comply with any applicable law, regulation or rule, the termination of the Plan, or any amendment thereof, shall not have a material adverse effect on any Award previously granted under the Plan without the holder's consent; provided, however, that an amendment which may cause an ISO to become an NSO shall not be treated as having a material adverse effect on an Award.

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SECTION 17. EXECUTION.

To record the adoption of the Plan by the Board on September 20, 2018, effective on such date, the Company has caused its authorized officer to execute the same.

InsTIL Bio, Inc.

By: /s/ Bronson Crouch
Name: Bronson Crouch
Title: Chief Executive Officer

INSTIL BIO, INC. 2018 STOCK INCENTIVE PLAN
APPENDIX REGARDING PLAN AMENDMENTS

Description	No. Shares Subject to Plan	Board Approval	Stockholder Approval
Initial Adoption of Plan	5,666,667	September 20, 2018	October 3, 2018
Amendment	8,666,667	March 4, 2019	March 4, 2019
Amendment	10,666,667	May 28, 2020	May 28, 2020
Amendment	16,872,341	June 30, 2020	June 30, 2020
Amendment	21,784,148	December 29, 2020	December 29, 2020

INSTIL BIO, INC.
2018 STOCK INCENTIVE PLAN
STOCK OPTION AGREEMENT

SECTION 18. KIND OF OPTION. This Option is intended to be either an incentive stock option intended to meet the requirements of Section 422 of the Code (an "**ISO**") or a non-statutory option (an "**NSO**"), which is not intended to meet the requirements of an ISO, as indicated in the Notice of Stock Option Grant. Even if this Option is designated as an ISO, it shall be deemed to be an NSO to the extent required by the $100,000 annual limitation under Section 422(d) of the Code.

SECTION 19. VESTING. Subject to the terms and conditions of the Plan and this Stock Option Agreement (the "**Agreement**"), your Option will be exercisable with respect to the Shares that have become vested in accordance with the schedule set forth in the Notice of Stock Option Grant. If your Option is granted in consideration of your Service as an Employee or a Consultant, after your Service as an Employee or a Consultant terminates for any reason, vesting of your Shares subject to such Option immediately stops and such Option expires immediately as to the number of Shares that are not vested as of the date your Service as an Employee or a Consultant terminates, except as otherwise provided under the Plan. If your Option is granted in consideration of your Service as an Outside Director, after your Service as a member of the Board of the Company, a Parent or Subsidiary (a "**Director**") terminates for any reason, vesting of your Shares subject to such Option immediately stops and such Option expires immediately as to the number of Shares that are not vested as of the date your Service as a Director terminates, except as otherwise provided under the Plan.

SECTION 20. TERM. Your Option will expire in any event at the close of business at Company headquarters on the date that is ten (10) years after the Date of Grant; provided, however, that if your Option is an ISO it will expire five (5) years after the Date of Grant if you are a Ten-Percent Stockholder of the Company (the "**Expiration Date**"). Also, your Option will expire earlier if your Service terminates, as described below.

SECTION 21. REGULAR TERMINATION.

21.1 If your Service terminates for any reason except death or Disability, the vested portion of your Option will expire at the close of business at Company headquarters on the date three (3) months after your termination of Service. During that three (3) month period, you may exercise the portion of your Option that was vested on your termination date. Notwithstanding the foregoing, the Option may not be exercised after the Expiration Date determined under Section 3 above.

21.2 If your Option is an ISO and you exercise it more than three months after termination of your Service as an Employee for any reason other than death or Disability expected to result in death or to last for a continuous period of at least twelve (12) months, your Option will cease to be eligible for ISO tax treatment.

21.3 Your Option will cease to be eligible for ISO tax treatment if you exercise it more than three months after the first day following three months of a bona fide leave of absence approved by the Company, unless you return to employment immediately upon termination of such leave or your right to reemployment after your leave was guaranteed by statute or contract.

SECTION 22. DEATH. If you die while in Service with the Company, the vested portion of your Option will expire at the close of business at Company headquarters on the date twelve (12) months after the date of your death. During that twelve (12) month period, your estate, legatees or heirs may exercise that portion of your Option that was vested on the date of your death. Notwithstanding the foregoing, the Option may not be exercised after the Expiration Date determined under Section 3 above.

SECTION 23. DISABILITY.

23.1 If your Service terminates because of a Disability, the vested portion of your Option will expire at the close of business at Company headquarters on the date twelve (12) months after your termination date. During that twelve (12) month period, you may exercise that portion of your Option that was vested on the date of your Disability. "**Disability**" means that you are unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment as determined by the Company; provided, however, that the Company has no obligation to investigate whether Disability is applicable unless you or your representative put the Company on notice within ninety (90) days after your termination of Service. Notwithstanding the foregoing, the Option may not be exercised after the Expiration Date determined under Section 3 above.

23.2 If your Option is an ISO and your Disability is not expected to result in death or to last for a continuous period of at least twelve (12) months, your Option will be eligible for ISO tax treatment only if it is exercised within three (3) months following the termination of your Service as an Employee.

SECTION 24. EXERCISING YOUR OPTION. To exercise your Option, you must execute the Notice of Exercise and Common Stock Purchase Agreement (the "**Exercise Notice**"), attached as Exhibit A. You must submit this form, together with full payment, to the Company. Your exercise will be effective when it is received by the Company. If someone else wants to exercise your Option after your death, that person must prove to the Company's satisfaction that he or she is entitled to do so.

SECTION 25. PAYMENT FORMS. When you exercise your Option, you must include payment of the Exercise Price for the Shares you are purchasing in cash or cash equivalents. Alternatively, you may pay all or part of the Exercise Price by surrendering, or attesting to ownership of, Shares already owned by you, unless such action would cause the Company to recognize any (or additional) compensation expense with respect to the Option for financial reporting purposes. Such Shares shall be surrendered to the Company in good form for transfer and shall be valued at their Fair Market Value on the date of Option exercise. To the extent that a public market for the Shares exists and to the extent permitted by applicable law, in each case as determined by the Company, you also may exercise your Option by delivery (on a form prescribed by the Company) of an irrevocable direction to a securities broker to sell Shares and to deliver all or part of the sale proceeds to the Company in payment of the aggregate Exercise Price and, if requested, applicable withholding taxes. The Company will provide the forms necessary to make such a cashless exercise. The Board may permit such other payment forms as it deems appropriate, subject to applicable laws, regulations and rules.

SECTION 26. TAX WITHHOLDING AND REPORTING.

26.1 You will not be allowed to exercise this Option unless you pay, or make acceptable arrangements to pay, any taxes required to be withheld as a result of the Option exercise or the sale of Shares acquired upon exercise of this Option. You hereby authorize withholding from payroll or any other payment due you from the Company or your employer to satisfy any such withholding tax obligation.

26.2 If you sell or otherwise dispose of any of the Shares acquired pursuant to an ISO on or before the later of (i) two years after the grant date, or (ii) one year after the exercise date, you shall immediately notify the Company in writing of such disposition.

26.3 By signing this Agreement, you explicitly and unambiguously consent and agree to assume any liability for fringe benefit tax that may be payable by the Company and/or your employer in connection with the Option granted under this Agreement to the extent permitted under applicable law. Further, by signing this Agreement, you agree that the Company and/or your employer may collect the fringe benefit tax from you by any reasonable method established by the Company and/or your employer. You further agree to execute any other consents or elections required to accomplish the above, promptly upon request of the Company and/or your employer.

SECTION 27. TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL. In the event that you propose to sell, pledge or otherwise transfer to a third party any Shares acquired under this Agreement, or any interest in such Shares, you will be subject to the "**Transfer Restriction**" set forth in Section 12.1 of the Plan (as amended from time to time), and the Company shall have a "**Right of First Refusal**" with respect to such Shares in accordance with the provisions of the Exercise Notice.

SECTION 28. RESALE RESTRICTIONS/MARKET STAND-OFF. In connection with any underwritten public offering by the Company of its equity securities pursuant to an effective registration statement filed under the U.S. Securities Act of 1933, as amended, including the Company's initial public offering, you may be prohibited from engaging in any transaction with respect to any of the Company's common stock without the prior written consent of the Company or its underwriters in accordance with the provisions of the Exercise Notice.

SECTION 29. TRANSFER OF OPTION. Prior to your death, only you may exercise this Option. This Option and the rights and privileges conferred hereby cannot be sold, pledged or otherwise transferred (whether by operation of law or otherwise) and shall not be subject to sale under execution, attachment, levy or similar process. For instance, you may not sell this Option or use it as security for a loan. If you attempt to do any of these things, this Option will immediately become invalid. You may, however, dispose of this Option in your will. Regardless of any marital property settlement agreement, the Company is not obligated to honor an Exercise Notice from your spouse or former spouse, nor is the Company obligated to

recognize such individual's interest in your Option in any other way. Notwithstanding the foregoing, however, to the extent permitted by the Board in its sole discretion, an NSO may be transferred by you to a revocable trust or to one or more family members or to a trust established for your benefit and/or one or more of your family members to the extent permitted by the Plan.

SECTION 30. RETENTION RIGHTS. This Agreement does not give you the right to be retained by the Company in any capacity. The Company reserves the right to terminate your Service at any time and for any reason without thereby incurring any liability to you.

SECTION 31. STOCKHOLDER RIGHTS. Neither you nor your estate or heirs have any rights as a stockholder of the Company until a certificate for the Shares acquired upon exercise of this Option has been issued. No adjustments are made for dividends or other rights if the applicable record date occurs before your stock certificate is issued, except as described in the Plan.

SECTION 32. ADJUSTMENTS. In the event of a stock split, a stock dividend or a similar change in the Company's Stock, the number of Shares covered by this Option and the Exercise Price per share may be adjusted pursuant to the Plan. Your Option shall be treated as the Board determines in the event the Company is subject to a merger, liquidation or reorganization as set forth in the Plan.

SECTION 33. LEGENDS. All certificates representing the Shares issued upon exercise of this Option shall, where applicable, have endorsed thereon the following legends:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OR FOREIGN JURISDICTION, AND MAY BE OFFERED AND SOLD ONLY IF REGISTERED AND QUALIFIED PURSUANT TO THE RELEVANT PROVISIONS OF U.S. FEDERAL, STATE AND APPLICABLE FOREIGN SECURITIES LAWS OR IF THE COMPANY IS PROVIDED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION AND QUALIFICATION UNDER U.S. FEDERAL, STATE AND APPLICABLE FOREIGN SECURITIES LAWS IS NOT REQUIRED.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE MAY NOT BE SOLD, TRANSFERRED, ENCUMBERED OR IN ANY MANNER DISPOSED OF, EXCEPT IN COMPLIANCE WITH THE TERMS OF THE COMPANY'S STOCK PLAN AND A WRITTEN AGREEMENT BETWEEN THE COMPANY AND THE INITIAL HOLDER HEREOF. SUCH PLAN AND AGREEMENT PROVIDE FOR CERTAIN TRANSFER RESTRICTIONS, INCLUDING RIGHTS OF FIRST REFUSAL UPON AN ATTEMPTED TRANSFER OF THE SECURITIES AND CERTAIN REPURCHASE RIGHTS IN FAVOR OF THE COMPANY. THE COMPANY SHALL NOT REGISTER OR OTHERWISE RECOGNIZE OR GIVE EFFECT TO ANY PURPORTED TRANSFER OF SECURITIES THAT DOES NOT COMPLY WITH SUCH TRANSFER RESTRICTIONS. THE SECRETARY OF THE COMPANY WILL UPON WRITTEN REQUEST FURNISH A COPY OF SUCH PLAN AND AGREEMENT TO THE HOLDER HEREOF WITHOUT CHARGE.

If the Option is an ISO, then the following legend should be included:

THE SHARES REPRESENTED BY THIS CERTIFICATE WERE ISSUED UPON EXERCISE OF AN INCENTIVE STOCK OPTION, AND THE COMPANY MUST BE NOTIFIED IF THE SHARES SHALL BE TRANSFERRED BEFORE THE LATER OF THE TWO (2) YEAR ANNIVERSARY OF THE DATE OF GRANT OF THE OPTION OR THE ONE (1) YEAR ANNIVERSARY OF THE DATE ON WHICH THE OPTION WAS EXERCISED. THE REGISTERED HOLDER MAY RECOGNIZE ORDINARY INCOME IF THE SHARES ARE TRANSFERRED BEFORE SUCH DATE.

SECTION 34. TAX DISCLAIMER.

You agree that you are responsible for consulting your own tax advisor as to the tax consequences associated with your Option. The tax rules governing options are complex, change frequently and depend on the individual taxpayer's situation. For your information, a memorandum that briefly summarizes current U.S. federal income tax law relating to certain aspects of stock options is attached hereto as Exhibit B. Please note that this memorandum does not purport to be complete. Although the Company will make available to you general tax information about stock options, you agree that the Company shall not be held liable or responsible for making such information available to you or for any tax or financial consequences that you may incur in connection with your Option.

In addition, as noted in Exhibit B, options granted at a discount from fair market value may be considered "deferred compensation" subject to adverse tax consequences under Section 409A of the Code. The Board has made a good faith determination that the exercise price per share of the Option is not less than the fair market value of the Shares underlying your Option on the Date of Grant. It is possible, however, that the Internal Revenue Service could later challenge that determination and assert that the fair market value of the Shares underlying your Option was greater on the Date of Grant than the exercise price determined by the Board, which could result in immediate income tax upon the vesting of your Option (whether or not exercised) and a 20% tax penalty, as well as the loss of incentive stock option status (if applicable). The Company gives no assurance that such adverse tax consequences will not occur and specifically assumes no responsibility therefor. By accepting this Option, you acknowledge that any tax liability or other adverse tax consequences to you resulting from the grant of the Option will be the responsibility of, and will be borne entirely by, you. YOU ARE THEREFORE ENCOURAGED TO CONSULT YOUR OWN TAX ADVISOR BEFORE ACCEPTING THE GRANT OF THIS OPTION.

SECTION 35. THE PLAN AND OTHER AGREEMENTS. The text of the Plan is incorporated in this Agreement by reference. Certain capitalized terms used in this Agreement are defined in the Plan. The Notice of Stock Option Grant, this Agreement, including its attachments, and the Plan constitute the entire understanding between you and the Company regarding this Option. Any prior agreements, commitments or negotiations concerning this Option are superseded.

SECTION 36. MISCELLANEOUS PROVISIONS.

36.1 You understand and acknowledge that (i) the Plan is entirely discretionary, (ii) the Company and your employer have reserved the right to amend, suspend or terminate the Plan at any time, (iii) the grant of an option does not in any way create any contractual or other right to receive additional grants of options (or benefits in lieu of options) at any time or in any amount and (iv) all determinations with respect to any additional grants, including (without limitation) the times when options will be granted, the number of Shares offered, the Exercise Price and the vesting schedule, will be at the sole discretion of the Company.

36.2 The value of this Option shall be an extraordinary item of compensation outside the scope of your employment contract, if any, and shall not be considered a part of your normal or expected compensation for purposes of calculating severance, resignation, redundancy or end-of-service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.

36.3 You understand and acknowledge that participation in the Plan ceases upon termination of your Service for any reason, except as may explicitly be provided otherwise in the Plan or this Agreement.

36.4 You hereby authorize and direct your employer to disclose to the Company or any Subsidiary any information regarding your employment, the nature and amount of your compensation and the fact and conditions of your participation in the Plan, as your employer deems necessary or appropriate to facilitate the administration of the Plan.

36.5 You consent to the collection, use and transfer of personal data as described in this Subsection. You understand and acknowledge that the Company, your employer and the Company's other Subsidiaries hold certain personal information regarding you for the purpose of managing and administering the Plan, including (without limitation) your name, home address, telephone number, date of birth, social insurance number, salary, nationality, job title, any Shares or directorships held in the Company and details of all options or any other entitlements to Shares awarded, canceled, exercised, vested, unvested or outstanding in your favor (the "**Data**"). You further understand and acknowledge that the Company and/or its Subsidiaries will transfer Data among themselves as necessary for the purpose of implementation, administration and management of your participation in the Plan and that the Company and/or any Subsidiary may each further transfer Data to any third party assisting the Company in the implementation, administration and management of the Plan. You understand and acknowledge that the recipients of Data may be located in the United States or elsewhere. You authorize such recipients to receive, possess, use, retain and transfer Data, in electronic or other form, for the purpose of administering your participation in the Plan, including a transfer to any broker or other third party with whom you elect to deposit Shares acquired under the Plan of such Data as may be required for the administration of the Plan and/or the subsequent holding of Shares on your behalf. You may, at any time, view the Data, require any necessary modifications of Data or withdraw the consents set forth in this Subsection by contacting the Human Resources Department of the Company in writing.

SECTION 37. APPLICABLE LAW; VENUE. This Agreement and all disputes or controversies arising out of or relating thereto shall be governed by, and construed in accordance with, the internal laws of the State of Delaware as to matters within the scope thereof, and as to all other matters, the internal laws of the State of California, without regard to the laws of any other jurisdiction that might be applied because of the conflicts of laws principles of any state. The parties agree that any action brought by either party to interpret or enforce any provision of this Agreement shall be brought in, and each party agrees to, and does hereby, submit to the jurisdiction and venue of, the appropriate state court or federal district court for the area in which the Company's headquarters is located.

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE U.S. SECURITIES ACT OF 1933 OR THE SECURITIES LAWS OF ANY STATE OR FOREIGN JURISDICTION, AND MAY BE OFFERED AND SOLD ONLY IF REGISTERED AND QUALIFIED PURSUANT TO THE RELEVANT PROVISIONS OF U.S. FEDERAL AND STATE AND APPLICABLE FOREIGN SECURITIES LAWS OR IF THE COMPANY IS PROVIDED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION AND QUALIFICATION UNDER U.S. FEDERAL AND STATE AND APPLICABLE FOREIGN SECURITIES LAWS IS NOT REQUIRED.

INSTIL BIO, INC.
2018 STOCK INCENTIVE PLAN
NOTICE OF STOCK OPTION GRANT

Instil Bio, Inc. (the "**Company**") hereby grants you the following Option to purchase shares of its common stock ("**Shares**"). The terms and conditions of this Option are set forth in the Stock Option Agreement and the Instil Bio, Inc. 2018 Stock Incentive Plan (the "**Plan**"), both of which are attached to and made a part of this document.

Date of Grant:	
Name of Optionee:	
Number of Option Shares:	
Exercise Price per Share:	$
Vesting Start Date:	
Type of Option:	ISO
Vesting Schedule:	Subject to the terms and conditions set forth in Section 2 of the Stock Option Agreement, the Option vests over four years. The Option vests with respect to the first 25% of the total Option Shares when the Optionee completes 12 months of continuous Service as an Employee after the Vesting Start Date, and with respect to an additional 1/48th of the total Option Shares when the Optionee completes each full month of continuous Service as an Employee thereafter. Fractional vested Shares shall be rounded down to the nearest whole number at all times.

By signing this document, which may be accomplished by e-signature or other electronic indication of acceptance, you acknowledge receipt of a copy of the Plan, and agree that (a) you have carefully read, fully understand and agree to all of the terms and conditions described in the attached Stock Option Agreement, the Plan document and "Notice of Exercise and Common Stock Purchase Agreement" (the "Exercise Notice"); (b) you hereby make the purchaser's investment representations contained in the Exercise Notice with respect to the grant of this Option; (c) you understand and agree that the Stock Option Agreement, including its cover sheet and attachments, constitutes the entire understanding between you and the Company regarding this Option, and that any prior agreements, commitments or negotiations concerning this Option are replaced and superseded; and (d) you have been given an opportunity to consult your own legal and tax counsel with respect to all matters relating to this Option prior to signing this cover sheet and that you have either consulted such counsel or voluntarily declined to consult such counsel.

OPTIONEE:

By: _____
Name:

Address: _____
_____

COMPANY:

INSTIL BIO, INC.

By: _____
Name: Bronson Crouch
Title: Chief Executive Officer

INSTIL BIO, INC.
2018 STOCK INCENTIVE PLAN
NOTICE OF EXERCISE AND COMMON STOCK PURCHASE AGREEMENT

THIS AGREEMENT is dated as of _____, between Instil Bio, Inc. (the "**Company**"), and [Name of Optionee] ("**Purchaser**").

W I T N E S S E T H:

WHEREAS, the Company granted Purchaser a stock option on [Date of Grant] (the "**Date of Grant**") pursuant to a stock option agreement (the "**Option Agreement**") under which Purchaser has the right to purchase up to [Number of Shares] shares of the Company's common stock (the "**Option Shares**"); and

WHEREAS, the Option is exercisable with respect to certain of the Option Shares as of the date hereof; and

WHEREAS, pursuant to the Option Agreement, Purchaser desires to purchase shares of the Company as herein described, on the terms and conditions set forth in this Agreement, the Option Agreement and the Instil Bio, Inc. 2018 Stock Incentive Plan (the "**Plan**"). Certain capitalized terms used in this Agreement are defined in the Plan.

NOW, THEREFORE, it is agreed between the parties as follows:

1. Purchase of Shares.

1.1 Pursuant to the terms of the Option Agreement, Purchaser hereby agrees to purchase from the Company and the Company agrees to sell and issue to Purchaser _____ shares of the Company's common stock (the "**Common Stock**") for the Exercise Price per share specified in the Notice of Stock Option Grant payable by personal check, cashier's check, money order or otherwise as permitted by the Option Agreement. Payment shall be delivered at the Closing, as such term is defined below.

1.2 The closing (the "**Closing**") under this Agreement shall occur at the offices of the Company as of the date hereof, or such other time and place as may be designated by the Company (the "**Closing Date**").

2. Adjustment of Shares. Subject to the provisions of the Certificate of Incorporation of the Company, if (a) there is any stock dividend or liquidating dividend of cash and/or property, stock split or other change in the character or amount of any of the outstanding securities of the Company, or (b) there is any consolidation, merger or sale of all or substantially all of the assets of the Company, then, in such event, any and all new, substituted or additional securities or other cash or property to which Purchaser is entitled by reason of Purchaser's ownership of the shares shall be immediately subject to the Transfer Restriction and Right of First Refusal, as defined below, with the same force and effect as the shares subject to the Transfer Restriction and Right of First Refusal. Appropriate adjustments shall be made to the number and/or class of shares subject to the Transfer Restriction and Right of First Refusal to reflect the exchange or distribution of such securities. In the event of a merger or consolidation of the Company with or into another entity or any other corporate reorganization, the Transfer Restriction and Right of First Refusal may be enforced or exercised by the Company's successor.

3. Transfer Restriction and Right of First Refusal. Purchaser acknowledges that the Shares received under this Agreement are subject to the transfer restriction set forth in Section 12.1 of the Plan (as may be amended from time to time) (the "**Transfer Restriction**"). In addition, before any shares of Common Stock registered in the name of Purchaser may be sold or transferred, such shares shall first be offered to the Company pursuant to the right of first refusal contained in the Company's bylaws, as amended from time to time, and in the absence of any such provision in the bylaws, then in accordance with the following (the "**Right of First Refusal**"):

3.1 Purchaser shall promptly deliver a notice ("**Notice**") to the Company stating (i) Purchaser's bona fide intention to sell or transfer such shares, (ii) the number of such shares to be sold or transferred, and the basic terms and conditions of such sale or transfer, (iii) the price for which Purchaser proposes to sell or transfer such shares, (iv) the name of the proposed purchaser or transferee, and (v) proof satisfactory to the Company that the proposed sale or transfer will not violate any applicable U.S. federal, state or foreign securities laws. The Notice shall be signed by both Purchaser and the proposed purchaser or transferee and must constitute a binding commitment subject to the Company's Right of First Refusal as set forth herein.

3.2 Within thirty (30) days after receipt of the Notice, the Company may elect to purchase all or any portion of the shares to which the Notice refers, at the price per share specified in the Notice. If the Company elects not to purchase all or any portion of the shares, the Company may assign its right to purchase all or any portion of the shares. The assignees may elect within thirty (30) days after receipt by the Company of the Notice to purchase all or any portion of the shares to which the Notice refers, at the price per share specified in the Notice. If the price specified in the Notice consists of no legal consideration (as, for example, in the case of a transfer by gift), the purchase price will be the fair market value of the shares as determined in good faith by the Company. An election to purchase shall be made by written notice to Purchaser. Payment for shares purchased pursuant to this Section 3 shall be made within thirty (30) days after receipt of the Notice by the Company and, at the option of the Company, may be made by cancellation of all or a portion of outstanding indebtedness, if any, or in cash or both.

3.3 If all or any portion of the shares to which the Notice refers are not elected to be purchased, as provided in Section 3.2, Purchaser may sell those shares to any person named in the Notice at the price specified in the Notice, provided that such sale or transfer is consummated within sixty (60) days of the date of said Notice to the Company, and provided, further, that any such sale is made in compliance with applicable U.S. federal, state and foreign securities laws and not in violation of any other contractual restrictions to which Purchaser is bound. The third-party purchaser shall be bound by, and shall acquire the shares of stock subject to, the provisions of this Agreement, including the Company's Right of First Refusal, and shall execute and file with the Secretary of the Company a copy of the attached Annex I.

3.4 Any proposed transfer on terms and conditions different from those set forth in the Notice, as well as any subsequent proposed transfer shall again be subject to the Company's Right of First Refusal and shall require compliance with the procedures described in this Section 3.

3.5 Purchaser agrees to cooperate affirmatively with the Company, to the extent reasonably requested by the Company, to enforce rights and obligations pursuant to this Agreement.

3.6 Notwithstanding the above, neither the Company nor any assignee of the Company under this Section 3 shall have any right under this Section 3 at any time subsequent to the closing of a public offering of the common stock of the Company pursuant to a registration statement declared effective under the U.S. Securities Act of 1933, as amended (the "**Securities Act**").

3.7 This Section 3 shall not apply to a transfer, including by will or intestate succession, to one or more members of Purchaser's Immediate Family or to a trust established by Purchaser for the benefit of Purchaser and/or one or more members of Purchaser's Immediate Family, provided that the transferee agrees in writing on a form prescribed by the Company to be bound by all of the provisions of this Agreement to the same extent as they apply to Purchaser. The transferee shall execute a copy of the attached Annex I and file the same with the Secretary of the Company.

3.8 In the event of any transfer by operation of law or other involuntary transfer (including death, whether by will or intestate succession, or divorce, but excluding a transfer to Immediate Family as set forth in Section 3.7 above) of all or a portion of the shares of Common Stock by the record holder thereof, the Company's Right of First Refusal shall consist of an option to purchase all of the shares transferred at the greater of the purchase price paid by the Purchaser pursuant to this Agreement or the Fair Market Value of the shares on the date of transfer (as determined by the Board). Upon such a transfer, the person acquiring the shares shall promptly notify the Secretary of the Company of such transfer. The right to purchase such shares shall be provided to the Company for a period of thirty (30) days following receipt by the Company of written notice by the person acquiring the shares.

3.9 Notwithstanding anything to the contrary set forth in this Agreement, Purchaser hereby agrees to be bound by any and all restrictions on the transfer of shares of Common Stock as set forth in the Company's bylaws (as may be amended from time to time) and that such transfer restrictions shall supersede all other agreements, whether written or oral, in place by and between the Company and Purchaser regarding the transfer of the shares of Common Stock.

4. Purchaser's Rights After Exercise of Right of First Refusal. If the Company makes available, at the time and place and in the amount and form provided in this Agreement, the consideration for the Common Stock to be repurchased in accordance with the provisions of Section 3 of this Agreement, then from and after such time the person from whom such shares are to be repurchased shall no longer have any rights as a holder of such shares (other than the right to receive payment of such consideration in accordance with this Agreement). Such shares shall be deemed to have been repurchased in accordance with the applicable provisions hereof, whether or not the certificate(s) therefor have been delivered as required by this Agreement.

5. Legend of Shares. All certificates representing the Common Stock purchased under this Agreement shall, where applicable, have endorsed thereon the following legends and any other legends required by applicable securities laws:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OR FOREIGN JURISDICTION, AND MAY BE OFFERED AND SOLD ONLY IF REGISTERED AND QUALIFIED PURSUANT TO THE RELEVANT PROVISIONS OF U.S. FEDERAL AND STATE AND APPLICABLE FOREIGN SECURITIES LAWS OR IF THE COMPANY IS PROVIDED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION AND QUALIFICATION UNDER U.S. FEDERAL AND STATE AND APPLICABLE FOREIGN SECURITIES LAWS IS NOT REQUIRED.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE MAY NOT BE SOLD, TRANSFERRED, ENCUMBERED OR IN ANY MANNER DISPOSED OF, EXCEPT IN COMPLIANCE WITH THE TERMS OF THE COMPANY'S STOCK PLAN AND A WRITTEN AGREEMENT BETWEEN THE COMPANY AND THE INITIAL HOLDER HEREOF. SUCH PLAN AND AGREEMENT PROVIDE FOR CERTAIN TRANSFER RESTRICTIONS. THE COMPANY SHALL NOT REGISTER OR OTHERWISE RECOGNIZE OR GIVE EFFECT TO ANY PURPORTED TRANSFER OF SECURITIES THAT DOES NOT COMPLY WITH SUCH TRANSFER RESTRICTIONS. THE SECRETARY OF THE COMPANY WILL UPON WRITTEN REQUEST FURNISH A COPY OF SUCH PLAN AND AGREEMENT TO THE HOLDER HEREOF WITHOUT CHARGE.

If the Option is an ISO, then the following legend should be included:

THE SHARES REPRESENTED BY THIS CERTIFICATE WERE ISSUED UPON EXERCISE OF AN INCENTIVE STOCK OPTION, AND THE COMPANY MUST BE NOTIFIED IF THE SHARES SHALL BE TRANSFERRED BEFORE THE LATER OF THE TWO (2) YEAR ANNIVERSARY OF THE DATE OF GRANT OF THE OPTION OR THE ONE (1) YEAR ANNIVERSARY OF THE DATE ON WHICH THE OPTION WAS EXERCISED. THE REGISTERED HOLDER MAY RECOGNIZE ORDINARY INCOME IF THE SHARES ARE TRANSFERRED BEFORE SUCH DATE.

6. Purchaser's Investment Representations.

6.1 This Agreement is made with Purchaser in reliance upon Purchaser's representation to the Company, which by Purchaser's acceptance hereof Purchaser confirms, that the Common Stock which Purchaser will receive will be acquired with Purchaser's own funds for investment for an indefinite period for Purchaser's own account, not as a nominee or agent, and not with a view to the sale or distribution of any part thereof, and that Purchaser has no present intention of selling, granting participation in, or otherwise distributing the same, but subject, nevertheless, to any requirement of law that the disposition of Purchaser's property shall at all times be within Purchaser's control. By executing this Agreement, Purchaser further represents that Purchaser does not have any contract, understanding or agreement with any person to sell, transfer, or grant participation to such person or to any third person, with respect to any of the Common Stock.

6.2 Purchaser understands that the Common Stock will not be registered or qualified under applicable U.S. federal, state or foreign securities laws on the ground that the sale provided for in this Agreement is exempt from registration or qualification under applicable U.S. federal, state or foreign securities laws and that the Company's reliance on such exemption is predicated on Purchaser's representations set forth herein.

6.3 Purchaser agrees that in no event shall Purchaser make a disposition of any of the Common Stock (including a disposition under Section 3 of this Agreement), unless and until (i) Purchaser shall have notified the Company of the proposed disposition and shall have furnished the Company with a statement of the circumstances surrounding the proposed disposition and (ii) Purchaser shall have furnished the Company with an opinion of counsel satisfactory to the Company to the effect that (A) such disposition will not require registration or qualification of such Common Stock under applicable U.S. federal, state or foreign securities laws or (B) appropriate action necessary for compliance with the applicable U.S. federal, state or foreign securities laws has been taken or (iii) the Company shall have waived, expressly and in writing, its rights under clauses (i) and (ii) of this Section.

6.4 With respect to a transaction occurring prior to such date as the Plan and Common Stock thereunder are covered by a valid Form S-8 or similar U.S. federal registration statement, this Subsection shall apply unless the transaction is covered by the exemption in California Corporations Code section 25102(o) or a similar broad-based exemption. In connection with the investment representations made herein, Purchaser represents that Purchaser is able to fend for himself or herself in the transactions contemplated by this Agreement, has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of Purchaser's investment, has the ability to bear the economic risks of Purchaser's investment and has been furnished with and has had access to such information as would be made available in the form of a registration statement together with such additional information as is necessary to verify the accuracy of the information supplied and to have all questions answered by the Company.

6.5 Purchaser understands that if the Company does not register with the U.S. Securities and Exchange Commission pursuant to section 12 of the U.S. Securities Exchange Act of 1934, as amended, or if a registration statement covering the Common Stock (or a filing pursuant to the exemption from registration under Regulation A of the Securities Act) under the Securities Act is not in effect when Purchaser desires to sell the Common Stock, Purchaser may be required to hold the Common Stock for an indeterminate period. Purchaser also acknowledges that Purchaser understands that any sale of the Common Stock which might be made by Purchaser in reliance upon Rule 144 under the Securities Act may be made only in limited amounts in accordance with the terms and conditions of that Rule.

7. No Duty to Transfer in Violation of This Agreement. The Company shall not be required (a) to transfer on its books any shares of Common Stock of the Company which shall have been sold or transferred in violation of any of the provisions set forth in this Agreement or (b) to treat as owner of such shares or to accord the right to vote as such owner or to pay dividends to any transferee to whom such shares shall have been so transferred. Any sale or transfer of the Company's Shares shall be void unless the provisions of this Agreement are satisfied.

8. Rights of Purchaser.

8.1 Except as otherwise provided herein, Purchaser shall, during the term of this Agreement, exercise all rights and privileges of a stockholder of the Company with respect to the Common Stock.

8.2 Nothing in this Agreement shall be construed as a right by Purchaser to be retained by the Company, or a parent or subsidiary of the Company in any capacity. The Company reserves the right to terminate Purchaser's Service at any time and for any reason without thereby incurring any liability to Purchaser.

9. Approved Sale.

Purchaser hereby agrees that in connection with any Change in Control approved by the Board, Purchaser shall:

9.1 if stockholder approval is required, vote Purchaser's Shares in favor of the transactions constituting such Change in Control, and in opposition to any and all other proposals that could reasonably be expected to delay or jeopardize the consummation thereof;

9.2 if the Change in Control requires the sale of Shares by Purchaser, sell Purchaser's Shares on the same terms and conditions, and in the same proportion, as approved by the Board; and

9.3 refrain from exercising any dissenters' rights or rights of appraisal under applicable law with respect to such transactions.

Purchaser further agrees to execute and deliver all reasonably required documentation and take such other action as is reasonably requested in order to consummate the transactions constituting such Change in Control.

10. Waiver of Statutory Information Rights. Purchaser hereby acknowledges and agrees that until the first sale of the Company's Common Stock to the public pursuant to an effective registration statement filed under the Securities Act, Purchaser will be deemed to have waived any rights that Purchaser might otherwise have had under Section 220 of the Delaware General Corporation Law to inspect for any proper purpose and to make copies and extracts from the Company's stock ledger, a list of stockholders and its other books and records or the books and records of any subsidiary. This waiver applies only in Purchaser's capacity as a stockholder and does not affect any other inspection rights Purchaser may have under other law or pursuant to a written agreement with the Company.

11. Resale Restrictions/Market Stand-Off. Purchaser hereby agrees that in connection with any underwritten public offering by the Company of its equity securities pursuant to an effective registration statement filed under the Securities Act, including the Company's initial public offering, Purchaser shall not, directly or indirectly, engage in any transaction prohibited by

the underwriter, or sell, make any short sale of, contract to sell, transfer the economic risk of ownership in, loan, hypothecate, pledge, grant any option for the purchase of, or otherwise dispose or transfer for value or agree to engage in any of the foregoing transactions with respect to any Common Stock without the prior written consent of the Company or its underwriters, for such period of time after the effective date of such registration statement as may be requested by the Company or such underwriters. Such period of time shall not exceed one hundred eighty (180) days; provided, however, that if either (a) during the last seventeen (17) days of such one hundred eighty (180) day period, the Company issues an earnings release or material news or a material event relating to the Company occurs or (b) prior to the expiration of such one hundred eighty (180) day period, the Company announces that it will release earnings results during the sixteen (16) day period beginning on the last day of the one hundred eighty (180) day period, then the restrictions imposed during such one hundred eighty (180) day period shall continue to apply until the expiration of the eighteen (18) day period beginning on the issuance of the earnings release or the occurrence of the material news or material event; and provided, further, that in the event the Company or the underwriter requests that the one hundred eighty (180) day period be extended or modified pursuant to then-applicable law, rules, regulations or trading policies, the restrictions imposed during the one hundred eighty (180) day period shall continue to apply to the extent requested by the Company or the underwriter to comply with such law, rules, regulations or trading policies. Purchaser hereby agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. To enforce the provisions of this Section, the Company may impose stop-transfer instructions with respect to the Common Stock until the end of the applicable stand-off period.

12. Other Necessary Actions. The parties agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement.

13. Notice. Any notice required or permitted under this Agreement shall be given in writing and shall be deemed effectively given upon the earliest of personal delivery, receipt or the third full day following deposit in the United States Post Office with postage and fees prepaid, addressed to the other party hereto at the address last known or at such other address as such party may designate by ten (10) days' advance written notice to the other party hereto.

14. Successors and Assigns. This Agreement shall inure to the benefit of the successors and assigns of the Company and, subject to the restrictions on transfer herein set forth, be binding upon Purchaser and Purchaser's heirs, executors, administrators, successors and assigns. The failure of the Company in any instance to exercise the Transfer Restrictions or Right of First Refusal described herein shall not constitute a waiver of any other Transfer Restriction or Right of First Refusal that may subsequently arise under the provisions of this Agreement. No waiver of any breach or condition of this Agreement shall be deemed to be a waiver of any other or subsequent breach or condition, whether of a like or different nature.

15. Applicable Law; Venue. This Agreement and all disputes or controversies arising out of or relating thereto shall be governed by, and construed in accordance with, the internal laws of the State of Delaware as to matters within the scope thereof, and as to all other matters, the internal laws of the State of California, without regard to the laws of any other jurisdiction that

might be applied because of the conflicts of laws principles of any state. The parties agree that any action brought by either party to interpret or enforce any provision of this Agreement shall be brought in, and each party agrees to, and does hereby, submit to the jurisdiction and venue of, the appropriate state court or federal district court for the area in which the Company's headquarters is located.

16. No State Qualification. THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA, AND THE ISSUANCE OF SUCH SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO SUCH QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 25100, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE. THE RIGHTS OF ALL PARTIES TO THIS AGREEMENT ARE EXPRESSLY CONDITIONED UPON SUCH QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

17. No Oral Modification. No modification of this Agreement shall be valid unless made in writing and signed by the parties hereto.

18. Entire Agreement. This Agreement, the Option Agreement and the Plan constitute the entire complete and final agreement between the parties hereto with regard to the subject matter hereof.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

COMPANY:	**PURCHASER:**
INSTIL BIO, INC.	
By: _____	By: _____
Name:	Name: [Name of Optionee]
Title:	

ANNEX I

ACKNOWLEDGMENT OF AND AGREEMENT TO BE BOUND BY THE NOTICE OF EXERCISE AND COMMON STOCK PURCHASE AGREEMENT OF INSTIL BIO, INC.

The undersigned, as transferee of shares of Instil Bio, Inc. hereby acknowledges that he or she has read and reviewed the terms of the Notice of Exercise and Common Stock Purchase Agreement of Instil Bio, Inc. and hereby agrees to be bound by the terms and conditions thereof, as if the undersigned had executed said Agreement as an original party thereto.

Dated: _____.

By: _____
(Signature of Transferee)

Name: _____
(Printed Name of Transferee)

EXHIBIT B
U.S. FEDERAL TAX INFORMATION

(Last updated May 2018)

The following memorandum briefly summarizes current U.S. federal income tax law. The discussion is intended to be used solely for general information purposes and does not make specific representations to any participant. A taxpayer's particular situation may be such that some variation of the basic rules is applicable to him or her. In addition, the U.S. federal income tax laws and regulations are revised frequently and may change again in the future, and the Company undertakes no obligation to update this memorandum. Each participant is urged to consult a tax advisor, both with respect to U.S. federal income tax consequences as well as any foreign, state or local tax consequences, before exercising any option or before disposing of any shares of stock acquired under the Plan.

Initial Grant of Options

The grant of an option, whether a nonqualified or nonstatutory stock option ("**NSO**") or an incentive stock option ("**ISO**"), is not a taxable event for the optionee, and the Company obtains no deduction for the grant of the option. Note, however, that under Section 409A of the Internal Revenue Code, options granted at a discount from fair market value may be considered "deferred compensation" subject to adverse tax consequences, including immediate income tax upon the vesting of the option (whether or not exercised) and a 20% tax penalty.

Nonqualified or Nonstatutory Stock Options

The exercise of an NSO is a taxable event to the optionee. The amount by which the fair market value of the shares on the date of exercise exceeds the exercise price (the "spread") will be taxed to the optionee as ordinary income. The spread will also be considered "wages" for purposes of FICA taxes. The Company will be entitled to a deduction in the same amount as the ordinary income recognized by the optionee from the exercise of the option that is reported to the IRS by the optionee or the Company. In general, the optionee's tax basis in the shares acquired by exercising an NSO is equal to the fair market value of such shares on the date of exercise. Upon a subsequent sale of any such shares in a taxable transaction, the optionee will realize capital gain or loss (long-term or short-term, depending on whether the shares were held for the required holding period before the sale) in an amount equal to the difference between his or her basis in the shares and the sale price.

The capital gains tax rules are complex. If shares are held for more than one year, the maximum tax rate on the gain may be up to twenty percent (20%) to the extent that a taxpayer's income exceeds certain thresholds. Higher income taxpayers may also be subject to a Medicare tax of 3.8% on some or all of their investment income, including capital gain income, if their income (both earned and investment) exceeds certain threshold amounts. Because the rules are complex and can vary in individual circumstances, each participant should consider consulting his or her own tax advisor.

If an optionee exercises an NSO and pays the exercise price with previously acquired shares of stock, special rules apply. The transaction is treated as a tax-free exchange of the old shares for the same number of new shares, except as described below with respect to shares acquired pursuant to ISOs. The optionee's basis in the new shares is the same as his or her basis in the old shares, and the capital gains holding period runs without interruption from the date when the old shares were acquired. The value of any new shares received by the optionee in excess of the number of old shares surrendered minus any cash the optionee pays for the new shares will be taxed as ordinary income. The optionee's basis in the additional shares is equal to the fair market value of such shares on the date the shares were transferred, and the capital gain holding period commences on the same date. The effect of these rules is to defer recognition of any gain in the old shares when those shares are used to buy new shares. Stated differently, these rules allow an optionee to finance the exercise of an NSO by using shares of stock that he or she already owns, without paying current tax on any unrealized appreciation in those old shares.

Incentive Stock Options

The holder of an ISO will not be subject to U.S. federal income tax upon the exercise of the ISO, and the Company will not be entitled to a tax deduction by reason of such exercise, provided that the holder is employed by the Company on the exercise date (or the holder's employment terminated within the three (3) months preceding the exercise date). Exceptions to this exercise timing requirement apply in the event the optionee dies or becomes disabled. A subsequent sale of the shares received upon the exercise of an ISO will result in the realization of long-term capital gain or loss in the amount of the difference between the amount realized on the sale and the exercise price for such shares, provided that the sale occurs more than one (1) year after the exercise of the ISO and more than two (2) years after the grant of the ISO. In general, if a sale or disposition of the shares occurs prior to satisfaction of the foregoing holding periods (referred to as a "disqualifying disposition"), the optionee will recognize ordinary income and the Company will be entitled to a corresponding deduction, generally equal to the amount of ordinary income recognized by the optionee from the disqualifying disposition that is reported to the IRS by the optionee or the Company.

Favorable tax treatment is accorded to an optionee only to the extent that the value of the shares (determined at the time of grant) covered by an ISO first exercisable in any single calendar year does not exceed one hundred thousand dollars ($100,000). If ISOs for shares whose aggregate value exceeds one hundred thousand dollars ($100,000) become exercisable in the same calendar year, the excess will be treated as NSOs.

A special rule applies if an optionee pays all or part of the exercise price of an ISO by surrendering shares of stock that he or she previously acquired by exercising any other ISO. If the optionee has not held the old shares for the full duration of the applicable holding periods, then the surrender of such shares to fund the exercise of the new ISO will be treated as a disqualifying disposition of the old shares. As described above, the result of a disqualifying disposition is the loss of favorable tax treatment with respect to the acquisition of the old shares pursuant to the previously exercised ISO.

Where the applicable holding period requirements have been met, the use of previously acquired shares of stock to pay all or a portion of the exercise price of an ISO may offer significant tax advantages. In particular, a deferral of the recognition of any appreciation in the surrendered shares is available in the same manner as discussed above with respect to NSOs.

Alternative Minimum Tax

Alternative minimum tax is paid when such tax exceeds a taxpayer's regular U.S. federal income tax. Alternative minimum tax is calculated based on alternative minimum taxable income, which is taxable income for U.S. federal income tax purposes, modified by certain adjustments and increased by tax preference items.

The "spread" under an ISO—that is, the difference between (a) the fair market value of the shares of stock at exercise and (b) the exercise price—is classified as alternative minimum taxable income for the year of exercise. Alternative minimum taxable income may be subject to the alternative minimum tax. However, if the shares of stock purchased upon the exercise of an ISO are sold in the same taxable year in which they are acquired, then the amount includible in the taxpayer's alternative minimum taxable income will in no event exceed the amount realized upon such sale less the option exercise price paid for those shares.

In general, when a taxpayer sells stock acquired through the exercise of an ISO, only the difference between the fair market value of the shares on the date of exercise and the date of sale is used in computing any alternative minimum tax for the year of the sale. The portion of a taxpayer's alternative minimum tax attributable to certain items of tax preference (including the spread upon the exercise of an ISO) can be credited against the taxpayer's regular liability in later years subject to certain limitations.

Withholding Taxes

Exercise of an NSO produces taxable income which is subject to withholding. The Company will not deliver shares to the optionee unless the optionee has agreed to satisfactory arrangements for meeting all applicable U.S. federal, state and local withholding tax requirements.

U.S. federal tax law does not require unrecognized gain on exercise of an ISO to be treated as "wages" for the purposes of FICA taxes.

THIS TAX SUMMARY IS GENERAL IN NATURE AND SHOULD NOT BE RELIED UPON BY ANY PERSON IN DECIDING WHETHER OR WHEN TO EXERCISE AN OPTION. EACH PERSON SHOULD CONSULT HIS OR HER OWN TAX ADVISOR REGARDING THESE MATTERS.