As filed with the Securities and Exchange Commission on July 8, 2021.

Registration No. 333-257553

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

Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ABSCI CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware	8731	85-3383487
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

18105 SE Mill Plain Blvd
Vancouver, WA 98683
(360) 949-1041
(Address, including zip code and telephone number, including area code, of Registrant's principal executive offices)

Sean McClain
Chief Executive Officer
Absci Corporation
18105 SE Mill Plain Blvd
Vancouver, WA 98683
(360) 949-1041
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Kingsley Taft, Esq. Maggie Wong, Esq. Goodwin Procter LLP Three Embarcadero Center San Francisco, CA 94111 (415) 733-6000	Sean McClain Chief Executive Officer Absci Corporation 18105 SE Mill Plain Blvd Vancouver, WA 98683 (360) 949-1041	Brian J. Cuneo, Esq. B. Shayne Kennedy, Esq. Latham & Watkins LLP 140 Scott Drive Menlo Park, CA 94205 (650) 328-4600

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

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

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	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, par value $0.0001 per share	$100,000,000.00	$10,910

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act. Includes the offering price of any additional shares that the underwriters have the option to purchase.
(2) Previously paid. Calculated pursuant to Rule 457(o) under the Securities Act 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, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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

Subject to completion, dated , 2021.

Preliminary prospectus

shares

absci®

Common stock

This is an initial public offering of shares of common stock by Absci Corporation. We are offering shares of our common stock to be sold in the offering. The initial public offering price is expected to be between $ and $ per share.

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

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended and, as such, have elected to take advantage of certain reduced public company reporting requirements.

	Per share	Total
Initial public offering price	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds to Absci Corporation, before expenses	$	$

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

We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of common stock at the initial public offering price, less underwriting discounts and commissions.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 19.

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

The underwriters expect to deliver the shares to purchasers on or about , 2021.

J.P. Morgan **Credit Suisse** **BofA Securities** **Cowen** **Stifel**

The date of this prospectus is , 2021.

Table of Contents

Through and including , (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

We and the underwriters have not authorized anyone to provide any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

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.

Prospectus Summary

This summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes included elsewhere in this prospectus. You should also consider, among other things, the matters described under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case appearing elsewhere in this prospectus. Unless otherwise stated, all references to "us," "our," "Absci" "we," the "Company" and similar designations refer to Absci Corporation and its wholly owned subsidiaries.

Our Mission

Our mission is to change the world, one protein at a time. We founded Absci with the goal of creating better medicines and helping them reach patients sooner. We recognized the extraordinary medical and economic potential of protein-based drugs (biologics), but also the significant challenges the biopharmaceutical industry faces to both discover novel biologics and generate cell lines to manufacture them at commercial scale. We looked at the end game – getting better medicines to patients, faster — and asked: *how?* We built our technology to be that *how*.

We believe we are replacing the fragmented steps and inefficiencies of the conventional biologic drug discovery and cell line development processes with our fully integrated, end-to-end platform designed to create new and better biologics and accelerate their advancement into clinical trials and ultimately into the marketplace where they can serve patients. Combining innovative approaches, including synthetic biology, high-throughput single-cell screening, and deep learning artificial intelligence (AI), we seek to identify optimal drug candidates by exploring expansive protein sequence solution spaces — including considering sequences that nature's evolutionary trajectory has yet to propose. We believe our platform allows us to expand biological possibilities and generate proteins intractable to produce with other technologies to ensure the best drug candidates have the opportunity to become therapeutic realities for patients. Our goal is to enable the creation of better medicines by *Translating Ideas into Drugs*.

And we are just getting started. Proteins are everywhere making biology happen. We believe commercial applications for novel proteins extend far beyond the realm of therapeutics and into other industries including materials science, industrial chemicals, cosmetics, synthetic foods, and agriculture. Today, we are focused on bringing value to the biopharmaceutical industry and generating better medicines. Our near term vision is to enable discovery of novel, targeted biologic drug candidates, and the cell lines to manufacture them, with the click of a button. Looking ahead, we envision a future in which Absci will be the universal engine creating protein-based solutions to advance the bio-based economy, one protein at a time.

Overview

With our AI-powered Integrated Drug Creation Platform we enable the creation of novel biologics by unifying biologic drug discovery and cell line development into one simultaneous process. We leverage proprietary synthetic biology technologies and deep learning AI to predict, identify, design, construct, screen, select and scale production of novel biologic drug candidates, and learn from the data we generate. We believe our approach delivers disruptive efficiency, but more importantly enables our partners to create novel and human/AI-designed new-to-nature biologics (next-generation biologics).

While next-generation biologics have exciting medical potential and are a rapidly growing field of drug development, because their protein architectures (scaffolds or modalities) are biologically

foreign, they present challenges for conventional biologic drug discovery and cell line development methods. These methods typically involve a linear series of steps to screen and select desired molecular parts and reformat them into their final protein scaffold, and subsequent laborious and often unsuccessful generation of a suitable manufacturing cell line. We are transforming the biologic drug discovery and cell line development processes by rapidly screening up to billions of drug candidates *in* the desired final protein scaffold that goes into patients and *in* the production cell line that scales up for clinical and commercial manufacturing.

We believe our platform integrates a fragmented set of processes and bypasses the molecular reformatting and cell line development challenges that can lead to inefficiencies and failures. To accomplish this, we use proprietary high-throughput single cell assays that can evaluate billions of drug sequence variants, each within its production cell line, for target binding affinity, protein quality, and production level (titer). We also harness the large datasets we generate to train and refine our deep learning models which guide our protein and cell line designs, and enable *in silico* optimization of multiple attributes.

We believe our platform is the only commercially available solution that allows for high-throughput screening for simultaneous biologic drug discovery and manufacturing cell line development for next-generation biologics. With our recent acquisition of Totient, we are expanding our platform to include identification of disease- and tissue-specific targets and fully human antibodies as enhancements to our Discovery applications. We believe our unique approach to biologic drug creation has the potential to significantly accelerate preclinical development timelines and expand therapeutic possibilities for the biopharmaceutical industry.

Our goal is to become the partner of choice for biologic drug discovery and cell line development. As a technology development company, we generate biologic drug candidates and production cell lines for our partners to develop; we do not conduct or sponsor preclinical validation studies or clinical trials or seek regulatory approvals for drug candidates. Our business model is to establish partnerships with biopharmaceutical companies and use our platform for rapid creation of next-generation biologic drug candidates and production cell lines. We expect our partnerships to provide us with the opportunity to participate in the future success of the biologics generated utilizing our platform, through potential milestone payments as well as royalties on sales by our partners of approved products. We aim to assemble economic interests in a diversified portfolio of partners' next-generation biologic drug candidates across multiple indications.

We currently have drug candidates in nine Active Programs (across seven current partners' preclinical or clinical pipelines) for which we have negotiated, or expect to negotiate upon completion of certain technology development activities, license agreements with potential downstream milestone payments and royalties. Eight of the Active Programs are focused on developing production cell lines for drug candidates that our partners (including Merck & Co., Inc. (Merck), Xyphos Biotechnology, an Astellas Company (Astellas), Alpha Cancer Technologies, Inc. and other undisclosed biotechnology companies) are developing (five preclinical, one Phase 1, one Phase 3, and one animal health), reflecting our 2018 commercialization of our Cell Line Development (CLD) applications. We have one Discovery program underway, focused on lead optimization with Astellas, which we signed shortly after our December 2020 expansion of our platform to include our initial Discovery applications. We define Active Programs as programs that are subject to ongoing technology development activities intended to determine if the program can be pursued by our partner for future clinical development, as well as any program for which our partner obtains and maintains a license to our technology to advance the program after completion of the technology development phase. There is no assurance, however, that our partners will advance any drug candidates that are currently the subject of Active Programs into further preclinical or clinical development or that our partners will elect to license our technologies upon completion of the technology development phase in a timely manner, or at all.

Strategy

We believe we represent a new breed of biotechnology company, integrating powerful artificial intelligence with new synthetic biology technologies to create next-generation biologics. We aim to become a partner of choice to both large pharmaceutical companies and biotechnology companies to enable and empower discovery and cell line development capabilities for biologics. We intend to use our Integrated Drug Creation Platform to empower innovation by identifying new targets, creating new modalities, discovering next-generation biologics, driving efficiencies, broadening pipelines, and accelerating preclinical timelines.

Our strategy to accomplish this is as follows:

- Enable the discovery and development of next-generation biologics and new modalities through our proprietary platform.
- Accelerate biologic drug discovery and cell line development by unifying these processes as “Integrated Drug Creation.”
- Drive rapid adoption by becoming a partner of choice for large pharmaceutical companies and biotechnology companies.
- Advance the promise of *in silico* drug creation by leveraging proprietary data and AI.
- Continuously invest in our platform to push the boundaries of science and unlock the untapped power of biology.
- Maintain an entrepreneurial, founder-led, scientifically rigorous, data-driven, and inclusive corporate culture.

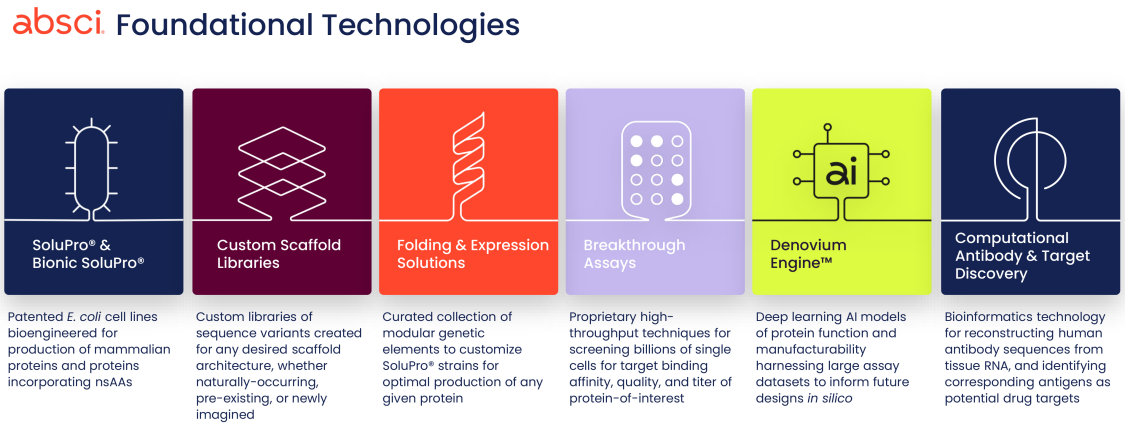
Our Integrated Drug Creation Platform

We built our Integrated Drug Creation Platform to create next-generation biologics including those that lie beyond the scope of nature. To achieve this, we leverage synthetic biology technologies, engineered biodiversity, proprietary functional assays and data-driven deep learning computational models to discover novel disease- and tissue-specific drug targets and next-generation biologic drug candidates while generating optimized production cell lines in parallel. The foundational technologies that power our platform are:

- **SoluPro & Bionic SoluPro:** SoluPro is our patented bioproduction system based on bioengineered *E. coli.* Using synthetic biology techniques, we designed SoluPro to be our chassis cell line and be fundamentally good at making complex mammalian proteins. We believe our SoluPro unlocks evolutionary opportunities by expanding the biological repertoire of proteins that can be produced to include complex new-to-nature proteins such as next-generation biologics. We further engineered a version of SoluPro to facilitate site-specific incorporation of non-standard amino acids (nsAAs) into proteins for scaled production. We refer to these nsAA-containing proteins as Bionic Proteins and the SoluPro strain we use to produce them as Bionic SoluPro.
- **Custom Scaffold Libraries:** We can design and generate custom collections of drug candidate sequence variants for each Discovery program, starting with whatever scaffold our partner specifies, whether natural, pre-existing, or newly-invented, and building out up to billions of different versions to test. These libraries are specifically generated for each program and scaffold, and our AI predictions coupled with our ability to generate libraries in any given scaffold allow us to consider relevant variants that nature could not have proposed. We can also specify nsAA incorporation sites as we design these libraries.
- **Folding & Expression Solutions:** We curate a diverse collection of folding and expression solutions, which are genetic tools that we use to customize SoluPro and optimize

production of the desired protein. Each protein we work on has different characteristics when it comes to manufacturability factors, and with the folding and expression solutions parts library and our synthetic biology methods, we create up to billions of different cell lines and measure each cell's performance to find the solutions that work best for the protein-of-interest. The folding and expression solutions collectively comprise an expansive set of genetic modules and techniques we have assembled, including ribosome binding site sequences, molecular chaperones, and codon-optimization conventions.

- **Breakthrough Assays:** Our proprietary Activity-specific Cell Enrichment (ACE) and High-Throughput Proximity Binding (HiPrBind) Assays allow us to evaluate and sort the millions to billions of drug sequence and cell line variants we generate. Tailored for each of our programs, our high-throughput assays can rank and sort billions of cells based on desired parameters such as target affinity, protein quality, and titer. We are also able to capture datasets correlating protein sequence variants and folding and expression solutions with cell line characteristics. These large, highly complex datasets have the potential to provide us with highly relevant insights about protein function and manufacturability in our system and beyond.
- **Denovium Engine:** Our Denovium Engine is an AI technology that includes deep learning computational models of protein function. The Denovium Engine models, trained on our high-quality data that are particularly relevant to our system, generate non-obvious predictions about the impact of amino acid sequence and cell line characteristics on a given protein's function and manufacturability. A deep learning neural network approach is well-suited to our complex datasets because the models learn what is relevant to the specific objective, without human annotation or bias. We expect the capabilities of the Denovium Engine to grow with each new set of data we generate and input. In the future, we intend to use AI to inform the choice of drug scaffold, define the scope of sequence variants to generate, and design the cell line attributes. We believe this technology may eventually enable us to optimize complex solution space fully *in silico* without the need to physically screen billions of options.
- **Computational Antibody & Target Discovery:** Our computational antibody and target discovery technology is a bioinformatics and machine learning-based platform that allows us to reconstruct sequences of antibodies and other disease-specific proteins from bulk RNA sequencing data (RNA-Seq). We can retrospectively select samples from patients who experienced distinct immune responses and assemble sequences of the most highly expressed monoclonal antibodies present in the tissue of interest. We use these antibodies to identify corresponding target proteins (antigens), and thus we uncover both novel and previously recognized immunogenic targets. We are building a library of tissue- and disease-specific target antigens paired with unique fully human antibodies. Our approach is extensible to identifying other disease state-specific macromolecules relevant to therapeutic responses, such as T-cell receptors.



Our platform integrates biologic drug discovery and cell line development processes, accomplishing these activities in parallel rather than sequentially. We have designed our Integrated Drug Creation Platform to provide the following potential benefits for our partners:

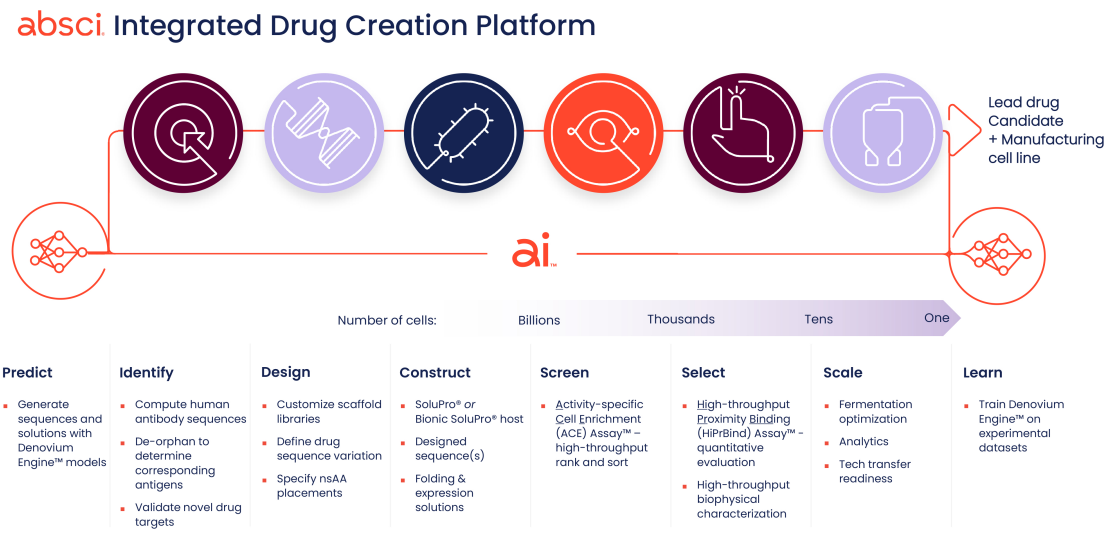
- Accelerated timelines from idea to drug candidate.
- Creation of new biologic modalities.
- Efficient production of complex biologics.
- Design of better drug candidates.
- Increase manufacturing productivity and reduce costs.

We perform our process using our Integrated Drug Creation Platform to predict biologically interesting variants, identify novel disease targets, design custom libraries of protein-of-interest sequence variants, construct diverse populations of cells with these libraries and our folding and expression solutions, screen and sort these cells based on our desired criteria, select lead drug candidate/cell line combinations having the desired functionality and manufacturability qualities, optimize these leads for scaled manufacturing readiness, and learn by feeding data from our multitude of single cell experiments into our AI models to continually refine our predictions. Our process using our Integrated Drug Creation Platform includes the following steps:

- **Predict:** We expect to use our Denovium Engine AI models to generate non-obvious predictions about what are likely to be optimal drug candidate sequences and cell line designs for any protein-of-interest. The AI combines the collective learnings available in public databases with our own experimental data specifically documenting protein functionality and manufacturability factors relevant to our system. Importantly, our Denovium Engine considers sequences and solutions that it has not seen before, and it may predict entirely new-to-nature protein scaffold elements and sequence motifs or design new biologic modalities. In addition, with data we produce through computational antibody and target discovery technology, we intend to train our Denovium Engine to predict likely drug targets from antibody or other binding protein sequences.
- **Identify:** Starting with disease tissue samples or bulk RNA sequencing data of interest to our partners, we expect to apply our newly acquired computational antibody and target discovery technology to reconstruct sequences of human monoclonal antibodies that are prevalent in the tissue. With our SoluPro expression system and adapted versions of our ACE Assay we believe we can rapidly de-orphan the antibodies, using them as probes to identify their corresponding antigens. Not only are the antigens, whether known or novel, of

potential interest as therapeutic targets, but also the fully human antibody sequences themselves may serve as starting points for lead drug candidate design.

- **Design:** Based on the program goals, we design custom libraries of protein-of-interest variants in the desired scaffold architecture, and specify any desired nsAA placements. Using our Denovium Engine models, we may recommend modifications to the scaffold architecture, as well as define the scope of protein variation to evaluate options beyond sequences that exist in nature. In addition, we also incorporate designs based on folding and expression solutions predicted as relevant by our Denovium Engine models. This entire step is accomplished *in silico*.
- **Construct:** Using synthetic biology approaches, we construct up to billions of genetically distinct SoluPro or Bionic SoluPro cells to evaluate. Each cell contains the instructions to make one version of the protein-of-interest, as well as a different assortment of folding and expression solutions.
- **Screen:** Our proprietary high-throughput ACE Assay allows us to evaluate and sort up to billions of cells. We collect subsets of the population of cells that express the best versions of the protein-of-interest (hits), based on target binding, protein quality, and titer. We are also generating billions of data points describing sequence modifications and combinations of folding solutions contributing to protein affinity, solubility and manufacturability that we use to train our Denovium Engine deep learning model.
- **Select:** With our HiPrBind Assay, using automated multiplexed plate-based methods, we grow micro-batches of each of the thousands of hits from the ACE Assay and perform quantitative characterization of protein function, quality, and titer. We also perform high-throughput biophysical characterization to collect additional data on relevant biophysical attributes that impact developability. We are able to select the best several candidates (leads) in their putative production cell lines for further analytics, as well as collect further data insights to enhance our Denovium Engine models.
- **Scale:** We optimize fermentation conditions for the selected lead strain(s) to demonstrate desired productivity, quality, and scalability. We perform comprehensive analytics on the lead drug candidate(s) for evaluation and technology transfer to our partners.
- **Learn:** Throughout our process, we generate large and complex datasets specifying determinants of protein function and manufacturability. We use these data to train our Denovium Engine to enable its models to make increasingly refined predictions for target identification, drug scaffold sequence variation and cell line design. Our goal is to train the deep learning models with enough data to be able to input a sequence of a new drug target and have the model output a unique, optimal drug scaffold sequence and cell line architecture that we construct and confirm: a process that we refer to as *de novo* biologic drug creation *in silico*.



Applications of our Integrated Drug Creation Platform

Our platform is flexible, and we are able to onboard a given program at multiple points in the biologic target identification, drug discovery, and cell line development process. Starting with a given target and a desired scaffold format for an eventual drug candidate, we may perform comprehensive *de novo* biologic drug discovery through to cell line development. We may enhance discovery opportunities with our partners by building new scaffolds and designing new molecules to incorporate nsAAs to facilitate post-purification chemical modifications. We may further expand program scope to start with target identification activities incorporating our recently acquired computational antibody and target discovery technology. We may also design and optimize a high titer production cell line for a partner's already-established lead drug candidate. We classify our applications into two key categories: Discovery and Cell Line Development (CLD). Since we deliver a production cell line for each of our projects, we define Discovery as any projects for which we are evaluating variants of the protein-of-interest, and we define CLD as a program for which the production cell line alone is the goal of the partnership.

- **Discovery:** We commercially launched our initial Discovery applications in December 2020, and to date we have one Discovery program underway for lead optimization. Discovery involves screening for lead drug "hits" directed to the desired target; the target may be provided by a partner or identified using our computational antibody and target discovery technology. Unlike other commonly used screening methods used for biologic drug discovery, we are screening for hit variants *in* the complete scaffold, not a domain fragment to be subsequently reformatted. We also screen *in* production cell line variants. Our Discovery applications are scaffold-agnostic. Whether we are screening variants of an antibody, a T-cell engager, a multivalent Fc-fusion, or any other human- or AI-designed modality, our platform is adaptable to simultaneously optimize for functionality and manufacturability of lead candidates. We believe there is no other commercially available solution that enables comprehensive scaffold-agnostic drug discovery in the desired scaffold

format. The Discovery applications that we currently or in the future expect to address with our Integrated Drug Creation Platform are the following:

- *Novel target identification* - From tissue samples that are of particular therapeutic interest, we identify prevalent immune-response molecules such as antibodies along with the corresponding antigens, offering new therapeutic targets as well as cognate binding partners for further validation. Whatever the desired biologic modality, we can design, construct, and select the appropriate sequence for lead drug development. And we create an optimized production cell line.

- *Scaffold design & drug platform development* - We are uniquely capable of assembling and producing new-to-nature next-generation biologic scaffolds. We may therefore empower our partners with the ability to execute on theoretical modalities, creative fusions, and multivalent molecular hybrids. Within the context of those assembled scaffolds we can evaluate variants to discover new drug candidates designed for optimal target affinity and other desired characteristics. And we create optimized production cell lines.

- *De novo discovery* - We may perform *de novo* discovery by starting with a desired scaffold format for the desired drug, and creating a library of relevant sequence variants that will establish the target specificity (e.g., CDR regions of antibody). And we create an optimized production cell line.

- *nsAA incorporation* (Bionic Proteins) - We may engineer a signal into the gene encoding the drug candidate that directs incorporation of an nsAA into the growing protein chain in a site-specific manner. The nsAA provides a handle for chemical modifications including glycosylation, PEGylation, ADC-payload conjugation, and novel branched proteins and chemical conjugates. And we create an optimized production cell line.

- *Human antibody discovery* - From our catalog of human-derived antibody sequences we are building a collection of unique fully-human monoclonal antibodies with specificity for validated targets of interest. We may optimize monoclonal antibodies or next-generation biologics derived from these sequences as lead drug candidates in partnered programs. And we create an optimized production cell line.

- *Lead optimization* - We may start with drug discovery leads and introduce modifications into the sequences to evaluate variants for improved target affinity, manufacturability, and other pharmacologic characteristics. Thus we can optimize leads that our partners may advance through preclinical development. And we create an optimized production cell line.

- **Cell Line Development (CLD):** We launched our CLD applications in 2018 as our first commercial offering, and all but one of our ongoing programs are for CLD. Because we deliver a production cell line for each of our projects, we classify a program as CLD only when the production cell line alone is the goal of the partnership, or in other words, when the sequence of the lead drug candidate is locked in. Fundamentally, the process utilizing our Integrated Drug Creation Platform is the same as for our Discovery programs, except that the plasmid libraries we design include a fixed lead drug sequence, with variation limited to the assortment of the folding and expression solutions. Screening and selection steps are aimed at identifying the cell lines with highest titer expression of the drug candidate. Partners typically have come to us with late-preclinical or clinical-stage next-generation biologics for which they have not been able to develop a manufacturing process or for which an existing manufacturing process is poorly performing. As we succeed in these CLD programs, we believe we enable the advancement of next-generation biologic

candidates that otherwise would not proceed in development due to manufacturability challenges.

Market Opportunity

Our market opportunity is driven by the number of biologic candidates we generate and the successful development and commercialization of these candidates by our partners. As reflected in aggregated data from EvaluatePharma® [April, 2021] Evaluate Ltd. (Evaluate Pharma data), there are currently 1,250 companies involved in developing and marketing over 4,950 protein-based biologics, which we define as including candidates categorized as monoclonal antibodies (mAbs), monoclonal antibody conjugates (ADCs), and recombinant products (comprising novel fusion proteins as well as numerous conventional recombinant proteins, peptides, and hormones), but excluding those categorized as cell therapies, DNA and RNA based therapies, gene therapies, plasma-derived therapies, and vaccines. In 2020, cumulative global sales of these protein-based biologics reached approximately $254 billion, representing 33% of the sales of all drugs. In 2020, 72 protein-based biologics reached blockbuster status with annual worldwide sales higher than $1.0 billion. Of the total protein-based biologics sales, mAbs represent approximately 63%, with average per product peak sales of $2.7 billion (median $1.3 billion). The protein-based biologics market is expected to reach $418 billion by 2026, representing a compound annual growth rate of approximately 9%. In the near term, we are focused on the next-generation biologics market, which we estimate, based on our analysis of Evaluate Pharma data, to represent approximately 32% of protein-based biologics in Phase 1 clinical development. We estimate next-generation biologics represent a similar proportion of the 2,539 preclinical protein-based biologics. While our Integrated Drug Creation Platform is suited to generation of any type of protein-based biologic, we believe our capabilities are especially differentiated in the area of next-generation biologics. We expect our future programs to be principally in this category as we seek to provide an avenue to expand the number and variety of next-generation biologics in development by our existing and future partners, including with the addition of nsAA-containing Bionic Proteins to their pipelines.

Totient Acquisition

In June 2021, we entered into an agreement and plan of merger, or the merger agreement, with Totient, Inc., or Totient. Totient has developed a bioinformatics and machine learning-based antibody discovery software platform that allows us to computationally reconstruct sequences of antibodies and other disease-specific proteins from bulk RNA sequencing data. To date, Totient has reconstructed more than 4,500 antibodies from over 50,000 patients and has de-orphaned a collection of promising antibodies by identifying and validating their target antigens. Building on Totient's ability to identify fully-human antibodies from patients who demonstrated differentiated immune responses, we expect to generate a large collection of natural human antibodies and target antigens that it may leverage for therapeutic protein design as well as deep learning model training.

Upon consummation of the merger, or the Totient acquisition, in June 2021, Totient became our wholly-owned subsidiary. We paid the former stockholders and noteholders of Totient upfront cash consideration of $40.0 million, subject to customary purchase price adjustments, including consideration in exchange for the cancellation of (i) unexercised outstanding options to purchase shares of Totient common stock, whether vested or unvested, and (ii) outstanding stock appreciation rights previously granted by Totient. Holders of Totient's Class A common stock also received an aggregate of 669,743 shares of our common stock, subject to certain vesting conditions. In addition, Totient's Class A common stockholders and noteholders are eligible to receive up to an additional $15.0 million in cash upon the achievement of certain milestones.

Our Growth Strategy

Our goal is to establish our proprietary, end-to-end platform as the industry standard for biologic drug discovery and cell line development. We are laying the groundwork for integration into our

partners' discovery organizations, with the goal to be the *de facto* starting point for new drug creation. Our growth strategy is to:

- Establish new partnerships to create biologic drug candidates.
- Increase the number of molecules on which we work with our existing partners.
- Expand the scope of our partnerships across the biologic drug discovery and cell line development value chain.
- Create new biologic modalities and novel conjugates with Bionic Proteins that incorporate nsAAs.
- Grow our platform through R&D and strategic acquisitions.
- Create proprietary biologic assets.
- Leverage our platform to address market opportunities outside of biopharmaceuticals.

Risks Associated with our Business

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

- Our current business has a limited operating history, which may make it difficult to evaluate our business and predict our future performance.
- We have incurred significant losses since inception, we expect to incur losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.
- Even if this offering is successful, we will need to raise additional capital to fund our operations and improve our platform. If we are unable to raise additional capital on terms acceptable to us or at all, we may need not be able to compete successfully, which would harm our business, operations and financial condition.
- Our historical revenue is primarily related to technology development services, and our revenue for any historical period may not be indicative of results that may be expected for any future period.
- Our commercial success depends on the technological capabilities of our Integrated Drug Creation Platform and its utilization by our existing partners and adoption by new partners.
- Our future success is dependent on the eventual approval and commercialization of biologic drugs developed under our partnerships for which we have no control over the clinical development plan, regulatory strategy or commercialization efforts.
- We are substantially dependent on the successful application of our Integrated Drug Creation Platform to Discovery and Cell Line Development partnerships, and we have only recently begun to enter into Discovery partnerships.
- If we cannot maintain our current relationships with partners, fail to expand our relationships with our current partners, or if we fail to enter into new relationships, our future operating results would be adversely affected as a general matter.
- Biopharmaceutical drug development is inherently uncertain, and it is possible that our technology may not succeed in discovering appropriate molecules or producing cell lines. Even if we do succeed, it is possible that none of the drug candidates discovered using our platform, if any, that are further developed by our partners will achieve development or

regulatory milestones, including marketing approval, or become viable commercial technologies, on a timely basis or at all, which would harm our ability to generate revenue.

- We expect to make significant investments in our continued research and development of new technologies and platform expansion, which may not be successful.
- The loss of any member of our senior management team or our inability to attract and retain highly skilled scientists and business development professionals could adversely affect our business.
- Our partners may not achieve projected discovery and development milestones and other anticipated key events in the expected timelines or at all, which could have an adverse impact on our business and our anticipated revenue.
- The biopharmaceutical platform technology market is highly competitive, and if we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenue, or sustain profitability.
- If we are unable to obtain and maintain sufficient intellectual property protection for our technologies, including our platform and Denovium deep learning technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize technologies or a platform similar or identical to ours, and our ability to successfully leverage our platform technologies may be impaired.
- We have identified a material weakness in our internal control over financial reporting, and we may identify additional material weaknesses in the future or otherwise fail to maintain proper and effective internal controls, which may impair our ability to produce accurate financial statements on a timely basis.

Corporate History and Information

We were formed as AbSci, LLC in August 2011 as a limited liability company under the Oregon Limited Liability Act and subsequently converted into a Delaware limited liability company under the laws of the State of Delaware in April 2016. In October 2020, we completed a reorganization whereby we converted from a Delaware limited liability company to a Delaware corporation under the name Absci Corporation. We have three direct wholly-owned subsidiaries, AbSci, LLC, *De Novo* Design, LLC and Target Discovery Merger Sub II, LLC, and two indirect wholly-owned subsidiaries, Totient UK Ltd. and Totient d.o.o. Beograd. Our principal executive office is located at 18105 SE Mill Plain Blvd, Vancouver, WA 98683, and our telephone number is (360) 949-1041. Our website address is www.absci.com. We do not incorporate the information on or accessible through our website into this prospectus.

Trademarks

This prospectus contains references to our trademarks and service marks and to those belonging to third parties. Absci®, SoluPro® and SoluPure® are our registered trademarks with the U.S. Patent and Trademark Office. We also use various other trademarks, service marks and trade names in our business, including the Absci logo, ACE Assay, HiPrBind Assay, Bionic Proteins, Translating Ideas into Drugs, Bionic SoluPro, Integrated Drug Creation, Denovium, Denovium Engine and TOTIENT. All other trademarks, service marks or trade names referred to 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 with or without the ® and ™ symbols, but references which omit the ® and ™ symbols should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

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, as amended (JOBS Act). As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act);
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements, and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these exemptions for up to five years from the date of effectiveness of this registration statement or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.07 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission (SEC) which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

We have elected to utilize the exemption for the delayed adoption of certain accounting standards, and, therefore, we will adopt new or revised accounting standards at the time private companies adopt the new or revised accounting standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies. As a result of this election, 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.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. 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 as measured on the last business day of our second fiscal quarter 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 as measured on the last business day of our second fiscal quarter. 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 have reduced disclosure obligations regarding executive compensation. Further, if we are a smaller reporting company with less than $100 million in annual revenue, we would not be required to

obtain an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

The Offering

Common stock offered by us	shares
Option to purchase additional shares	We have granted the underwriters an option to purchase up to additional shares of common stock from us. The underwriters can exercise this option at any time within 30 days from the date of this prospectus.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that we will receive net proceeds from the sale of our common stock in this offering of approximately $ million, or $ million if the underwriters exercise in full their option to purchase additional shares, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering to further our investment in expanding our Integrated Drug Creation Platform's capabilities, continued growth of our business development organization and activities, and for general corporate purposes, including working capital, capital expenditures, and operating expenses. We may also use a portion of the remaining net proceeds, if any, to acquire complementary businesses, products, services or technologies, including scientific expertise, although we have no binding agreements or commitments to do so at this time. See "Use of Proceeds" for additional information.
Risk Factors	You should read carefully "Risk Factors" beginning on page 19 and other information included in this prospectus for a discussion of factors that you should consider before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	"ABSI"

The number of shares of our common stock to be outstanding after this offering is based on shares of common stock (after giving effect to the conversion of 14,006,929 shares of our redeemable convertible preferred stock outstanding as of March 31, 2021 and the conversion of the Convertible Notes issued in March 2021, into an aggregate of shares of our common stock immediately prior to the completion of this offering; the issuance of 669,743 shares of common stock in connection with the Totient Acquisition; and which includes shares outstanding that

are subject to forfeiture or our right to repurchase as of such date) outstanding as of March 31, 2021, and excludes:

- 1,625,055 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of $3.63 per share;
- 765,881 shares of our common stock issuable upon the exercise of options granted after March 31, 2021, with a weighted-average exercise price of $14.78 per share;
- 31,126 shares of our common stock issuable upon exercise of stock appreciation rights granted after March 31, 2021, with a weighted-average exercise price of $16.40 per share;
- 93,007 shares of our common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2021, with a weighted-average exercise price of $1.00 per share;
- 545,639 shares of our common stock reserved for future issuance under our 2020 Stock Option and Grant Plan (2020 Plan) as of March 31, 2021;
- shares of our common stock reserved for future issuance under our 2021 Stock Option and Incentive Plan (2021 Plan) which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan (2021 ESPP) which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 ESPP.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- a -for- reverse stock split of our common stock effected on , 2021;
- the conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2021 into an aggregate of 14,006,929 shares of our common stock immediately prior to the completion of this offering;
- the conversion of our convertible promissory notes issued in March 2021 (Convertible Notes) into an aggregate of shares of common stock upon the completion of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus, and that the offering is completed on , 2021;
- no exercise of the outstanding options described above;
- no exercise by the underwriters of their option to purchase up to additional shares of our common stock in this offering; and
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, which will occur immediately prior the completion of this offering.

Summary Consolidated Financial Data

The following summary consolidated statements of operations and comprehensive loss data for the years ended December 31, 2019 and 2020 and the summary consolidated balance sheet data as of December 31, 2020 have been derived from our audited consolidated financial statements appearing elsewhere in this prospectus, and the following summary consolidated statements of operations and comprehensive loss data for the three months ended March 31, 2021 and 2020 and the summary consolidated balance sheet data as of March 31, 2021 have been derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus, in each case, except for the pro forma and pro forma adjusted data. We have prepared the unaudited interim financial statements on the same basis as our audited financial statements and, in the opinion of management, these financial statements reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of our unaudited interim financial statements. You should read the following summary consolidated financial data together with the “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of this prospectus and our consolidated financial statements and the related notes appearing elsewhere in this prospectus. Our historical results are

not necessarily indicative of the results that may be expected in any future periods, and our interim results are not necessarily indicative of results that may be expected for the full year.

	For the Years Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except for share and per share data)			
Consolidated Statements of Operations Data:				
Revenues				
Technology development revenue	$ 2,044	$ 4,117	$ 525	$ 940
Collaboration revenue	16	663	47	123
Total revenues	2,060	4,780	572	1,063
Operating expenses				
Research and development	4,311	11,448	1,907	7,050
Selling, general and administrative	3,523	5,502	971	4,685
Depreciation and amortization	491	1,131	184	476
Total operating expenses	8,325	18,081	3,062	12,211
Operating loss	(6,265)	(13,301)	(2,490)	(11,148)
Other income (expense)				
Interest expense	(268)	(634)	(98)	(455)
Other expense, net	(51)	(418)	(70)	164
Total other expense, net	(319)	(1,052)	(168)	(291)
Loss before income taxes	(6,584)	(14,353)	(2,658)	(11,439)
Income tax benefit	—	—	—	477
Net loss and comprehensive loss	(6,584)	(14,353)	(2,658)	(10,962)
Adjustment of redeemable convertible preferred units and stock	(17,286)	(34,336)	(11,154)	—
Cumulative undeclared preferred stock dividends	—	(780)	$ —	(995)
Net loss applicable to common stockholders and unitholders	$ (23,870)	$ (49,469)	$ (13,812)	$ (11,957)
Net loss per share attributable to common stockholders and unitholders: Basic and diluted	$ (5.18)	$ (10.55)	$ (3.00)	$ (2.33)
Weighted-average common shares and units outstanding: Basic and diluted	4,606,505	4,691,020	4,606,505	5,140,648
Pro forma net loss per share attributable to common shareholders: Basic and Diluted [(1)]				
Pro forma weighted-average common shares outstanding: Basic and Diluted [(1)]				

(1) See the subsection titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Pro Forma Information” for an explanation of the calculations of our basic and diluted pro forma net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.

	As of March 31, 2021		
	Actual	Pro Forma[1]	Pro Forma, As Adjusted[2][3]
			(in thousands)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 180,756		
Working capital[4]	167,953		
Total assets	222,833		
Total liabilities	159,959		
Redeemable convertible preferred stock	161,377		
Accumulated deficit	(101,027)		
Total other stockholders' deficit	(98,503)		

(1) The pro forma column in the balance sheet data table above gives effect to (i) the conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2021 into an aggregate of 14,006,929 shares of our common stock immediately prior to the completion of this offering; and (ii) the issuance of shares of common stock upon the conversion of all outstanding principal and accrued interest on the Convertible Notes upon the completion of this offering, assuming an initial public offering price per share of $, the midpoint of the price range set forth on the cover of this prospectus, and assuming that the offering is completed on , 2021, and (iii) the completion of the Totient Acquisition (other than the potential payment of the additional $15.0 million for achievement of certain milestones).

(2) The pro forma as adjusted column in the balance sheet data table above gives effect to (i) the pro forma adjustments set forth in footnote (1) above; and (ii) the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the amount of cash and cash equivalents, working capital, total assets and total other stockholders' (deficit) equity by approximately $ 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease, as applicable, the amount of each of cash and cash equivalents, working capital, total assets and total other stockholders' (deficit) equity by approximately $ million, based on the assumed initial public offering price per share, the midpoint of the price range 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. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.

(4) We define working capital as current assets less current liabilities.

Risk Factors

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

Risks Related to Our Limited Operating History, Financial Condition and Prospects

Our current business has a limited operating history, which may make it difficult to evaluate our business and predict our future performance.

Our current business has a limited operating history. We began commercial operations in 2018. Before engaging in commercial operations, we focused primarily on technology development. Our revenue for the fiscal years ended December 31, 2019 and 2020 was $2.1 million and $4.8 million, respectively, and for the three months ended March 31, 2021 was $1.1 million. Our revenue was generated primarily from technology development activities. We are very early in the adoption phase of our business model, and, to date, no partner has entered into a license for clinical or commercial use of any intellectual property rights related to biologic drug candidates or cell lines generated utilizing our platform. Moreover, we have only agreed upon clinical or commercial license terms for two of our Active Programs in the event an option is exercised by a partner to license such intellectual property rights. We may never achieve commercial success and we have limited historical financial data upon which we may base our projected revenue. We also have limited historical financial data upon which we may base our planned operating expense or upon which you may evaluate our business and prospects. Based on our limited experience in developing and marketing new technologies, we may not be able to effectively:

- drive adoption of our technologies;
- attract and retain partners;
- enter into licensing arrangements with our partners following completion of our technology development activities;
- establish partnerships that contain economic terms sufficient to make our business model viable;
- achieve sufficient near term revenue or capital to sustain our business to enable us to receive the downstream economics of our existing or future partnerships;
- expand the scope of our existing partnerships;
- anticipate and adapt to changes in our the existing and emerging markets in which we operate;
- focus our technology development efforts in areas that generate returns on these efforts;
- succeed in achieving our technology development goals.
- maintain and develop strategic relationships with suppliers to acquire necessary materials and equipment for the development of our technologies on appropriate timelines, or at all;

- implement an effective business development strategy to drive adoption of our Integrated Drug Creation Platform by new and existing partners;
- scale our technology development activities to meet potential demand at a reasonable cost;
- acquire, in-license or otherwise obtain technologies that enable us to expand our platform capabilities;
- avoid infringement of third-party intellectual property rights;
- obtain licenses on commercially reasonable terms to third-party intellectual property rights, as needed for our current and planned operations;
- obtain and maintain valid and enforceable patents and other intellectual property rights that give us a competitive advantage;
- protect our proprietary technologies; and
- attract, retain and motivate qualified personnel.

In addition, a substantial portion of our expenses have been and will continue to be fixed. Accordingly, if we do not generate revenue as and when anticipated, our losses may be greater than expected and our operating results will suffer. You should consider the risks and difficulties frequently encountered by companies like ours in new and rapidly evolving markets when making a decision to invest in our common stock.

We have incurred significant losses since inception, we expect to incur losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred significant losses since our inception. For the years ended December 31, 2019 and 2020, we incurred net losses of $6.6 million and $14.4 million, respectively, and for the three months ended March 31, 2021 we incurred net losses of $11.0 million. As of March 31, 2021, we had an accumulated deficit of $101.0 million. We expect that our operating expenses will continue to increase as we grow our business and will also increase as a result of our becoming a public company. Since our inception, we have financed our operations primarily from private placements of our preferred equity securities, convertible promissory notes and the incurrence of other indebtedness, and to a lesser extent, revenue derived from our Integrated Drug Creation Platform. We have devoted substantially all of our resources to the development of our Integrated Drug Creation Platform and commercialization of resulting technology development capabilities. We will need to generate significant additional revenue to achieve and sustain profitability, and even if we achieve profitability, we cannot be sure that we will remain profitable for any substantial period of time. We may never be able to generate sufficient revenue to achieve or sustain profitability and our recent and historical growth should not be considered indicative of our future performance.

Even if this offering is successful, we will need to raise additional capital to fund our operations and improve our platform. If we are unable to raise additional capital on terms acceptable to us or at all, we may not be able to compete successfully, which would harm our business, operations, and financial condition.

Based on our current business plan, we believe the net proceeds from this offering, together with our existing cash and cash equivalents and anticipated cash flows from operations, will be sufficient to meet our working capital and capital expenditure needs over at least the next 12 months following the date of this prospectus. If our available cash resources together with our net proceeds from this offering and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements, including because of lower demand for the application of our Integrated Drug Creation Platform to biologic drug discovery or cell line development, or the realization of other risks described in this prospectus, we will be required to raise additional capital prior to such time

through issuances of equity or convertible debt securities, entrance into a credit facility or another form of third party funding, or seek other sources of financing. Such additional financing may not be available on terms acceptable to us or at all.

In any event, we may consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons. For example, this may include reasons such as to:

- increase our business development efforts to drive market recognition of our platform and address competitive developments;
- fund business development efforts for our current and future programs;
- expand the capabilities of our platform into additional areas of biopharmaceutical research and development, such as drug target discovery;
- acquire, license or invest in additional technologies or complementary businesses or assets;
- pursue opportunities to apply our protein creation technologies beyond the biopharmaceutical industry; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve revenue growth;
- the cost of expanding our operations, including our business development efforts;
- our rate of progress in selling access to our platform and business development activities associated therewith;
- our rate of progress in, and cost of development of new technologies;
- the effect of competing technological and market developments; and
- costs related to any domestic and international expansion.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders would result. Any preferred equity securities issued also would likely provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. Debt financing and preferred equity financing, if available, may also involve agreements that include covenants restricting our ability to take specific actions, such as incurring additional debt, selling or licensing our assets, making asset acquisitions, making capital expenditures, or declaring dividends.

If we are unable to obtain adequate financing or financing on terms satisfactory to us, if we require it, our ability to continue to pursue our business objectives and to respond to business opportunities, challenges, or unforeseen circumstances could be significantly limited, and could have a material adverse effect on our business, financial condition, results of operations and prospects.

Substantially all of our historical revenue is related to technology development activities, and we have not demonstrated the ability to enter into a sufficient number of partnerships providing for long-term license arrangements under which we are entitled to receive milestone payments or royalties on net product sales. We have not received

any such milestone or royalty revenues to date, and it may be years before we realize any such revenues, if at all.

For the years ended December 31, 2019 and 2020 and for the three months ended March 31, 2021, substantially all of our revenue was generated by technology development fees through performing technology development activities addressing molecules in programs for our programs. To date, such fees have generally been payable upon both the inception of, and the demonstration of technical achievement of program milestones, under technology development agreements with our partners. Our business model is dependent on the successful completion of the technology development phase under these arrangements and, more importantly, on our subsequent entry into long-term license arrangements with our partners that entitle us to development, regulatory and commercial milestones and/or royalties with respect to product candidates generated through our platform, which may include product candidates discovered and/or manufactured in cell lines developed by us. We are still in the very early stages of implementing our business model and, to date, no partner has entered into a license for clinical or commercial use of any intellectual property rights related to biologic drug candidates or cell lines generated utilizing our platform. Moreover, we have only agreed upon clinical or commercial license terms for two of our Active Programs in the event an option is exercised by a partner to license such intellectual property rights. If we are unable to maintain partnerships covering Active Programs (including if any partnership covering an Active Program is terminated during or upon completion of the technology development phase) or we are otherwise unable to enter into license agreements for our Active Programs, we will not receive any downstream payments under these programs, which will have a material and adverse effect on our business prospects. Additionally, any such license agreements that we may enter into may not be on terms that are favorable to us, or such license agreements may be terminated.

Technology development fees are generated by technology development activities that we perform for our partners, the timing and nature of which are dictated by the timing of program commencement, which depends on various permissions, information and supplies provided by our partners and/or third party vendors as well as the pace of program progression and receipt of ongoing input from our partners. Our eligibility to receive milestone payments is generally subject to the negotiation of future arrangements, as described above. As a result, we currently do not generate significant recurring revenue and, until we are able to establish significant recurring revenue, if at all, we will be prone to regular fluctuations in our revenue dependent on the timing of our entry into partnership agreements, our partners advancing subject programs, and our partners achieving development milestones or commercial sales with respect to drug candidates discovered and/or manufactured in cell lines developed by us.

Risks Related to Our Business Model and Partnerships

Our commercial success depends on the technological capabilities of our Integrated Drug Creation Platform and its utilization by our existing partners and adoption by new partners.

We utilize our Integrated Drug Creation Platform to identify biopharmaceutical drug candidates and associated production cell lines for further development and potential commercialization by our partners. As a result, the quality and sophistication of our platform and technology are critical to our ability to conduct our technology development activities and to deliver more promising molecules and cell lines and to accelerate and lower the costs of discovery and cell line development for our existing and potential partners, as compared to other methods. In particular, our business depends, among other things, on:

- our platform’s ability to successfully identify appropriate molecules and production cell lines for our partners and provide them to our partners on the desired timeframes;

- our partners’ determination that the product candidates and/or production cell lines that we provide to them can ultimately be used to advance our partners’ clinical development programs;
- our partners' willingness to enter into license agreements with economic terms that are acceptable to us, which is based substantially on the value our partners believe can be recognized from the product candidates and/or production cell lines that we provide to them;
- our ability to execute on our strategy to enter into new partnerships with new or existing partners on technology development terms that are acceptable to us;
- our ability to increase awareness of the capabilities of our technologies and solutions;
- our partners’ and potential partners’ willingness to adopt our technologies;
- whether our platform reliably provides advantages over legacy and other alternative technologies and is perceived by partners to be cost effective;
- the rate of adoption of our technologies by pharmaceutical companies, biotechnology companies of all sizes, government organizations and non-profit organizations and others;
- prices we charge for our technology and the discoveries that we make;
- the relative reliability and robustness of our platform;
- our ability to develop new technologies for partners;
- our platform’s ability to offer sufficient cost effectiveness, efficiency, and performance to warrant partners’ continued adoption of and ongoing reliance on our technologies;
- our platform’s ability to screen a high number of cells and drug candidates;
- whether competitors develop a platform that enables biologic drug discovery and cell line development more effectively than our platform;
- the status of the market for next-generation biologics, which may become less attractive due to business or regulatory factors;
- our ability to bioengineer our bespoke *E. coli* SoluPro and Bionic SoluPro strains to produce certain types of proteins;
- our ability to adapt our assays to screen effectively for certain types of drug modalities or targets;
- our ability to adapt our assays to de-orphan antibodies we discover through technology acquired through our acquisition of Totient;
- our ability to construct diverse genetic libraries covering sufficient diversity of protein sequence variants and folding and expression solutions combinations;
- our ability to reliably adapt our assays to each program to screen large strain libraries and routinely identify molecules/strains that meet the program deliverables;
- our ability to optimize our fermentation conditions to scale at an effective level;
- our ability to use our deep learning AI to generate actionable biological insights;
- our platform’s ability to create new drug modalities and novel conjugates;

- our platform's ability to incorporate non-standard amino acids into proteins with high efficiency and fidelity;
- the timing and scope of any approval that may be required by the U.S. Food and Drug Administration (FDA) or any other regulatory body for drugs that are developed based on molecules discovered and/or manufactured using our Integrated Drug Creation Platform technologies;
- our partners' and the biopharmaceutical industry's continued interest and investment in next-generation biologic drug development, and the continued market growth and clinical success of this category collectively;
- the impact of our investments in innovation and commercial growth;
- negative publicity regarding our or our competitors' technologies resulting from defects or errors; and
- our ability to further validate and enhance our platform through research and technology development activities.

There can be no assurance that we will successfully address any of these or other factors that may affect the market acceptance of our platform or our technology. If we are unsuccessful in achieving and maintaining market acceptance of our platform, our business, financial condition, results of operations and prospects could be adversely affected.

We are substantially dependent on the successful application of our Integrated Drug Creation Platform to biologic drug discovery and cell line development partnerships, and we have only recently begun to enter into biologic drug discovery partnerships.

To date, we have invested nearly all of our efforts and financial resources in technology development relating to our bespoke *E. coli* SoluPro and Bionic SoluPro strains. The biologic drug discovery and cell line development business is capital intensive, particularly for early stage companies that do not have significant off-setting revenues.

Our success is dependent on our ability to drive adoption of our platform by partners, developing technologies for our partners, and entering into license agreements with such partners. Further, our success depends upon our expansion of our existing partnerships, and entry into new partnerships, to include our Discovery applications, as well as continuing to drive adoption of our Cell Line Development applications. Substantially all of our revenue generated to date is from technology development arrangements for our Cell Line Development applications. To date, we have very limited experience and expertise in the biologic drug discovery using our platform and have not demonstrated success in expanding our platform into biologic drug discovery. In order to realize the benefits of such an expanded scope of our Integrated Drug Creation Platform, we need to further advance our technology and further market our expanded capabilities to existing and new partners.

Our future revenue growth and market potential may depend on our ability to leverage our Integrated Drug Creation Platform, together with our custom libraries and other proprietary tools, into other areas of biopharmaceutical research and development, such as biologics drug discovery. However, we may not be able to successfully validate that our Integrated Drug Creation Platform will accelerate the hit identification and lead optimization steps of biologic drug discovery or that they will allow us to discover more effective drugs.

Our inability to continue these initiatives and initiate new technology development efforts could result in a failure to develop our platform, improve upon existing technologies, develop and advance the opportunities like biologics drug discovery, and expand our addressable market, each of which could have a material and adverse impact on our business development, business, financial position and results of operations.

We do not expect to generate significant recurring revenue unless and until such time as we enter into further agreements that, in the aggregate, result in regular and continuous fees for our performance of technology development activities, and, more importantly, agreements under which we would be eligible for future payments upon our partners' achievement of development and regulatory milestones or commencement of commercial sales with respect to any drug candidates generated using our platform. We are unable to predict whether and the extent to which payments will be made to us under our arrangements and whether and the extent to which we will be able to enter into future arrangements under which we are eligible to generate additional revenues, or the timing of the achievement of any milestones under these agreements, if they are achieved at all. The timing and likelihood of payments to us under these agreements is dependent on our partners' successful utilization of the molecules discovered using our platform, which is outside of our control. Because of these factors, our operating results could vary materially from quarter to quarter.

Our future success is dependent on the eventual approval and commercialization of biologic drugs developed under our partnerships for which we have no control over the clinical development plan, regulatory strategy or commercialization efforts.

Our business model is dependent on the eventual progression of biologic drug candidates discovered or initially developed utilizing our Integrated Drug Creation Platform into clinical trials and commercialization. This requires us to attract partners and enter into agreements with them that contain obligations for the partners to pay us milestone payments as well as royalties on sales of approved products for the biologic drug candidates they develop that are generated utilizing our platform. Given the nature of our relationships with our partners, we do not control the progression, clinical development, regulatory strategy or eventual commercialization, if approved, of these product candidates. As a result, our future success and the potential to receive milestones and royalties are entirely dependent on our partners efforts for which we have no control. If our partners determine not to proceed with the future development of a product candidate discovered or initially developed utilizing our Integrated Drug Creation Platform or if it implements a clinical or regulatory strategy that ultimately does not enable the further development or approval of the product candidate, we will not receive the benefits of our partnerships, which may have a material and adverse effect on our operations.

In addition, biologic drug development is inherently uncertain and very few product candidates ultimately progress through clinical development and receive approval for commercialization. See the risk factor section below "*Risks Related to Biologic Drug Development*" for additional information related to the risks of biologic drug development. If our partners do not receive regulatory approval for a sufficient number of product candidates originating from our partnerships, we may not be able sustain our business model. Further, we will have little control over how diversified our portfolio of potential milestone payments or royalties will end up being.

While as a general matter we intend to periodically report on the status of our business development initiatives, including anticipated next steps, we may not provide forward-looking guidance on the timing of those next steps. In addition, we do not control the timing of disclosure by our partners of any milestones or other information related to any drug candidates generated using our platform. Any disclosure by us or our partners of data or other information regarding any such drug candidates that is perceived as negative may have a material adverse impact on our stock price or overall valuation. Our stock price may also decline as a result of negative clinical trial results, including adverse safety events involving any drug candidate that is subject to one of our partnerships.

If we cannot maintain our current relationships with partners, fail to expand our relationships with our current partners, or if we fail to enter into new relationships, our future operating results would be adversely affected as a general matter.

In the years ended December 31, 2019 and 2020, revenue from our top 3 partners and top 2 partners accounted for 87% and 77% of our technology development revenue, respectively. In the three months ended March 31, 2021, revenue from one partner accounted for 90% of our technology development revenue. The revenue attributable to these partners may fluctuate in the future, which could have an adverse effect on our business financial condition, results of operations and prospects. Our existing partners may cease to use our technologies depending on their own technological developments, availability of other competing technologies and internal decisions regarding allocation of time and resources to the discovery and development of biologic product candidates, over which we have no control. Our existing and future partners may have limited bandwidth to initiate new programs, which could limit their adoption or scale of application of our technologies. In addition, existing partners may choose to produce some or all of their requirements internally by using or developing their own manufacturing capabilities or by using capabilities from acquisitions of assets or entities from third parties with such capabilities. While our business is not substantially dependent on technology development revenues from any individual partner, because we currently have a limited number of partnerships, a loss of one of our partners could adversely impact our revenue, results of operations, cash flows or reputation in any given period.

Our future success also depends on our ability to expand relationships with our existing partners and to establish relationships with new partners. We engage in discussions with other companies and institutions regarding potential technology development and license opportunities on an ongoing basis, which can be time consuming. There is no assurance that any of these discussions will result in a technology development and/or license agreement, or if an agreement is reached, that the resulting relationship will be successful, or that the terms of such agreement will be favorable to us. In addition, although we have entered into a Joint Marketing Agreement with KBI Biopharma, Inc., this agreement may not lead to any future business opportunities. In addition, our ability to monitor the achievement of clinical, regulatory and commercial milestones by our partners and enforce the payment of any corresponding fees is limited. Furthermore, the termination of any of these relationships could result in a temporary or permanent loss of revenue. Additionally, speculation in the industry about our existing or potential commercial relationships can be a catalyst for adverse speculation about us and our technology, which can adversely affect our reputation and our business.

We cannot assure investors that we will be able to maintain or expand our existing partnerships or that our technologies will achieve adequate market adoption among new partners. Any failure to increase penetration in our existing markets or new markets would adversely affect our ability to improve our operating results.

Our revenue under our technology development and other partner agreements for any particular period, or on an absolute basis, can be difficult to forecast.

Because of the complexities and long development timelines inherent in the biologic drug development business, it is difficult to predict the timing of payments under our technology development and other partner agreements. In particular, payments under our technology development agreements are subject to the achievement of project milestones and our partners' decisions to initiate or continue the technology development work, and any future downstream payments with respect to product candidates generated using our platform will be subject to our partners' advancement of the product candidates, over which we have no control. As a result, our revenue for any particular period can be difficult to forecast. Our revenue may grow at a slower rate than in past periods or even decline on a year-over-year basis. Because of these factors, our operating results could vary materially from quarter to quarter from our forecasts. Also, due to the limited probability of success for advancement of a clinical candidate by a partner at any given

stage of development and the unpredictability of when a partner may choose to continue development of a product candidate and whether any milestone payments will be due to us, our revenue may be difficult to forecast on an absolute basis.

Additionally, we recognize revenue either as we perform our technology development, upon completion of performing our technology development or upon achieving certain licensing, clinical, regulatory, and commercialization milestones. As a result, much of our revenue is generated from agreements entered into during previous periods. Consequently, a decline in demand for our platform, a decline in new or renewed business in any one quarter or any delays in the achievement, or any failure to achieve, development, regulatory and commercial milestones by our partners with respect to product candidates generated using our platform, may not significantly reduce our revenue for that quarter but could negatively affect our revenue in future quarters. Our revenue recognition model also makes it difficult for us to rapidly increase our revenue through increased operations in any period, as revenue from partners is recognized over the course of their drug development and commercialization process.

We expect to make significant investments in our continued research and development of new technology development and platform expansion, which may not be successful.

We are seeking to leverage our Integrated Drug Creation Platform as a consolidated technology for simultaneous biologic drug discovery and cell line development. We are seeking to expand our platform and the scope of our capabilities, which may or may not be successful. This includes, but is not limited to, drug discovery, incorporation of non-standard amino acids (nsAAs), and application of artificial intelligence across our Integrated Drug Creation Platform. We expect to incur significant expenses to advance these research and development efforts or to invest in, or acquire complementary technologies, but these efforts may not be successful. For instance, we have very limited experience with the discovery of novel biologic drug candidates and incorporation of nsAAs, and have not yet deployed these technologies in the context of partnered programs. Additional development will be required for the routine and robust use of these technologies in partnered programs. Through the course of additional technology development, significant unanticipated challenges may arise that adversely affect our future partnership prospects. To expand the scope of our platform, we acquired Denovium, an AI company leveraging deep learning for protein discovery and engineering, in January 2021 and Totient, a computational antibody and target discovery platform company, in June 2021. We are working to integrate the Denovium deep learning technology and the Totient antibody and target discovery technology into our Integrated Drug Creation Platform to accelerate drug discovery and cell line development efforts. Our long-term goals for this technology, such as constructing deep learning models capable of *in silico* target identification and drug and cell line design, will require significant investment and long development times and may ultimately never materialize.

Additionally, we may make significant investments in proprietary drug candidates we seek to discover, and any discovery and subsequent development efforts for such drug candidates may not be successful. Such investments may be costly, and given the uncertain nature of biologic drug discovery and development, our efforts in this field may not be successful. We may also make significant investments in pursuing technology development in industries other than the biopharmaceutical industry, and such pursuits may not be successful. We have no prior experience in using our technology platform in industries outside of the biopharmaceutical industry, and the economic structure of any future transactions in other industries may be more unfavorable to us than transactions in the biopharmaceutical industry.

Developing new technologies is a speculative and risky endeavor. Technologies that initially show promise may fail to achieve the desired results or may not achieve acceptable levels of analytical accuracy or clinical utility. We may need to alter our technologies in development before we identify a potentially successful technology. Technology development is expensive, may take years to complete and can have uncertain outcomes. Failure can occur at any stage of the development.

Additionally, development of any technology may be disrupted or made less viable by the development of competing technologies, and changes in the industry in which our technologies are applied could obsolete our technologies. For example, advancements in gene therapy or RNA-based vaccine technologies could significantly reduce the market share of protein-based biologics.

New potential technologies may fail any stage of development or commercialization and if we determine that any of our current or future technologies are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing or acquiring additional technologies, our potential for growth may be impaired.

The failure of our partners to meet their contractual obligations to us could adversely affect our business.

Our reliance on our partners poses a number of additional risks, including the risk that they may not perform their contractual obligations to us to our standards, in compliance with applicable legal or contractual requirements, in a timely manner or at all; they may not maintain the confidentiality of our proprietary information; and disagreements or disputes could arise that could cause delays in, or termination of, the research, development or commercialization of products generated using our platform or result in litigation or arbitration.

In addition, certain of our partners are large, multinational organizations that run many programs concurrently, and we are dependent on their ability to accurately track and make milestone payments to us pursuant to the terms of our agreements with them. Any failure by them to inform us when milestones are reached and make related payments to us could adversely affect our results of operations.

Moreover, some of our future partners may be located in markets subject to political and social risk, corruption and infrastructure problems, and could be subject to country-specific privacy and data security risk as well as burdensome legal and regulatory requirements. Any of these factors could adversely impact their financial condition and results of operations, which could impair their ability to meet their contractual obligations to us and have a material adverse effect on our business, financial condition and results of operations.

Our partners may not achieve projected discovery and development milestones and other anticipated key events in the expected timelines or at all, which could have an adverse impact on our business and our anticipated revenue.

From time to time, we may make public statements regarding the expected timing of certain milestones and key events, as well as regarding developments and milestones under our partnerships, to the extent that our partners have publicly disclosed such information or permit us to make such disclosures. Certain of our partners may in the future make statements about their goals and expectations for partnerships with us. The actual timing of these events can vary dramatically due to a number of factors such as delays or failures in our or our current and future partners' drug discovery and development programs, the amount of time, effort, and resources committed by us and our current and future partners, and the numerous uncertainties inherent in the development of drugs. Additionally, to date, none of our partners has successfully completed any regulatory submissions, such as investigational new drug (IND) applications or biologics license applications (BLAs), for any drug candidates generated using our platform. As a result, there can be no assurance that our partners' current and future programs will advance or be completed in the time frames we or they expect. If our partners fail to achieve one or more of these milestones or other key events as planned, our business could be materially adversely affected and we may never receive the anticipated revenues from these partnerships.

Our partners have significant discretion in determining when and whether to make announcements, if any, about the status of our partnerships, including about clinical developments and timelines for advancing collaborative programs, and the price of our

common stock may decline as a result of announcements of unexpected or negative results or developments.

Our partners have significant discretion in determining when and whether to make announcements about the status of our partnerships, including about preclinical and clinical developments and timelines for advancing product candidates generated using our platform. We do not plan to disclose the development status and progress of individual drug candidates of our partners, unless and until those partners do so first. Our partners may wish to report such information more or less frequently than we expect, or they may not report such information at all, in which case we would not report that information either. In addition, if a partner chooses to announce a partnership with us, there is no guarantee that we will receive technology development revenue in that quarter or even the following quarter, as such revenue is only payable to us in accordance with the terms of the agreements governing such partnerships. The price of our common stock may decline as a result of the public announcement of unexpected results or developments in our partnerships, or as a result of our partners withholding such information.

Risks Related to Biologic Drug Development

Biologic drug development is inherently uncertain, and it is possible that our technology may not succeed in discovering appropriate molecules or producing cell lines. Even if we do succeed, it is possible that none of the drug candidates discovered using our platform, if any, that are further developed by our partners will achieve development or regulatory milestones, including marketing approval, or become viable commercial technologies, on a timely basis or at all, which would harm our ability to generate revenue.

We use our platform to identify biologic drug candidates and develop cell lines for the production of drug candidates for partners who are engaged in biologic drug discovery and development. These partners include large pharmaceutical companies, smaller biotechnology companies and may in the future include non-profit and government organizations. While we receive payments for performing research activities and successfully completing technical program deliverables and milestones for our partners, we anticipate that the vast majority of the economic value of the contracts that we enter into with our partners will be in the downstream payments that would be payable if certain milestones are met by our partners with respect to product candidates identified and manufactured using bespoke cell lines developed by our Integrated Drug Creation Platform and royalties on net sales if such product candidates are approved for marketing and successfully commercialized. As a result, our future growth is dependent on the ability of our partners to successfully develop and commercialize therapies based on molecules generated using our platform. Due to our reliance on our partners, the risks relating to product development, regulatory clearance, authorization or approval and commercialization apply to us indirectly through the activities of our partners. Even if our platform is capable of identifying high quality biologic drug candidates, there can be no assurance that our partners will successfully develop, secure marketing approvals for and commercialize any drug candidates based on the proteins that we discover. As a result, we may not realize the intended benefits of our partnerships.

Due to the uncertain, time-consuming and costly clinical development and regulatory approval process, our partners may not successfully develop any drug candidates generated using our platform, or our partners may choose to discontinue the development of these drug candidates for a variety of reasons, including due to safety, risk versus benefit profile, exclusivity, competitive landscape, commercialization potential, production limitations or prioritization of their resources. It is possible that none of these drug candidates will ever receive regulatory approval and, even if approved, such drug candidates may never be successfully commercialized.

In addition, even if these drug candidates receive regulatory approval in the United States, our partners may never obtain approval or commercialize such drugs outside of the United States, which would limit their full market potential and therefore our ability to realize their potential downstream value. Furthermore, approved drugs may not achieve broad market acceptance among

physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited. Likewise, our partners have to make decisions about which clinical stage and pre-clinical drug candidates to develop and advance, and our partners may not have the resources to invest in all of the drug candidates generated using our platform, or clinical data and other development considerations may not support the advancement of one or more drug candidates. Decision-making about which drug candidates to prioritize involves inherent uncertainty, and our partners' development program decision-making and resource prioritization decisions, which are outside of our control, may adversely affect the potential value of those partnerships. Additionally, subject to its contractual obligations to us, if one more of our partners is involved in a business combination, the partner might de-emphasize or terminate the development or commercialization of any drug candidate generated using our platform. If one of our strategic partners terminates its agreement with us, we may find it more difficult to attract new partners.

We are also subject to industry-wide FDA and other regulatory risk. For example, the number of BLAs approved by the FDA varies significantly over time and if changes in applicable laws, regulations, or policy or other events lead to an extended reduction in the number of BLAs approved by the FDA or otherwise reduce the number of biologics in development, our industry would contract and our business would be materially harmed.

Our partners' failure to effectively develop or commercialize any drug candidates generated using our platform could have a material adverse effect on our business, financial condition, results of operations and prospects, and cause the market price of our common stock to decline. In addition to the inherent uncertainty in drug development addresses above, our ability to forecast our future revenues may be limited.

In addition, we may in the future seek to advance proprietary drug candidates through preclinical validation, and may seek to license or co-develop such proprietary drug candidates with a partner for clinical development. In such case, we would also be dependent on our ability to enter into partnerships with respect to the drug candidate with license or joint development terms that are acceptable to us in a timely manner. We may also in the future invest in advancing proprietary drug candidates through some or all clinical-stage development activities and regulatory filings for approval to commercialize such proprietary drug candidates. If we were to do this, we would be subject to all of the risks of biologic drug development described above and elsewhere in this prospectus, and our failure to effectively develop or commercialize such proprietary drug candidates could have a material adverse effect on our business, financial condition, results of operations and prospects, and cause the market price of our common stock to decline.

If our partners experience any of a number of possible unforeseen or negative events in connection with preclinical or clinical development, regulatory approval or commercialization of product candidates generated through our partnership, this could negatively affect our revenue opportunity for that program, and/or have broader deleterious effects on our reputation and future partnership prospects.

Our partners may experience numerous unforeseen events during, or as a result of, preclinical studies or clinical trials that could delay or prevent their ability to conduct further development or obtain regulatory approval or licensure of, or commercialize, biologic drug candidates generated through our partnerships, including:

- Preclinical studies designed to enable the submission of IND applications, or other preclinical development activities, by our partners may not result in data sufficient to support the advancement of the applicable product candidates into clinical development, or our partners may abandon development activities for such product candidates prior to any IND submission for a variety of reasons;

- regulatory authorities or ethical review boards, including institutional review boards (IRBs), may not authorize commencement of a clinical trial or conduct a clinical trial at a prospective trial site;
- there may be delays in reaching or failure to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- the FDA or other regulatory authorities may disagree with a clinical trial design or a sponsor's interpretation of data even after such regulatory authorities have reviewed and commented on the clinical trial design;
- differences in trial design between early stage clinical trials and later-stage clinical trials may make it difficult to extrapolate the results of earlier clinical trials to later-stage clinical trials;
- the FDA or other regulatory authorities may disagree about whether study endpoints are clinically meaningful or recommend study endpoints that require lengthy periods of observation;
- the number of patients, or amount of data, required to complete clinical trials may be larger than anticipated, patient enrollment in these clinical trials may be slower than anticipated or patients may drop out of clinical trials at a higher rate than anticipated;
- contract research organizations and other contracted third parties may fail to perform their duties in accordance with the study protocol or applicable laws and regulations;
- changes may be made to product candidates after commencing clinical trials, which may require that previously completed stages of clinical testing be repeated or delay later stages of testing;
- clinical trials may fail to satisfy the applicable regulatory requirements of the FDA or other regulatory authorities responsible for oversight of the conduct of clinical trials in other countries;
- regulators may elect to impose a clinical hold, or our partners, governing IRBs, data safety monitoring boards or ethics committees may elect to suspend or terminate our partners' clinical research or trials for various reasons, including non-compliance with regulatory requirements or a finding that the participants are being exposed to unacceptable risks to their health or the privacy of their health information being disclosed;
- the cost of clinical trials of the applicable product candidates, or improvements to such product candidates, may be greater than our partners anticipate, causing them to delay or terminate their clinical development efforts;
- the supply or quality of materials necessary to conduct clinical trials of the applicable product candidates may be insufficient or inadequate;
- the outcome of our partners' preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results;
- product candidates may be associated with negative or inconclusive results in clinical trials, and our partners may decide to deprioritize or abandon these product candidates, or regulatory authorities may require our partners to abandon them or may impose onerous changes or requirements, which could lead to de-prioritization or abandonment;
- product candidates may have undesirable side effects which could lead to serious adverse events, or other unexpected characteristics. One or more of such effects or events could cause regulators to impose a clinical hold on the applicable trial, or cause our partners or

their investigators, IRBs or ethics committees to suspend or terminate the trial of the applicable product candidates; and

- clinical trials may suggest or demonstrate that products are not safe and effective, or as safe and effective as competing therapies on the market or in development.

In addition, disruptions caused by the COVID-19 pandemic may increase the likelihood that our partners encounter such difficulties or delays in initiating, enrolling, conducting or completing their planned and ongoing clinical trials. Delays of this nature could also allow competitors to bring products to market before our partners do, potentially impairing our partners' abilities to successfully commercialize products generated in partnership with us and harming our business and results of operations. Any delays in the development of the product candidates developed by our partners generated using our technology our partners may significantly harm our business, financial condition and prospects. 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 clearance, authorization or approval of partnered products in development.

The biopharmaceutical platform technology market is highly competitive, and if we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenue, or sustain profitability.

We face significant competition in the biopharmaceutical platform technology market. Our technologies address therapeutic discovery and bioproduction challenges that are addressed by other platform technologies controlled by companies that have a variety of business models, including the development of internal pipelines of therapeutics, technology licensing, discovery screening, cell line generation and the sale of instruments and devices. Potential competitors addressing certain steps in the target identification, biologic drug discovery and cell line development processes or adjacent aspects of these broad processes include the following:

- in the field of novel target identification, we may face competition from academic, pharmaceutical, and biotechnology research initiatives, as well as companies focused on novel methods for target identification, including Insitro, Inc., TScan Therapeutics, Inc. and 3T Biosciences, Inc.;
- in the field of AI-guided drug design and discovery, we may face competition from companies designing novel proteins such as Generate Biomedicines, Inc., as well as adjacent technology companies pursuing small molecule design such as Schrodinger, Inc., Recursion Pharmaceuticals, Inc., Relay Therapeutics, Inc., Atomwise Inc., Valo Health, Inc., and Exscientia Limited;
- in the field of scaffold design and drug platform development, we may face competition from pharmaceutical and biotechnology companies developing novel biologic modalities including Amgen Inc., Crescendo Biologics Limited and Harpoon Therapeutics, Inc. among others;
- in the field of novel human/humanized antibody discovery, we may face competition from companies such as AbCellera Biologics Inc., Adimab LLC and Alloy Therapeutics, Inc.;
- in the field of non-standard amino acid protein engineering, we may face competition from companies such as Ambrx Inc. and Sutro Biopharma, Inc. (Sutro); and
- in the field of cell line generation and single-cell screening, we may face competition from service providers, such as Lonza Group AG and Selexis SA, companies offering instrumentation, such as Berkeley Lights Inc., and companies with alternative protein production systems, such as Sutro.

- In addition, we are aware of other synthetic biology companies focused on developing various custom cell lines in a variety of model organisms for biomanufacturing of molecules relevant to other industries. These companies, which include Ginkgo Bioworks, Inc., Zymergen Inc., Geltor, Inc., Antheia, Inc., and Bolt Threads, Inc., may in the future pursue biopharmaceutical applications of their platforms that could compete with our technologies.

Our target partners may also elect to develop their processes on in house systems, or using other methods, rather than implementing our technologies and may decide to stop using our technologies. These companies are likely to exhaust all internal alternatives to our technology before adopting our technologies. In addition, there are many large established companies in the life science technology market that we do not currently compete with but that could develop systems, technologies, tools or other products that will compete with us in the future. These large established companies have substantially greater financial and other resources than us, including larger research and development staff or more established marketing and sales forces.

Our competitors and potential competitors may enjoy a number of competitive advantages over us. For example these may include:

- longer operating histories;
- larger partner bases;
- greater brand recognition and market penetration;
- greater financial resources;
- greater technological and research and development resources;
- better system reliability and robustness;
- greater business development capabilities; and
- better established, larger scale and lower cost manufacturing capabilities.

As a result, our competitors and potential competitors may be able to respond more quickly to changes in partner requirements, devote greater resources to the development, promotion and sale of their platforms or solutions than we can, or sell their platforms or solutions, or offer solutions competitive with our platform and solutions at prices designed to win significant levels of market share. In addition, we may encounter challenges in marketing our solutions with our pricing model, which is structured to capture the potential downstream revenues associated with drug candidates that were discovered using our platform. Our partners and potential partners may prefer one or more pricing models employed by our competitors that involve upfront payments rather than downstream revenues. We may not be able to compete effectively against these organizations.

In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies. Certain of our competitors may be able to secure key inputs from vendors on more favorable terms, devote greater resources to marketing and promotional campaigns, adopt more aggressive pricing policies and devote substantially more resources to technology and platform development than we can. If we are unable to compete successfully against current and future competitors, we may be unable to increase market adoption of our platform technologies for the biologic drug discovery and cell line development, which could prevent us from increasing our revenue or sustaining profitability.

The market, including potential partners and potential investors, may be skeptical of the viability and benefits of our technology platform because it is based on novel and complex synthetic biology technology.

The market, including customers and potential investors, may be skeptical of the viability and benefits of our technology platform because it is based on novel and complex synthetic biology technology. There can be no assurance that our technologies will be understood, approved, or accepted by potential partners and potential investors or that we will be able to enter into new partnerships with new or existing partners. The synthetic biology market is relatively new, and potential partners may be hesitant to allocate resources in a relatively unproven field. If we are unable to convince these potential partners of the utility and value of our technologies or that our technologies are superior to the technologies they currently use, we will not be successful in entering these markets and our business and results of operations will be adversely affected. If potential investors are skeptical of the success of our technologies, our ability to raise capital and the value of our stock may be adversely affected.

The medical insurance coverage and reimbursement status of newly approved therapeutics is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for current or future products and services could limit our partners' ability to fully commercialize product candidates generated using our platform, which would decrease our ability to generate revenue.

The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford any therapeutics generated using our platform that our partners may develop and sell. In addition, because the therapeutics we generate may represent new classes of treatments for diseases, we and our partners cannot accurately estimate how such therapeutics would be priced, whether reimbursement could be obtained or any potential revenue generated. Sales of such therapeutics will depend substantially, both domestically and internationally, on the extent to which the costs of such therapeutics are paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If reimbursement is not available, or is available only to limited levels, our partners may not be able to successfully commercialize some therapeutics generated with our technology. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow our partners to establish or maintain pricing sufficient to realize a sufficient return on their investment in such therapeutics, and may lead to discontinuation or deprioritization of marketing and sales efforts for such products. Changes in the reimbursement landscape may occur, which are outside of our control, and may impact the commercial viability of our technology development services and/or therapeutics generated using our technology.

There is significant uncertainty related to the insurance coverage and reimbursement of newly cleared, authorized or approved therapeutics in the United States and other jurisdictions. Due to the trend toward value-based pricing and coverage, the increasing influence of health maintenance organizations and additional legislative changes, we expect our partners to experience pricing pressures on therapeutics generated using our platform that our partners may commercialize. The downward pressure on healthcare costs in general, particularly novel therapeutics, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products, which would negatively impact our ability to generate revenues.

Healthcare reform efforts aimed at lowering the price of biopharmaceutical products may impact our ability to maintain sufficient profits.

Payors, whether domestic or foreign, or governmental or private, are developing increasingly sophisticated methods of controlling healthcare costs and those methods are not always specifically adapted for new technologies. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could

impact our ability to sell our products profitably. In particular, in 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (ACA), was enacted, which, among other things, subjected biologic products to potential competition by lower-cost biosimilars; addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected; increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations; subjected manufacturers to new annual fees and taxes for certain branded prescription drugs; created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% (increased to 70% pursuant to the Bipartisan Budget Act of 2018, effective as of January 1, 2019) 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 provided incentives to programs that increase the federal government's comparative effectiveness research. If efforts to contain the price of biopharmaceutical products are successful, the magnitude of milestone payments and royalties we would expect to receive in connection with our partners' future prioritization and investment in developing novel biologics may be impacted.

Our business could become subject to government regulation, and the regulatory approval and maintenance process may be expensive, time-consuming and uncertain both in timing and in outcome.

Our operations are currently not subject to the direct regulation by the FDA or other regulatory bodies. However, our business could in future become subject to more direct oversight by the FDA, or other domestic or international agencies. For example, we may be subject to evolving and variable regulations governing the production of genetically engineered organisms. Furthermore, while we have no active plans to operate a manufacturing facility designed to comply with current good manufacturing practices (cGMPs), future market pressures or the lack of available capacity at cGMP manufacturing facilities may necessitate our entry into this market. Complying with such regulations may be expensive, time-consuming and uncertain, and our failure to obtain or comply with such approvals and clearances could have an adverse effect on our business, financial condition and operating results.

Risks Related to Our Operations

Our loan and security agreement contains covenants that restrict our operating activities, and we may be required to repay the outstanding indebtedness in an event of default, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In June 2018, we entered into a Loan and Security Agreement (LSA), which was subsequently amended, with Bridge Bank (Lender) pursuant to which the Lender agreed to provide us a term loan up to $3.0 million with a maturity date in May, 2022. We initially borrowed $0.3 million that was funded in June, 2018. In March 2019, we entered into a First Amendment to the loan and service agreement to increase total borrowings to $3.0 million. In March 2020, we entered into a Second Amendment to the loan service agreement that increased total borrowings to $5.0 million. Until we have repaid such indebtedness, the loan and security agreement subjects us to various customary covenants, including requirements as to financial reporting, liquidity ratios and insurance and restrictions on our ability to dispose of our business or property, to change our line of business, to liquidate or dissolve, to enter into any change in control transaction, to merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity, to incur additional indebtedness, to incur liens on our property, to pay any dividends or make other distributions on capital stock other than dividends payable solely in capital stock, to redeem capital stock, to enter into in-bound licensing agreements, to engage in transactions with

affiliates, and to encumber our intellectual property. Our business may be adversely affected by these restrictions on our ability to operate our business.

Following the amendments, we are permitted to make interest only payments on the LSA through May 2021, at which time amortization begins. However, we may be required to repay the outstanding indebtedness under the loan facility if an event of default occurs under the loan and security agreement. An event of default will occur if, among other things, we fail to make required payments under the loan and security agreement; we breach any of our covenants under the loan and security agreement, subject to specified cure periods with respect to certain breaches; the Lender determines that a material adverse change (as defined in the loan and security agreement) has occurred; we or our assets become subject to certain legal proceedings, such as bankruptcy proceedings; we are unable to pay our debts as they become due; or we default on contracts with third parties which would permit the third party to accelerate the maturity of such indebtedness or that could have a material adverse change on us. We may not have enough available cash or be able to raise additional funds through equity or debt financings to repay such indebtedness at the time any such event of default occurs. In such a case, we may be required to delay, limit, reduce or terminate our operations or grant to others rights to develop and market our Integrated Drug Creation Platform that we would otherwise prefer to develop and market ourselves. The Lender could also exercise its rights as secured lender to take possession of and to dispose of the collateral securing the term loan, which collateral includes substantially all of our property (excluding intellectual property, which is subject to a negative pledge). Our business, financial condition, results of operations and prospects could be materially adversely affected as a result of any of these events.

We rely on a limited number of suppliers or, in many cases, single suppliers, for laboratory equipment and materials and may not be able to find replacements or immediately transition to alternative suppliers.

We rely on a limited number of suppliers, or in many cases single suppliers, to provide certain consumables and equipment that we use in our laboratory operations, as well as reagents and other laboratory materials involved in the development of our technology. Fluctuations in the availability and price of laboratory materials and equipment could have an adverse effect on our ability to meet our technology development goals with our partners and thus our results from operations as well as future partnership opportunities. An interruption in our laboratory operations or technology transfer could occur if we encounter delays, quality issues or other difficulties in securing these consumables, equipment, reagents or other materials, and if we cannot then obtain an acceptable substitute. In addition, we would likely be required to incur significant costs and devote significant efforts to find new suppliers, acquire and qualify new equipment, validate new reagents and revalidate aspects of our existing assays, which may cause delays in our processing of samples or development and commercialization of our technology. Any such interruption could significantly affect our business, financial condition, results of operations and reputation.

In particular, we have purchased and rely on the Sartorius Ambr system. Sartorius AG (Sartorius) supplies us with the Ambr bioreactor system and related equipment and consumables, which are critical to our business. The Ambr system and its related consumables are provided solely by Sartorius. We are also materially reliant on the liquid handling robotics and associated consumables produced solely by the Hamilton Company (Hamilton). We obtain our supplies of equipment and materials from Sartorius and Hamilton under purchase orders and do not have supply contracts in place with either of these suppliers. Any disruption in the supply chain for these products would materially affect our business. While there are alternative types of equipment that we could use as a replacement for the Ambr system and/or the Hamilton workstations, switching to different systems would require significant capital investment, long lead times and significant training and validation.

Our Integrated Drug Creation Platform may not meet the expectations of our partners, which means our business, financial condition, results of operations and prospects could suffer.

Our success depends on, among other things, the market's confidence that our platform is capable of substantially shortening the amount of time necessary to perform certain activities as compared to the use of legacy and other alternative technologies, and will enable more efficient or improved pharmaceutical and biotechnology product development and/or biomanufacturing. There is no assurance that we will be able to meet our partners' needs in the future, or at all. To date, we have not yet had a program enter clinical testing or progress to manufacture in a cGMP environment, which may reduce our partners confidence in our platform. We also believe that pharmaceutical and biotechnology companies are likely to be particularly sensitive to defects in, or suboptimal performance of, our platform, including if our platform fails to deliver meaningful acceleration of certain research timelines accompanied by results at least as good as the results generated using legacy or other alternative technologies. There can be no guarantee that our platform will meet the expectations of pharmaceutical and biotechnology companies.

We will need to develop and expand our workforce, commercial infrastructure and laboratory operations to support anticipated growth in demand for our technology development programs, and we may encounter difficulties in managing this development and expansion.

We will need to expand our workforce, commercial infrastructure and laboratory operations to support anticipated growth in demand for our technology development programs. If we are unable to support fluctuations in the demand for our technology development programs, including ensuring that we have adequate capacity to meet increased demand, our business could suffer. As of June 30, 2021, we had 169 full-time employees and we expect to increase the number of employees and the scope of our operations as we continue to develop our technologies. As we seek to increase the number of our partnerships, expand the scope of our existing partnerships and further develop our technological capabilities, we may need to incorporate new equipment, implement new technology systems and laboratory processes and hire new personnel with different qualifications. Failure to manage this growth or transition could result in turnaround time delays, higher technology development costs, declining technology development quality, deteriorating alliance management success, and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our technologies, and could damage our reputation and the prospects for our business.

To manage our anticipated expansion, 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. Also, our management team may need to divert a disproportionate amount of its attention away from its day-to-day activities and devote a substantial amount of time to managing these business expansion activities. Due to our limited resources and early stage of growth, we may not be able to effectively manage this simultaneous execution and the expansion of our operations. This may result in weaknesses in our infrastructure, operational mistakes, slower development of our technology development programs, loss of business opportunities, loss of employees and reduced productivity among our employees.

If our management is unable to effectively manage our expected development and expansion, our expenses may increase more than expected, our ability to generate or increase our revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance, and our ability to develop and commercialize our technologies and compete effectively, will depend, in part, on our ability to effectively manage our future development and expansion.

Our business development organization is currently limited, and if we are unable to expand our business development organization to reach our existing and potential partners, our business may be adversely affected.

We currently have a limited number of business development professionals. We will need to expand our commercial organization in order to effectively market our platform capabilities to existing and new partners. Competition for employees capable of negotiating and entering into partnerships with pharmaceutical and biotechnology companies is intense. We may not be able to attract and retain personnel or be able to build an efficient and effective business development organization, which could negatively impact market adoption of our platform and limit our revenue growth and potential profitability. In addition, the time and cost of establishing a specialized business development or sales team for a particular future service, technology, asset, or set of assets, may be difficult to justify in light of the revenue generated or projected.

Our expected future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees. Our future financial performance and our ability to successfully sell our programs and to compete effectively will depend, in part, on our ability to manage this potential future growth effectively, without compromising quality.

The loss of any member of our senior management team or our inability to attract and retain highly skilled scientists and business development professionals could adversely affect our business.

Our success depends on the skills, experience and performance of key members of our senior management team, including Sean McClain, our founder and Chief Executive Officer, and Matthew Weinstock, our Chief Technology Officer. The individual and collective efforts of these employees will be important as we continue to develop our platform and our technology, and as we expand our commercial activities. The loss or incapacity of existing members of our executive management team could adversely affect our operations if we experience difficulties in hiring qualified successors. While certain of our executive officers are party to employment contracts with us, their employment with us is at-will, which means that either we or the executive may terminate their employment at any time, and we therefore cannot guarantee their retention for any period of time.

Our technology development programs and laboratory operations depend on our ability to attract and retain highly skilled personnel. We may not be able to attract or retain qualified personnel due to the intense competition for highly skilled scientists, including those focused on biologic drug discovery and cell line development, as well as qualified business development and sales professionals, among life sciences companies. Additionally, our geographic location in Vancouver, Washington, which does not have as high a concentration of innovative biotechnology companies as other geographic locations may negatively impact our ability to attract top talent.

We also face competition from universities and public and private research institutions in recruiting and retaining highly qualified scientific personnel. We may have difficulties locating, recruiting or retaining qualified salespeople. Recruiting and retention difficulties can limit our ability to support our research and business development programs. A key risk in the area of retention is that all of our employees are at-will.

We may not realize the expected benefits of our recent acquisitions because of difficulties related to integration.

In January 2021, we consummated the Denovium acquisition, and, in June 2021, we consummated the Totient acquisition. We expect that the integration processes for such acquisitions will require significant time and resources, and we may not be able to manage such processes successfully. If we are not able to successfully integrate Denovium’s or Totient’s businesses with ours, the anticipated

benefits of such acquisitions may not be realized fully or may take longer than expected to be realized. For instance, in connection with the Denovium acquisition, we acquired a team of computational biologists and artificial intelligence experts along with a proprietary deep learning platform geared for protein discovery and engineering. There is no guarantee that Denovium will continue to benefit projects or that we will be able to achieve our ultimate goal of *in silico* protein and cell line design. Further, it is possible that we will experience disruption of either company's or both companies' ongoing businesses, including as we continue to service a limited number of Denovium's ongoing contracts for the foreseeable future. We may also incur higher than expected costs as a result of the acquisitions or experience an overall post-completion process that takes longer than originally anticipated. In addition, at times the attention of certain members of our management and resources may be focused on integration of the businesses of the two companies and diverted from day-to-day business operations, which may disrupt our ongoing business and the business of the combined company. We expect to incur, significant, non-recurring costs in connection with the acquisitions of Denovium and Totient and integrating our operations with Denovium's and Totient's, including costs to maintain employee morale and to retain key employees. Management cannot ensure that the elimination of duplicative costs or the realization of other efficiencies will offset the transaction and integration costs in the near term or at all. Furthermore, uncertainty about the effect of the Denovium acquisition or the Totient acquisition on our business, employees, partners, third parties with whom we have relationships may have an adverse effect on our business, financial condition, results of operations and prospects. In addition, such challenges in integrating our acquisition of Denovium or Totient may be magnified by the ongoing COVID-19 pandemic.

Other potential difficulties we may encounter as part of the integration process include (i) the challenge of integrating complex systems, operating procedures, regulatory compliance programs, technology, networks and other assets of Denovium and Totient in a seamless manner that minimizes any adverse impact on our employees, suppliers and other business partners; and (ii) potential unknown liabilities, liabilities that are significantly larger than we currently anticipate and unforeseen increased expenses or delays associated with the acquisition, including costs to integrate Denovium's and Totient's businesses that may exceed the costs that we currently anticipate. Accordingly, the contemplated benefits of the Denovium acquisition or the Totient acquisition may not be realized fully, or at all, or may take longer to realize than expected.

We have made technology acquisitions and expect to acquire businesses or assets or make investments in other companies or technologies that could negatively affect our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.

We have made technology acquisitions and expect to pursue acquisitions of businesses and assets in the future. We also may pursue strategic alliances and joint ventures that leverage our technologies and industry experience to expand our offerings. Additionally, we may invest in certain wholly-owned preclinical and/or clinical development programs with the goal of licensing them to partners for clinical development. Although we have acquired other businesses or assets in the past, including our acquisitions of Denovium, Inc. in January 2021 and Totient, Inc., or Totient, in June 2021, we may not be able to find suitable partners or acquisition or asset purchase candidates in the future, and we may not be able to complete such transactions on favorable terms, if at all. The competition for partners or acquisition candidates may be intense, and the negotiation process will be time-consuming and complex. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, these acquisitions may not strengthen our competitive position, the transactions may be viewed negatively by partners or investors, we may be unable to retain key employees of any acquired business, relationships with key suppliers, manufacturers or partners of any acquired business may be impaired due to changes in management and ownership, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in the incurrence of debt, contingent liabilities or future write-offs of intangible assets or goodwill, any of which could have a material adverse effect on our business,

financial condition, results of operations and prospects. For example, in connection with our acquisition of Totient, Totient's Class A common stockholders and noteholders are eligible to receive up to an additional $15 million in cash upon the achievement of certain milestones. We cannot guarantee that we will be able to fully recover the costs of any acquisition. Integration of an acquired company also may disrupt ongoing operations and require management resources that we would otherwise focus on developing our existing business. We may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture. We also may experience losses related to investments in other companies, which could have a material adverse effect on our business, financial condition, results of operations and prospects. Acquisitions may also expose us to a variety of international and business related risks, including intellectual property, regulatory laws, local laws, tax and accounting.

To finance any acquisitions or asset purchase, we may choose to issue securities as consideration, which would dilute the ownership of our stockholders. Additional funds may not be available on terms that are favorable to us, or at all. If the price of our common stock is low or volatile, we may not be able to acquire companies or assets using our securities as consideration.

We may be subject to laws that generally govern the biopharmaceutical industry.

Biopharmaceutical 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. These laws and regulations may constrain our relationships with our customers and partners. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, and transparency laws and regulations related to drug pricing and payments and other transfers of value made to physicians and other healthcare providers. If our partners' operations are found to be in violation of any of such laws or any other governmental regulations that apply, we 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 responsible individuals may be subject to imprisonment.

Our inability to collect on our accounts receivable by a significant number of partners may have an adverse effect on our business, financial condition and results of operations.

Invoices issued to our partners are generally made on open credit terms. While we haven't experienced an inability to collect on accounts receivable from our partners historically, it may occur in the future. Management assesses the need to maintain an allowance for potential credit losses each reporting period. If our partners' cash flow, working capital, financial conditions or results of operations deteriorate, they may be unable or even unwilling to pay trade receivables owed to us promptly or at all. As a result, we could be exposed to a certain level of credit risk. If a major partner experiences, or a significant number of partners experience, financial difficulties, the effect on us could be material and have an adverse effect on our business, financial condition and results of operations.

If our operating facility becomes damaged or inoperable or we are required to vacate our facility, our ability to conduct and pursue our technology development efforts may be jeopardized.

We currently operate primarily through a single facility located in Vancouver, Washington. Our facility and equipment could be harmed or rendered inoperable or inaccessible by natural or man-made disasters or other circumstances beyond our control, including fire, earthquake, power loss, communications failure, war or terrorism, or another catastrophic event, such as a pandemic or similar outbreak or public health crisis, which may render it difficult or impossible for us to support our partners and develop updates, upgrades and other improvements to our technology and platform, advanced automation systems, and advanced application for some period of time. We

may be unable to execute on our technology development activities if our facility is inoperable or suffers a loss of utilization for even a short period of time, may result in the loss of partners or harm to our reputation, and we may be unable to regain those partners or repair our reputation in the future. Furthermore, our facility and the equipment we use to perform our technology development work could be unavailable or costly and time-consuming to repair or replace. It would be difficult, time-consuming and expensive to rebuild our facility, to locate and qualify a new facility or license or transfer our proprietary technology to a third party. Even in the event we are able to find a third party to assist in technology development efforts, we may be unable to negotiate commercially reasonable terms to engage with the third party.

We depend on our information technology systems, and any failure of these systems could harm our business.

We depend on information technology and telecommunications systems for significant elements of our business operations, including the operation of our AI platform (Denovium Engine), our antibody discovery software platform, our computational biology system, our knowledge management system, our partner reporting, our platform, our advanced automation systems, and advanced application software. These systems involve computational resources and data storage distributed between onsite servers, cloud platforms hosted by numerous third-party providers (e.g., Amazon Web Services), and a private GPU cluster owned by us but located and maintained at a facility in Texas. We have installed, and expect to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including for example, systems handling human resources, financial controls and reporting, contract management, regulatory compliance and other infrastructure operations. These implementations were expensive and required a significant effort in terms of both time and effort. In addition to the aforementioned business systems, we intend to extend the capabilities of both our preventative and detective security controls by augmenting the monitoring and alerting functions, the network design and the automatic countermeasure operations of our technical systems. These information technology and telecommunications systems support a variety of functions, including manufacturing operations, laboratory operations, data analysis, quality control, partner service and support, billing, research and development activities, scientific and general administrative activities. A significant risk in implementing these systems includes the integration and communication between separate IT systems, and any failure to integrate these systems effectively could adversely affect various aspects of our operations.

International expansion of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

Because we currently market our technologies and our partners may market products derived from our technologies outside of the United States and we or our partners may market future technologies, products and services outside of the United States, if cleared, authorized or approved, our business is subject to risks associated with doing business outside of the United States, including an increase in our expenses and diversion of our management’s attention from the development of future products and services. In addition, as a result of the Totient acquisition, we currently maintain offices and have employees located in Serbia and the United Kingdom. Our current and planned international operations could expose us to additional risks that may adversely affect our business and financial results, including:

- multiple, conflicting and changing laws and regulations such as privacy security and data use regulations, tax laws, export and import restrictions, economic sanctions and embargoes, employment laws, anticorruption laws, regulatory requirements, reporting and disclosure obligations, reimbursement or payor regimes and other governmental approvals, permits and licenses;

- failure by us, our partners or our distributors to obtain regulatory clearance, authorization or approval for the use of our technologies in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining intellectual property protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- difficulties in negotiating favorable reimbursement negotiations with governmental authorities;
- complexities in technology transfer regulations and logistics related to delivery of our bioengineered *E. coli* to partners;
- logistics and regulations associated with shipping samples, including infrastructure conditions and transportation delays;
- limits in our ability to penetrate international markets if we are not able to conduct our operations locally;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our technologies, exposure to foreign currency exchange rate fluctuations and different tax jurisdictions;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions;
- certain expenses, including expenses for travel, translation services, labor and employment costs and insurance;
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and distributors' activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act (FCPA), its books and records provisions, or its anti-bribery provisions, or laws similar to the FCPA in other jurisdictions in which we may now or in the future operate, such as the United Kingdom's Bribery Act of 2010; and
- onerous anti-bribery requirements of several member states in the European Union (EU), such as the United Kingdom's Bribery Act of 2010, and other countries that are constantly changing and require disclosure of information to which U.S. legal privilege may not extend.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our revenue and results of operations.

Our business activities are subject to the FCPA and other anti-bribery and anti-corruption laws of the United States and other countries in which we operate, as well as U.S. and certain foreign export controls and trade sanctions. Violations of such legal requirements could subject us to liability.

We are subject to the FCPA, which among other things prohibits companies and their third-party intermediaries from offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to non-U.S. government officials for the purpose of obtaining or retaining business or securing any other improper advantage. 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. Companies in the biotechnology and biopharmaceutical field are highly regulated and therefore involve interactions with public officials, including officials of non-U.S. governments. Additionally, in many other countries, hospitals are owned and operated by the government, and doctors and other hospital employees would be considered foreign officials under the FCPA. These laws are complex and far-reaching in nature, and, as a result, there is no certainty that all of our employees, agents or contractors will comply with such laws and regulations. Any violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction, involve significant costs and expenses, including legal fees, and could result in a material adverse effect on our business, financial condition, results of operations and prospects. We could also suffer severe penalties, including criminal and civil penalties, disgorgement and other remedial measures.

We use biological and hazardous materials that require considerable expertise and expense for handling, storage and disposal and may result in claims against us.

We work with materials, including chemicals, biological agents and compounds that could be hazardous to human health and safety or the environment. Our operations also produce hazardous and biological waste products. Our SoluPro system is based on bioengineered *E. coli*, which could pose a health risk if improperly handled. Additionally, we employ various synthetic biology processes, which could involve the use or emission of harmful materials. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. We may be subject to periodic inspections by relevant authorities to ensure compliance with applicable laws. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental laws and regulations may restrict our operations. If we do not comply with applicable regulations, we may be subject to fines and penalties.

In addition, we cannot eliminate the risk of accidental injury or contamination from these materials or wastes, which could cause an interruption of our commercialization efforts, technology development programs and business operations, as well as environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations. In the event of contamination or injury, we could be liable for damages or penalized with fines in an amount exceeding our resources and our operations could be suspended or otherwise adversely affected. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance.

Public health crises such as pandemics or similar outbreaks could cause a disruption of the development of our platform technologies, and adversely impact our business.

In late 2019, a novel strain of coronavirus, SARS-CoV-2, which resulted in the evolving COVID-19 pandemic, surfaced in Wuhan, China. Since then, COVID-19 has spread across the globe and to multiple regions within the United States, including Vancouver, Washington, where our primary office and laboratory space is located. The COVID-19 pandemic is evolving, and to date has led to the implementation of various responses, including government imposed shelter-in-place orders, quarantines, travel restrictions and other public health safety measures, as well as reported adverse impacts on healthcare resources, facilities and providers across the United States and in other countries. In response to the spread of COVID-19, and in accordance with guidance from federal, state, and local government authorities, we have restricted access to our facilities mostly to personnel and third parties who perform critical activities that must be completed on-site, limited the number of such personnel that can be present at our facilities at any one time, required universal facial masking in accordance with U.S. Centers for Disease Control recommendations, and requested (and facilitated) that most of our personnel work remotely in compliance with the local government issued guidance. In the event that government authorities were to further modify

current restrictions, our employees conducting technology development or manufacturing activities may not be able to access our laboratory and manufacturing space, and our core activities may be significantly limited or curtailed, possibly for an extended period of time.

With such restrictions in place our business has been and may continue to be impacted negatively in a number of ways. For example, we have experienced delays in technology development activities due to supply chain interruptions related to diversion of personal protective equipment and biotechnology research and biomanufacturing supplies to healthcare organizations and COVID-19 vaccine developers. In addition, the global focus on the pandemic and uncertainties of markets has extended our business development timelines, and has negatively impacted our partners' and potential partners' willingness to advance negotiations in a timely manner. We have also experienced difficulties recruiting personnel, especially from outside our region, due to travel restrictions and overall uncertainties and reluctance of prospective employees to relocate during the COVID-19 pandemic.

As a result of the COVID-19 pandemic, or similar pandemics and outbreaks, we have experienced and may continue to experience severe delays and disruptions, including, for example:

- interruption of or delays in receiving products and supplies from third parties;
- limitations on our business operations by local, state and/or federal governments that could impact our ability to conduct our technology development and other activities;
- delays in negotiations with partners and potential partners;
- increases in facilities costs to comply with physical distancing guidance;
- business disruptions caused by workplace, laboratory and office closures and an increased reliance on employees working from home, travel limitations, cyber security and data accessibility, or communication or mass transit disruptions; and
- limitations on employee resources that would otherwise be focused on the conduct of our activities, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

Any of these factors could severely impact our technology development activities, business operations and business development, or delay necessary interactions with local regulators, and other important contractors and partners. These and other factors arising from the COVID-19 pandemic could worsen in countries that are already afflicted with COVID-19, could continue to spread to additional countries, or could return to countries where the pandemic has been partially contained, and could further adversely impact our ability to conduct our business generally and have a material adverse impact on our operations and financial condition and results.

The extent to which the COVID-19 pandemic may negatively impact our operations and results of operations or those of our stakeholders will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions, additional or modified government actions, new information that will emerge concerning the severity and impact of the COVID-19 pandemic and actions to contain the outbreak or treat its impact, such as social distancing, quarantines, lock-downs or business closures.

We rely and expect in the future to rely on a limited number of outside parties to perform the cGMP manufacturing for clinical development and commercialization of any biologic product candidates produced using our technology. Limitations in this global

cGMP manufacturing capacity could delay or prevent clinical development and/or commercialization efforts.

We develop manufacturing processes that are required to use our cell lines, but we do not currently have capabilities to manufacture products in accordance with cGMPs. We rely on the in-house manufacturing capabilities of our partners or capabilities of established third-party contract development and manufacturing organizations (CDMOs) to manufacture biologic drug candidates generated with our technology. Manufacturing capacity maintained by our partners or third-party CDMOs is a finite resource that is in demand. Shortages in cGMP manufacturing capacity are difficult to predict and could hamper our operations and harm our business.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain sufficient intellectual property protection for our technologies, including our platform, Denovium deep learning technology and Totient antibody discovery software platform, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize technologies or a platform similar or identical to ours, and our ability to successfully leverage our platform technologies may be impaired.

We rely on patent protection as well as trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary technologies, all of which provide limited protection and may not adequately protect our rights or permit us to gain or keep a competitive advantage. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us. In addition, we may incur substantial litigation costs in our attempts to recover or restrict the use of our intellectual property.

To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition. If our intellectual property does not provide adequate coverage of our competitors' products and services, our competitive position could be adversely affected, as could our business. Both the patent application process and the process of managing patent disputes can be time-consuming and expensive.

Our success depends in large part on our ability to obtain and maintain adequate protection of the intellectual property we may own solely and jointly with others or otherwise have rights to, particularly patents, in the United States and in other countries with respect to our platform, our software and our technologies, without infringing the intellectual property rights of others.

We strive to protect and enhance the proprietary technologies that we believe are important to our business, including seeking patents intended to cover our platform and related technologies and uses thereof, as we deem appropriate. Our patents and patent applications in the United States and certain foreign jurisdictions relate to our technology. However, obtaining and enforcing patents in our industry is costly, time-consuming and complex, and we may fail to apply for patents on important products and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions. There can be no assurance that the claims of our patents (or any patent application that issues as a patent), will exclude others from making, using or selling our technology or technology that is substantially similar to ours. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. In countries where we have not sought and do not seek patent protection, third parties may be able to manufacture and sell our technology without our permission, and we may not be able to stop them from doing so. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our technology development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents

licensed to third parties. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

As of June 4, 2021, we own 35 issued or allowed patents and 48 pending patent applications worldwide, which includes four issued U.S. patents and 11 pending U.S. patent applications. It is possible that none of our pending patent applications will result in issued patents in a timely fashion or at all, and even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or services, may not provide us with any competitive advantages, or may be challenged and invalidated by third parties. It is possible that others will design around our current or future patented technologies. As a result, our owned and licensed patents and patent applications comprising our patent portfolio may not provide us with sufficient rights to exclude others from commercializing technology and products similar to any of our technology.

It is possible that in the future some of our patents, licensed patents and patent applications may be challenged at the United States Patent and Trademark Office (USPTO) or in proceedings before the patent offices of other jurisdictions. We may not be successful in defending any such challenges made against our patents or patent applications. Any successful third party challenge to our patents could result in loss of exclusivity or freedom to operate, patent claims being narrowed, the unenforceability or invalidity of such patents, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, limit the duration of the patent protection of our technology, and increased competition to our business. We may have to challenge the patents or patent applications of third parties. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, if successful, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business.

Any changes we make to our technology, including changes that may be required for commercialization or that cause them to have what we view as more advantageous properties may not be covered by our existing patent portfolio, and we may be required to file new applications and/or seek other forms of protection for any such alterations to our technology. There can be no assurance that we would be able to secure patent protection that would adequately cover an alternative to our technology.

The patent positions of life sciences companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in such companies' patents has emerged to date in the United States or elsewhere. Courts frequently render opinions in the biotechnology field that may affect the patentability of certain inventions or discoveries.

Changes in patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our technologies.

Changes in either the patent laws or in interpretations of patent laws in the United States or other countries or regions may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third party patents. We may not develop additional proprietary platforms, methods and technologies that are patentable.

Assuming that other requirements for patentability are met, prior to March 16, 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. On or after March 16, 2013, under the Leahy-Smith America Invents Act (America Invents Act) enacted in September 16, 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed

invention. A third party that files a patent application in the USPTO on or after March 16, 2013, but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our technology or (ii) invent any of the inventions claimed in our or our licensor's patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or any future in-licensed patent applications and the enforcement or defense of our owned or any future in-licensed issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, the patent position of companies in the biotechnology field is particularly uncertain. Various courts, including the United States Supreme Court have rendered decisions that affect the scope of patentability of certain inventions or discoveries relating to biotechnology. These decisions state, among other things, that a patent claim that recites an abstract idea, natural phenomenon or law of nature (for example, the relationship between particular genetic variants and cancer) are not themselves patentable. Precisely what constitutes a law of nature or abstract idea is uncertain, and it is possible that certain aspects of our technology could be considered natural laws. Accordingly, the evolving case law in the United States may adversely affect our and our licensors' ability to obtain new patents or to enforce existing patents and may facilitate third party challenges to any owned or licensed patents.

Issued patents covering our platform and technologies could be found invalid or unenforceable if challenged.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability. Some of our patents or patent applications (including licensed patents) may be challenged at a future point in time in opposition, derivation, reexamination, *inter partes* review, post-grant review or interference. Any successful third party challenge to our patents in this or any other proceeding could result in the unenforceability or invalidity of such patents or amendment to our patents in such a way that they no longer cover our platform and our technology, which may lead to increased competition to our business, which could harm our business. In addition, in patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on certain aspects of our platform technologies. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future products.

We may not be aware of all third party intellectual property rights potentially relating to our platform or technology. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until approximately 18 months after filing or, in some cases, not until such patent applications issue as patents. We or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and we or our licensors might not have been the first to file patent applications for these inventions. There is also no assurance that all of the potentially relevant prior art relating to our patents and patent applications or licensed patents and patent applications has been found, which could be used by a third party to challenge their validity, or prevent a patent from issuing from a pending patent application.

To determine the priority of these inventions, we may have to participate in interference proceedings, derivation proceedings or other post-grant proceedings declared by the USPTO that could result in substantial cost to us. The outcome of such proceedings is uncertain. No assurance can be given that other patent applications will not have priority over our patent applications. In addition, changes to the patent laws of the United States allow for various post-grant opposition proceedings that have not been extensively tested, and their outcome is therefore uncertain. Furthermore, if third parties bring these proceedings against our patents, we could experience significant costs and management distraction.

We may come to rely on in-licenses from third parties. If we were to lose these rights, our business could be materially adversely affected, our ability to develop improvements to our platform or technologies could be negatively and substantially impacted, and if disputes arise, we could be subjected to future litigation as well as the potential loss of or limitations on our ability to incorporate the technology covered by these license agreements.

We may need to obtain licenses from third parties to advance our research, development and commercialization activities. We expect that any future exclusive in-license agreements will impose various development, diligence, commercialization and other obligations on us. We may enter into engagements in the future, with other licensors under which we obtain certain intellectual property rights relating to our platform and technologies. These engagements may take the form of an exclusive license or of actual ownership of intellectual property rights or technologies from third parties. Our rights to use the technologies we license may be subject to the continuation of and compliance with the terms of those agreements. In some cases, we may not control the prosecution, maintenance or filing of the patents to which we hold licenses, or the enforcement of those patents against third parties.

Moreover, disputes may arise with respect to our licensing or other upstream agreements, including:

- the scope of rights granted under the agreements and other interpretation-related issues;
- the extent to which our technology development processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under our partnership agreements;
- our diligence obligations under the license agreements and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In spite of our efforts to comply with our obligations under any future in-license agreements, our licensors might conclude that we have materially breached our obligations under our license agreements and might therefore, including in connection with any aforementioned disputes, terminate the relevant license agreement, thereby removing or limiting our ability to develop and commercialize technology covered by these license agreements. If any such in-license is terminated, or if the licensed patents fail to provide the intended exclusivity, competitors or other third parties might have the freedom to market or develop technologies similar to ours. In addition, absent the rights granted to us under such license agreements, we may infringe the intellectual property rights that are the subject of those agreements, we may be subject to litigation by the licensor, and if such litigation by the licensor is successful we may be required to pay damages to our licensor, or we may be required to cease our technology development and commercialization activities which are deemed infringing, and in such event we may ultimately need to modify our activities or technologies to design around such infringement, which may be time- and resource-consuming, and which may not be ultimately successful. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, our rights to future components of our platform, may be licensed to us on a non-exclusive basis. The owners of these non-exclusively licensed technologies would therefore be free to license them to third parties, including our competitors, on terms that may be superior to those offered to us, which could place us at a competitive disadvantage. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. In addition, certain of our agreements with third parties may provide that intellectual property arising under these agreements, such as data that could be valuable to our business, will be owned by the counterparty, in which case, we may not have adequate rights to use such data or have exclusivity with respect to the use of such data, which could result in third parties, including our competitors, being able to use such data to compete with us.

If we cannot acquire or license rights to use technologies on reasonable terms or if we fail to comply with our obligations under such agreements, we may not be able to commercialize new technologies or services in the future and our business could be harmed.

In the future, we may identify third party intellectual property and technologies we may need to acquire or license in order to engage in our business, including to develop or commercialize new technologies or services, and the growth of our business may depend in part on our ability to acquire, in-license or use these technologies. However, we may not be able to acquire or in-license rights to these technologies on acceptable 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 technology development or commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. Even if such licenses are available, we may be required to pay the licensor in return for the use of such licensor's technology, upfront or technology access fees, payments based on certain development, regulatory or commercial milestones such as sales volumes, or royalties based royalties received or milestones achieved by our partners. In addition, such licenses may be non-exclusive, which could give our competitors access to the same intellectual property licensed to us.

In spite of our best efforts, our licensors might conclude that we have materially breached our license agreements and might therefore terminate the license agreements, thereby removing our ability to develop and commercialize technologies covered by these license agreements. If these licenses are terminated, or if the underlying intellectual property fails to provide the intended exclusivity, competitors would have the freedom to seek regulatory approval of, and to market,

technologies identical to ours. This could have a material adverse effect on our competitive position, business, financial condition, results of operations and prospects. Additionally, termination of these agreements or reduction or elimination of our rights under these agreements, or restrictions on our ability to freely assign or sublicense our rights under such agreements when it is in the interest of our business to do so, 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 technologies or impede, or delay or prohibit the further development or commercialization of one or more technologies that rely on such agreements.

While we still face all of the risks described herein with respect to those agreements, we cannot prevent third parties from also accessing those technologies. In addition, our licenses may place restrictions on our future business opportunities.

In addition to the above risks, intellectual property rights that we license in the future may include 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 or our partners' ability to further commercialize our technologies or products generated using our technologies may be materially harmed.

Further, we may not have the right to control the prosecution, maintenance and enforcement of all of our licensed and sublicensed intellectual property, and even when we do have such rights, we may require the cooperation of our licensors and upstream licensors, which may not be forthcoming. Our business could be adversely affected if we or our licensors are unable to prosecute, maintain and enforce our licensed and sublicensed intellectual property effectively.

Our licensors may have relied on third-party consultants or partners or on funds from third parties such that our licensors are not the sole and exclusive owners of the patents and patent applications we in-license. If other third parties have ownership rights to patents or patent applications we in-license, they may be able to license such patents to our competitors, and our competitors could market competing technologies and services. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

Our business, financial condition, results of operations and prospects could be materially and adversely affected if we are unable to enter into necessary agreements on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensors fail to abide by the terms of the licenses or fail to prevent infringement by third parties, or if the acquired or licensed patents or other rights are found to be invalid or unenforceable. Moreover, we could encounter delays in advancing ongoing or initiating new technology development programs while we attempt to develop alternatives. Defense of any lawsuit or failure to obtain any of these licenses on favorable terms could prevent us from developing technologies or advancing partnerships, which could harm our business, financial condition, results of operations and prospects.

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

Filing, prosecuting and defending patents on our platform, technologies, software, systems and processes in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and even where such protection is nominally available, judicial and governmental enforcement of such intellectual property rights may be lacking. Whether filed in the United States or abroad, our patent applications may be challenged or may fail to result in issued patents. Further, we may encounter

difficulties in protecting and defending such rights in foreign jurisdictions. Consequently, we may not be able to prevent third parties from practicing our inventions in some or all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own platform or technologies and may also sell their products or services to territories where we have patent protection, but enforcement is not as strong as that in the United States. These platforms and technologies may compete with ours. Our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. In addition, certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. Furthermore, many countries limit the enforceability of patents against other parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of any patents. In many foreign countries, patent applications and/or issued patents, or parts thereof, must be translated into the native language. If our patent applications or issued patents are translated incorrectly, they may not adequately cover our technologies; in some countries, it may not be possible to rectify an incorrect translation, which may result in patent protection that does not adequately cover our technologies in those countries.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the misappropriation or other violations of our intellectual property rights including infringement of our patents in such countries. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, or that are initiated against us, and the damages or other remedies awarded, if any, may not be commercially meaningful. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain adequate protection for our technologies and the enforcement of intellectual property. 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.

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. For example:

- others may be able to make products that are similar to any product candidates generated by our technologies that our partners may develop but that are not covered by the claims of the patents that we own or may license or own in the future;
- we, or our current or future partners, might not have been the first to make the inventions covered by the issued patents and pending patent applications that we own or may license or own in the future;
- we, or our current or future partners, might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or any future licensed intellectual property rights;

- it is possible that our pending patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- 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 cannot ensure that any patents issued to us or our licensors will provide a basis for an exclusive market for our commercially viable technologies or will provide us with any competitive advantages;
- we cannot ensure that our commercial activities or technologies will not infringe upon the patents of others;
- we cannot ensure that we or our partners or future licensees will be able to further commercialize our technologies on a substantial scale, if approved, before the relevant patents that we own or may license expire;
- we cannot ensure that any of our patents, or any of our pending patent applications, if issued, or those of our licensors, will include claims having a scope sufficient to protect our technology;
- we may not develop additional proprietary technologies that are patentable;
- the patents or intellectual property rights of others may harm our business; and
- we may choose not to file a patent application in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to protect the confidentiality of our information and our trade secrets, the value of our technologies could be materially adversely affected and our business could be harmed.

We rely heavily on trade secrets and confidentiality agreements to protect our unpatented know-how, technologies and other proprietary information, including parts of our technology platform, and to maintain our competitive position. However, trade secrets and know-how can be difficult to protect. In addition to pursuing patents on our technologies, we take steps to protect our intellectual property and proprietary technologies by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, academic institutions, corporate and/or strategic partners, potential or existing investors and, when needed, our advisers. However, we cannot be certain that such agreements have been entered into with all relevant parties, and 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. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure, which could adversely impact our

ability to establish or maintain a competitive advantage in the market. If we are required to assert our rights against such party, it could result in significant cost and distraction.

Monitoring unauthorized disclosure and detection of unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time-consuming, and the outcome would be unpredictable. In addition, some courts both within and outside the United States may be less willing, or unwilling, to protect trade secrets. Further, we may need to share our trade secrets and confidential know-how with current or future business partners, collaborators, contractors and others located in countries at heightened risk of theft of trade secrets, including through direct intrusion by private parties or foreign actors, and those affiliated with or controlled by state actors.

We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor or other third party, absent patent protection, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. If any of our trade secrets were to be disclosed to or independently discovered by a competitor or other third party, it could harm our business, financial condition, results of operations and prospects.

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

We have employed and expect to employ individuals who were previously employed at universities or other companies. Although we try to ensure that our employees, consultants, advisors and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that our employees, advisors, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information of their former employers or other third parties, or to claims that we have improperly used or obtained such trade secrets. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights and face increased competition to our business. A loss of key research personnel work product could hamper or prevent our ability to commercialize potential technologies and solutions, which could harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

In addition, while 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. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Any of the foregoing could harm our business, financial condition, results of operations and prospects.

We may not be able to protect and enforce our trademarks and trade names, or build name recognition in our markets of interest thereby harming our competitive position.

The registered or unregistered trademarks or trade names that we own may be challenged, infringed, circumvented, declared generic, lapsed or determined to be infringing on or dilutive of other marks. We may not be able to protect our rights in these trademarks and trade names, which we need in order to build name recognition. In addition, third parties may in the future file for registration of trademarks similar or identical to our trademarks, thereby impeding our ability to build brand identity and possibly leading to market confusion. If they succeed in registering or developing common law rights in such trademarks, and if we are not successful in challenging such rights, we may not be able to use these trademarks to develop brand recognition of our technologies or platform. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Further, we have and may in the future enter into agreements with owners of such third party trade names or trademarks to avoid potential trademark litigation which may limit our ability to use our trade names or trademarks in certain fields of business.

Although we have registered Absci, SoluPure and SoluPro with the U.S. Patent and Trademark Office and certain other jurisdictions, we have not yet registered certain of our trademarks in all of our potential markets, and failure to secure those registrations could adversely affect our business. If we apply to register these trademarks in other countries, and/or other trademarks in the United States and other countries, our applications may not be allowed for registration in a timely fashion or at all; and further, our registered trademarks may not be maintained or enforced. In addition, opposition or cancellation proceedings may in the future be filed against our trademark applications and registrations, and our trademarks may not survive such proceedings. In addition, third parties may file first for our trademarks in certain countries. If they succeed in registering such trademarks, and if we are not successful in challenging such third party rights, we may not be able to use these trademarks to market our technologies in those countries. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively, which could harm our business, financial condition, results of operations and prospects. And, over the long-term, if we are unable to establish name recognition based on our trademarks, then our business development abilities may be materially adversely impacted.

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

We or any future licensors may be subject to claims that former employees, partners or other third parties have an interest in our owned or any future in-licensed patents, trade secrets or other intellectual property as an inventor or co-inventor. Litigation may be necessary to defend against these and other claims challenging inventorship of our or such licensors' ownership of our owned or any future in-licensed patents, trade secrets or other intellectual property. If we or our future licensors 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, intellectual property that is important to our systems. 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, and certain partners or partners may defer engaging with us until the particular dispute is resolved. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we become involved in patent litigation or other proceedings related to a determination of rights, we could incur substantial costs and expenses, substantial

liability for damages or be required to stop our development and commercialization efforts of our technologies.

There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the life sciences, clinical diagnostics and drug discovery industries, including patent infringement lawsuits, declaratory judgment litigation and adversarial proceedings before the USPTO, including interferences, derivation proceedings, ex parte reexaminations, post-grant review and *inter partes* review, as well as corresponding proceedings in foreign courts and foreign patent offices.

We may, in the future, become involved with litigation or actions at the USPTO or foreign patent offices with various third parties. We expect that the number of such claims may increase as our business, visibility and partnership base expand and the number of our technology development programs and resultant licensed technologies increases, and as the level of competition in our industry increases. Any infringement claim, regardless of its validity, could harm our business by, among other things, resulting in time-consuming and costly litigation, diverting management's time and attention from the development of our business, requiring the payment of monetary damages (including treble damages, attorneys' fees, costs and expenses) or royalty payments.

It may be necessary for us to pursue litigation or adversarial proceedings before the patent office in order to enforce our patent and proprietary rights or to determine the scope, coverage and validity of the proprietary rights of others. The outcome of any such litigation might not be favorable to us, and even if we were to prevail, such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results or financial condition.

As we move into new markets and expand our technology offerings, incumbent participants in such markets may assert their patents and other proprietary rights against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us. In addition, future litigation may involve patent holding companies or other adverse patent owners who have no relevant product or service revenue and against whom our own patents may provide little or no deterrence or protection.

Third parties may assert that we are employing their proprietary technology without authorization. Given that biologic drug discovery and cell line development platform technology fields are highly competitive areas, there may be third-party intellectual property rights that others believe could relate to our technologies.

Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our current or future products, technologies and services may infringe. We cannot be certain that we have identified or addressed all potentially significant third-party patents in advance of an infringement claim being made against us. In addition, similar to what other companies in our industry have experienced, we expect our competitors and others may have patents or may in the future obtain patents and claim that making, having made, using, selling, offering to sell or importing our technologies infringes these patents. Defense of infringement and other claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and employee resources from our business. Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products or services and could result in the award of substantial damages against us, including treble damages, attorney's fees, costs and expenses if we are found to have willfully infringed. In the event of a successful claim of infringement against us, we may be required to pay damages and ongoing royalties and obtain one or more licenses from third parties, or be prohibited from selling certain products or services. We may not be able to obtain these licenses on acceptable or commercially reasonable terms, if at all,

or these licenses may be non-exclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we could encounter delays in product or service introductions while we attempt to develop alternative products or services to avoid infringing third-party patents or proprietary rights. Defense of any lawsuit or failure to obtain any of these licenses could prevent us from commercializing products or services, and the prohibition of sale of any of our technologies could materially affect our business and our ability to gain market acceptance for our technologies.

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

In addition, our agreements with some of our partners, suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results or financial condition.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on issued United States and most foreign patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States at several stages over the lifetime of the patents and/or applications in order to maintain such patents and patent applications. We have systems in place to remind us to pay these fees, and we engage an outside service to pay such fees due to patent agencies. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, if we or any future licensors fail to maintain the patents and patent applications covering technologies our competitors may be able to enter the market with similar or identical products or technology without infringing our patents and this circumstance would have a material adverse effect on our business.

Patent terms may be inadequate to protect our competitive position on our technology for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our platform or technologies are obtained, once the patent life has expired, we may be open to competition from others. If our platform or technologies require

extended development and/or regulatory review, patents protecting our platform or technologies might expire before or shortly after we are able to successfully commercialize them. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing processes or technologies similar or identical to ours.

Some of our jointly owned intellectual property has been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies, and compliance with such regulations may limit our exclusive rights and our ability to contract with non-U.S. manufacturers.

The United States federal government retains certain rights in inventions produced with its financial assistance under the Bayh-Dole Act. The federal government retains a "nonexclusive, nontransferable, irrevocable, paid-up license" for its own benefit. The Bayh-Dole Act also provides federal agencies with "march-in rights". March-in rights allow the government, in specified circumstances, to require the contractor or successors in title to the patent to grant a "nonexclusive, partially exclusive, or exclusive license" to a "responsible applicant or applicants" if it determines that (1) adequate steps have not been taken to commercialize the invention and achieve practical application of the government-funded technology, (2) government action is necessary to meet public health or safety needs, (3) government action is necessary to meet requirements for public use under federal regulations or (4) we fail to meet requirements of federal regulations. If the patent owner refuses to do so, the government may grant the license itself. Some of our jointly owned or licensed patents are subject to the provisions of the Bayh-Dole Act. If our licensors fail to comply with the regulations of the Bayh-Dole Act, they could lose title to any patents subject to such regulations, which could affect our license rights under the patents and our ability to stop others from using or commercializing similar or identical technology and products, or limit patent protection for our technology and products.

Risks Related to This Offering and Our Common Stock

Our share price may be volatile, and you may be unable to sell your shares at or above the offering price.

The market price of our common stock is likely to be volatile and could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- actual or anticipated fluctuations in our financial condition and operating results, including fluctuations in our quarterly and annual results;
- the termination of partnership agreements by our partners or announcements that our partners will cease developing a product originating from our platform;
- the introduction of new technologies or enhancements to existing technology by us or others in our industry;
- our inability to establish additional partnerships;
- departures of key personnel;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- changes in the regulatory landscape that subject us to additional regulatory and legal requirements;

- publication of research reports about us or our industry, or biologic drug discovery or cell line development in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- release of unfavorable publicity about us, our partners, our competitors, or the biopharmaceutical industry, including through press coverage or social media;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;
- 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;
- the impact of the ongoing COVID-19 pandemic on our business;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

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

We identified a material weakness in our internal control over our financial reporting process. If we are unable to remediate this material weakness, we may not be able to accurately or timely report our financial condition or results of operations.

While we and our independent registered public accounting firm did not and were not required to perform an audit of our internal control over financial reporting, in connection with the audits of our 2019 and 2020 consolidated financial statements, we and our independent registered public accounting firm identified control deficiencies in the design and operation of our internal control over financial reporting that constituted a material weakness. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis. We identified a material weakness in our internal control over our financial statement close process specifically related to an insufficient complement of accounting and finance personnel with the necessary U.S. GAAP technical expertise to timely identify and account for complex or non-routine transactions.

These control deficiencies could result in a misstatement of our accounts or disclosures that would result in a material misstatement of our financial results that would not be prevented or detected, and accordingly, we determined that these control deficiencies constitute a material weakness.

We are working to remediate the material weakness and are taking steps to strengthen our internal control over financial reporting through the hiring of additional finance and accounting personnel with the requisite technical knowledge and skills. With the additional personnel, we intend to take appropriate and reasonable steps to remediate this material weakness through the implementation of appropriate segregation of duties, formalization of accounting policies and controls and retention of appropriate expertise for complex accounting transactions. We will not be able to fully remediate these control deficiencies until these steps have been completed and have been operating effectively for a sufficient period of time. The hiring of additional finance and accounting personnel and the implementation of improvements to our accounting and proprietary systems and controls may be costly and time consuming and the cost to remediate may impair our results of operations in the future.

We cannot assure you that the measures we have taken to date will be sufficient to remediate the material weakness we identified or avoid the identification of additional material weaknesses in the future. If the steps we take do not remediate the material weakness in a timely manner, there could continue to be a reasonable possibility that this material weakness or other control deficiencies could result in a material misstatement of our annual or interim financial statements that would not be prevented or detected on a timely basis. If we fail to remediate our material weakness, identify future material weaknesses in our internal control over financial reporting or fail to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act), we may be unable to accurately report our financial results or report them within the timeframes required by law or stock exchange regulations. Failure to comply with Section 404 of the Sarbanes-Oxley Act could also potentially subject us to sanctions or investigations by the SEC or other regulatory authorities. If additional material weaknesses exist or are discovered in the future, and we are unable to remediate any such material weakness, our reputation, results of operations and financial condition could suffer.

If we fail to establish and maintain proper and effective internal control over financial reporting, our operating results and our ability to operate our business could be harmed.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. In connection with this offering, we intend to begin the process of documenting, reviewing and improving our internal controls and procedures for compliance with Section 404 of the Sarbanes-Oxley Act, which will require annual management assessment of the effectiveness of our internal control over financial reporting. We have begun recruiting additional finance and accounting personnel with certain skill sets that we will need as a public company.

Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes, and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business. In our efforts to maintain proper and effective internal control over financial reporting, we may discover new significant deficiencies or material weaknesses in our internal control over financial reporting, which we may not successfully remediate on a timely basis or at all. Any failure to remediate our existing any new significant deficiencies or material weaknesses identified by us or to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations or result in material misstatements in our financial statements. If we identify one or more material weaknesses in the future, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements, which may harm the market price of our common stock.

We are in the process of identifying key business metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions, and any such metrics may not accurately reflect all aspects of our business needed to make such evaluations and decisions, in particular as our business continues to grow.

In addition to our financial results, we expect to review a number of operating and financial metrics, including number of programs under contract, the trend of potential downstream revenue terms (milestones and royalties) of the portfolio, the performance of the portfolio in probability of success in achieving clinical milestones as compared to historical averages and the performance of the portfolio in the time taken to achieve clinical milestones, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. We currently have partnerships covering nine Active Programs for which we have negotiated or expect to negotiate upon completion of certain technology development activities, royalty- and milestone-bearing licenses. There is no assurance, however, that we will be able to negotiate or maintain such licenses on acceptable terms. Accordingly, we do not presently have sufficient information to make accurate predictions regarding our potential revenue and financial performance.

Any metrics that we may identify may not accurately reflect all aspects of our business and we anticipate that these metrics may change or may be substituted for additional or different metrics as our business grows and as we introduce new solutions. If we fail to review other relevant information or change or substitute the key business metrics we review as our business grows, our ability to accurately formulate financial projections and make strategic decisions may be compromised and our business, financial results and future growth prospects may be adversely impacted.

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

The initial public offering price is expected to be substantially higher than the net tangible book value per share of common stock. Investors purchasing shares of common stock in this offering will pay a price per share that substantially exceeds our net tangible book value per share after this offering. Based on the initial public offering price of $ per share, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, investors purchasing shares of common stock in this offering will incur immediate dilution of $ per share as of March 31, 2021, representing the difference between our pro forma as adjusted net tangible book value per share, after giving effect to this offering, and the initial public offering price. Further, investors purchasing shares of common stock in this offering will contribute approximately % of the total amount invested by stockholders since our inception but will own only approximately % of the total number of shares of common stock outstanding after this offering.

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

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. These sales, or the perception in the market that the holders of a large number of shares intend to sell their shares, could result in a decrease in the market price of our common stock. Immediately after this offering, we will have outstanding shares of common stock based on the number of shares outstanding as of March 31, 2021. This includes the shares that we are selling in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, shares are currently restricted as a result of securities laws, 180-day market stand-off provisions in agreements with us or 180-day lock-up agreements with the underwriters, but will be able to be sold after the offering as described in the section of this prospectus entitled "Shares Eligible for Future Sale." Moreover, after this offering, holders of an aggregate of up to shares of our common stock issuable upon the conversion of shares of our redeemable convertible preferred stock and the holder of our outstanding warrant to purchase shares of our common stock, will have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders as described in the section of this prospectus entitled "Description of Capital Stock—Registration Rights." We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market, subject to volume limitations applicable to affiliates and the market stand-off provisions and lock-up agreements described in the section of this prospectus entitled "Underwriting."

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to the adoption of our 2021 Plan and 2021 ESPP, could result in additional dilution of the percentage ownership of our stockholders and could cause our share price to fall.

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

Pursuant to our new 2021 Plan and 2021 ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part, our management is authorized to grant stock options to our employees, directors and consultants.

Initially, the aggregate number of shares of our common stock that may be issued pursuant to share awards under the 2021 Plan and 2021 ESPP will be shares. The number of shares of common stock reserved for issuance under the 2021 Plan and 2021 ESPP shall be cumulatively increased on January 1, 2022 and each January 1 thereafter by % of the total number of shares of common stock outstanding on December 31 of the preceding calendar year or a lesser number of shares determined by our board of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders will experience additional dilution, which could cause our share price to fall.

We may allocate the net proceeds from this offering in ways that you and other stockholders may not approve.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled “Use of Proceeds.” Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment, and the failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected results, which could cause our stock price to decline.

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

We currently anticipate that we will retain future earnings for the development, operation, expansion and continued investment into our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, we may enter into agreements that prohibit us from paying cash dividends without prior written consent from our contracting parties, or which other terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. Any return to stockholders will therefore be limited to the appreciation of their common stock, which may never occur.

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

Based on the number of shares outstanding on a fully diluted basis as of March 31, 2021, our executive officers, directors, and 5% stockholders will beneficially own approximately % of our common stock. Non-executive employees will beneficially own an additional % of our common stock on a fully diluted basis. After the sale and issuance of shares in this offering, our executive officers, directors, and 5% stockholders will beneficially own approximately % of our common stock (including any shares purchased by our executive officers, directors and 5% stockholders in this offering). Therefore, after this offering, these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents or approval of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

Future sales of our common stock in the public market could cause our share price to fall.

Sales of a substantial number of shares of our common stock in the public market after this offering, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. Based on the number of shares of common stock outstanding as of March 31, 2021, upon the closing of this offering, we will have shares of common stock outstanding, assuming no exercise of our outstanding options.

All of the common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act of 1933, as amended (Securities Act), except for any shares held

by our affiliates as defined in Rule 144 under the Securities Act. The remaining shares of common stock outstanding after this offering, based on shares outstanding as of March 31, 2021, will be restricted as a result of securities laws, lock-up agreements or other contractual restrictions that restrict transfers for at least 180 days after the date of this prospectus, subject to certain extensions.

The underwriters may, in their sole discretion, release all or some portion of the shares subject to lock-up agreements with the underwriters prior to expiration of the lock-up period. See also the section of this prospectus captioned "Shares Eligible for Future Sale." For more information regarding the lock-up agreements with the underwriters see the section of this prospectus captioned "Underwriting."

The holders of shares of common stock, or % based on shares outstanding on an as-converted basis as of March 31, 2021, will be entitled to rights with respect to registration of such shares under the Securities Act pursuant to a registration rights agreement between such holders and us. See "Certain Relationships and Related Party Transactions—Agreements with Stockholders" below. If such holders, by exercising their registration rights, sell a large number of shares, they could adversely affect the market price for our common stock. If we file a registration statement for the purpose of selling additional shares to raise capital and are required to include shares held by these holders pursuant to the exercise of their registration rights, our ability to raise capital may be impaired. We intend to file a registration statement on Form S-8 under the Securities Act to register shares of common stock for issuance under the 2021 Plan, the 2020 Plan and the 2021 ESPP. Our 2021 Plan and the 2021 ESPP will provide for automatic increases in the shares reserved for issuance under the plans which could result in additional dilution to our stockholders. Once we register the shares under these plans, they can be freely sold in the public market upon issuance and vesting, subject to a 180-day lock-up period and other restrictions provided under the terms of the applicable plan and/or the option agreements entered into with option holders.

No public market for our common stock currently exists, and an active trading market may not develop or be sustained following this offering.

Prior to this offering, there has been no public market for our common stock. An active trading market may not develop following the closing of this offering or, if developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration. The initial public offering price was determined by negotiations between us and the underwriters and may not be indicative of the future prices of our common stock.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws that will become effective upon the closing of this offering may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our

management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include that:

- our board of directors has the right to expand the size of our board of directors and to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered three-year terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- our stockholders may not act by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- a special meeting of stockholders may be called only by the chair of the board of directors, the chief executive officer, or a majority of the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- our amended and restated certificate of incorporation prohibits cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- our board of directors may alter our bylaws without obtaining stockholder approval;
- the required approval of the holders of at least 75% of the voting power of all of the then outstanding shares of voting stock to adopt, amend or repeal our bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- stockholders must provide advance notice and additional disclosures in order to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors is authorized to issue shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

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 certain disputes between us and our stockholders and that the federal district courts of the United States will be the exclusive forum for certain actions under federal securities laws, 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 that will become effective upon the closing of this offering specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for most legal actions involving actions brought against us by stockholders; provided that, if and only if the Court

of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. The choice of forum provisions will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. These choice of 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 any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims or make such lawsuits more costly for stockholders, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. 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, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. If a court were to find these types of provisions to be inapplicable or unenforceable, and if a court were to find the exclusive forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could materially adversely affect our business.

Our ability to use our net operating losses and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the Code) if a corporation undergoes an "ownership change," generally defined as a cumulative change of more than 50 percentage points (by value) in its equity ownership by certain stockholders over a rolling three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change taxable income or taxes may be limited. We have experienced at least one ownership change in the past, and we may experience ownership changes in the future as a result of shifts in our stock ownership (some of which shifts are outside our control), including in connection with this offering. As a result, if we earn net taxable income, our ability to use our pre-change NOL carryforwards to offset such taxable income may be subject to limitations. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. As a result, even if we attain profitability, we may be unable to use a material portion of our NOL carryforwards and other tax attributes, which could adversely affect our future cash flows.

General Risk Factors

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

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no securities or industry analysts commence coverage of our company, the trading price for our common stock would likely be

negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrades our common stock or publishes inaccurate or unfavorable research about our business, our share price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our share price and trading volume to decline.

Unfavorable U.S. or 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 financial markets. The most recent global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including weakened demand for our technologies and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our partners, possibly resulting in supply disruption, or cause delays in their payments to us. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

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

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

Our employees, consultants and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, consultants, advisors, and partners. Misconduct by these parties could include intentional failures to comply with the applicable laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. These laws and regulations may restrict or prohibit a wide range of pricing, discounting and other business arrangements. Such misconduct could result in legal or regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and any other 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 comply with these 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 result in the imposition of significant civil, criminal and administrative penalties, which could have a significant impact on our business. Whether or not we are successful in defending against such actions or investigations, we could incur substantial costs, including legal fees and divert the attention of management in defending ourselves against any of these claims or investigations.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter and our policies have limits and significant deductibles. Some of the policies we currently maintain include general liability, property, umbrella and directors' and officers' insurance.

Any additional insurance coverage we acquire in the future, may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. A successful liability claim or series of claims in which judgments exceed our insurance coverage could adversely affect our business, financial condition, results of operations and prospects, including preventing or limiting the use of our platform to generate products.

We also expect that operating as a public company will make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers. We do not know if we will be able to maintain existing insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our business, financial condition, results of operations and prospects.

Security breaches, loss of data and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we generate and store sensitive data, including research data, intellectual property and proprietary business information owned or controlled by ourselves or our employees, partners and other parties. We manage and maintain our applications and data utilizing a combination of on-site systems and cloud-based data centers. We utilize external security and infrastructure vendors to manage parts of our data centers. These applications and data encompass a wide variety of business-critical information, including research and development information, commercial information and business and financial information. We face a number of risks relative to protecting this critical information, including loss of access risk, inappropriate use or disclosure, accidental exposure, unauthorized access, inappropriate modification and the risk of our being unable to adequately monitor and audit and modify our controls over our critical information. This risk extends to the third party vendors and subcontractors we use to manage this sensitive data or otherwise process it on our behalf. Further, to the extent our employees may work remotely, additional risks may arise as a result of depending on the networking and security put into place by the employees. The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take reasonable measures to protect sensitive data from unauthorized access, use or disclosure, no security measures can be perfect and our information technology and infrastructure may be vulnerable to attacks by hackers or infections by viruses or other malware or breached due to employee erroneous actions or inactions by our employees or contractors, malfeasance or other malicious or inadvertent disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, breach, or other loss of information could result in legal claims or proceedings. Unauthorized access, loss or dissemination could also disrupt our operations and damage our reputation, any of which could adversely affect our business.

Additionally, although we maintain cybersecurity insurance coverage, we cannot be certain that such coverage will be adequate for data security liabilities actually incurred, will cover any

indemnification claims against us relating to any incident, will continue to be available to us on economically reasonable terms, or at all, or that any insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could adversely affect our reputation, business, financial condition and results of operations.

We are an emerging growth company, and the reduced reporting requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements, exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved, and an exemption from compliance with the requirement of the Public Accounting Oversight Board regarding the communication of critical audit matters in the auditor's report on the financial statements. We could be an emerging growth company for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the date of the closing of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that are held by non-affiliates to exceed $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

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

We cannot predict if investors will find our common stock less attractive because we may rely on the reporting exemptions and the extended transition period for complying with new or revised accounting standards. 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 share price may be more volatile.

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

As a public company, we will incur significant legal, accounting, insurance and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Exchange Act, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC, and the Nasdaq Global Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial

controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas, such as “say-on-pay” and proxy access. The JOBS Act permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of this offering. We intend to take advantage of the reduced reporting requirements available to emerging growth companies under the JOBS Act, but we cannot guarantee that we will not be required to implement the more stringent requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

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

Pursuant to Section 404, in our second annual report due to be filed with the SEC after becoming a public company, we will be required to furnish a report by our management on our internal control over financial reporting. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants, adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing whether such controls are functioning as documented, and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. In addition, investors’ perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm the market price of our stock.

We or our partners may be adversely affected by natural or man-made disasters or other business interruptions, such as cybersecurity attacks, and our business continuity and disaster recovery plans, or those of our partners, may not adequately protect us from the effects of a serious disaster.

Natural and man-made disasters and other events beyond our control could severely disrupt our operations, or those of our partners, and have a material adverse impact on our business, results of operations, financial condition and prospects. If a natural disaster, power outage, cybersecurity attack or other event occurred that prevented us from using all or a significant portion of our headquarters, damaged critical infrastructure, such as our laboratory facilities or those of our partners, limited our or our partners’ ability to access or use our respective digital information systems or that otherwise disrupted our respective operations, it may be difficult or, in certain cases,

impossible for us or our partners to continue our respective businesses for a substantial period of time. The disaster recovery and business continuity plans we and our partners currently have in place are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. Our cybersecurity liability insurance may not cover any or all damages, depending on the severity and extent, we or our partners could sustain based on any breach of our respective computer security protocols or other cybersecurity attack. We may incur substantial expenses as a result of the limited nature of our respective disaster recovery and business continuity plans, which could have a material adverse impact on our business.

Our results of operations and financial condition could be materially adversely affected by changes in accounting principles.

The accounting for our business is subject to change based on the evolution of our business model, interpretations of relevant accounting principles, enforcement of existing or new regulations and changes in policies, rules, regulations and interpretations, of accounting and financial reporting requirements of the SEC or other regulatory agencies. Adoption of a change in accounting principles or interpretations could have a significant effect on our reported results of operations and could affect the reporting of transactions completed before the adoption of such change. It is difficult to predict the impact of future changes to accounting principles and accounting policies over financial reporting, any of which could adversely affect our results of operations and financial condition and could require significant investment in systems and personnel.

If our estimates or judgments relating to our critical accounting policies prove to be incorrect or financial reporting standards or interpretations change, our results of operations could be adversely affected.

The preparation of financial statements in conformity with generally accepted accounting principles in the United States (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates.” The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include the estimated variable consideration included in the transaction price in our contracts with partners, stock-based compensation, purchase price allocations for recent acquisitions, and valuation of our common stock. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our common stock.

Additionally, we regularly monitor our compliance with applicable financial reporting standards and review new pronouncements and drafts thereof that are relevant to us. As a result of new standards, changes to existing standards and changes in their interpretation, we might be required to change our accounting policies, alter our operational policies, and implement new or enhance existing systems so that they reflect new or amended financial reporting standards, or we may be required to restate our published financial statements. Such changes to existing standards or changes in their interpretation may have an adverse effect on our reputation, business, financial position, and profit.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon completion of this offering, we will become subject to certain reporting requirements of the Exchange Act. Our disclosure controls and procedures are designed to reasonably assure that

information required to be disclosed by us in reports we file or submit under the Exchange Act is accumulated and communicated to management, recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements or insufficient disclosures due to error or fraud may occur and not be detected.

Cautionary Note Regarding Forward-Looking Statements

This prospectus contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- our expectations regarding our further development of, successful application of, and the rate and degree of market acceptance of, our Integrated Drug Creation Platform;
- our expectations regarding the markets for our services and technologies, including the growth rate of the biologics and next-generation biologics markets;
- our ability to attract new partners and enter into technology development agreements that contain milestone and royalty obligations in favor of us;
- the potential to receive revenue for the achievement of milestones and royalties under agreements for sales of products originating from our Integrated Drug Creation Platform;
- our ability to enter into license agreements with the partners in our existing Active Programs for which our partners don't have current milestone and royalty obligations;
- our ability to manage and grow our business by expanding our relationships with existing partners or introducing our Integrated Drug Creation Platform to new partners;
- our expectations regarding our current and future partners continued development of biologic drugs generated utilizing our platform;
- 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;
- our estimates of the sufficiency of our cash resources;
- our ability to establish or maintain collaborations, partnerships or strategic relationships;
- our ability to provide our partners with a full biologic drug discovery and cell line development solution from target to IND-ready, including non-standard amino acid incorporation capabilities;
- our ability to obtain and maintain intellectual property protection for our platform, products and technologies, the duration of such protection and our ability to operate our business without infringing on the intellectual property rights of others;
- our ability to attract, hire and retain key personnel and to manage our future growth effectively;
- our expectations regarding use of the proceeds from this offering;
- our financial performance;

- the volatility of the trading price of our common stock;
- our competitive position and the development of and projections relating to our competitors or our industry;
- the potential impact of the ongoing COVID-19 pandemic on our business or operations;
- the impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; and
- our expectations about market trends.

In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue” or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC 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 any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we assume no obligation to update or revise any forward-looking statements except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to rely unduly upon these statements.

Market and Industry Data and Forecasts

We obtained the industry, market and competitive position data used throughout this prospectus from our own internal estimates and research, as well as from industry and general publications and surveys, governmental agencies and publicly available information, including aggregated publicly available data from EvaluatePharma® [April, 2021] Evaluate Ltd. (Evaluate Pharma data). Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which these data are derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. In addition, while we believe the industry, market and competitive position data included in this prospectus is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

Use of Proceeds

We estimate that the net proceeds from our issuance and sale of shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise in full their option to purchase additional shares, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting 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, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable the net proceeds to us from this offering by approximately $ 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase or decrease of 1.0 million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase or decrease, as applicable, our net proceeds from this offering by approximately $ million, assuming the assumed initial public offering price to the public remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the initial price to the public or the number of shares by these amounts would have a material effect on the uses of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

The principal purpose of this offering is to obtain additional capital to support our operations and growth, create a public market for our common stock, and enable access to the public equity markets for us and our stockholders.

As of March 31, 2021, we had cash and cash equivalents of $180.8 million. We currently expect to use our net proceeds from this offering, together with our existing cash and cash equivalents, to further our investment in expanding our Integrated Drug Creation Platform's capabilities, continued growth of our business development organization and activities, and for general corporate purposes, including working capital, capital expenditures, and operating expenses. We may also use a portion of the remaining net proceeds, if any, to acquire complementary businesses, products, services or technologies, including scientific expertise, although we have no binding agreements or commitments to do so at this time.

Based on our current plans, 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 at least through . We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect.

The expected use of net proceeds from this offering represents our intentions based upon our present plans and business conditions. We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering. Due to uncertainties inherent in the product development process, it is difficult to estimate the exact amounts of the net proceeds that will be used for any particular purpose. We may use our existing cash and cash equivalents and the future payments, if any, generated from any future collaboration agreements to fund our operations, either of which may alter the amount of net proceeds used for a particular purpose. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including the results of our research and development efforts as well as our interactions with regulatory authorities. Accordingly, we will have broad discretion in using these proceeds.

Pending the uses described above, we plan to invest the net proceeds of this offering in short- term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Any future determination to declare dividends will be subject to the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, financial condition, future prospects and any other factors deemed relevant by our board of directors. In addition, under our loan and security agreement with Bridge Bank we are prohibited from declaring and issuing dividends without the Lenders consent. Investors should not purchase our common stock with the expectation of receiving cash dividends.

Capitalization

The following table sets forth our cash and cash equivalents and total capitalization as of March 31, 2021:

- on an actual basis;
- on a pro forma basis to give effect to (i) the conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2021 into an aggregate of 14,099,936 shares of our common stock immediately prior to the completion of this offering; (ii) the issuance of shares of common stock upon the conversion of all outstanding principal and accrued interest on the Convertible Notes upon the completion of this offering, assuming an initial public offering price per share of $, the midpoint of the price range set forth on the cover of this prospectus, and assuming that the offering is completed on , 2021, (iii) the consummation of the Totient Acquisition (other than the potential payment of the additional $15.0 million for achievement of certain milestones) and (iv) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis to give effect to (i) the pro forma adjustments described above, and (ii) the issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions, and estimated offering expenses payable by us.

You should read this information together with our financial statements and related notes appearing elsewhere in this prospectus and the information set forth under the heading “Selected

Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted[1]
			(unaudited)
			(in thousands, except share and per share data)
Cash and cash equivalents	$ 180,756		$
Convertible Notes	$ 125,000		
Long-Term Debt, including current portion	5,055		
Redeemable convertible preferred stock, $0.0001 par value; 14,099,936 shares authorized; 14,006,929 issued and outstanding; liquidation preference of $217,023, actual; no redeemable convertible preferred stock, pro forma and pro forma as adjusted	161,377		
Other stockholders' (deficit) equity:			
Common stock, $0.0001 par value; 22,000,000 shares authorized; 5,934,236 shares issued and outstanding, actual; shares authorized, issued and outstanding, pro forma; shares authorized, issued and outstanding, pro forma as adjusted	—		
Preferred stock, $0.0001 par value per share; no shares authorized, issued or outstanding, actual; shares authorized, no shares issued or outstanding, pro forma and pro forma as adjusted	—		—
Additional paid-in capital	2,524		
Accumulated deficit	(101,027)		
Total stockholders' (deficit) equity	(98,503)		
Total capitalization	$ 192,929		$

(1) Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders’ (deficit) equity, and total capitalization by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease, as applicable, each of pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders’ (deficit) equity, and total capitalization by approximately $ million, assuming the assumed initial public offering price per share, as set forth on the cover page of this prospectus, remains the same. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.

The number of shares of common stock issued and outstanding pro forma and pro forma as adjusted in the table above is based on 5,934,236 shares of common stock outstanding as of March 31, 2021, and reflects (i) 14,099,636 shares of our common stock issuable upon the conversion of all outstanding shares of our redeemable convertible preferred stock immediately prior to the completion of this offering; (ii) the issuance of shares of common stock upon the conversion of all outstanding principal and accrued interest on the Convertible Notes upon the completion of this offering, assuming an initial public offering price per share of $, the midpoint of the price range set forth on the cover of this prospectus, and assuming that the offering is completed on , 2021; and (iii) the consummation of the Totient Acquisition (other than the potential payment of the additional $15.0 million for achievement of certain milestones), and excludes:

- 1,625,055 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of $3.63 per share;

- 765,881 shares of our common stock issuable upon the exercise of options granted after March 31, 2021, with a weighted-average exercise price of $14.78 per share;
- 31,126 shares of our common stock issuable upon exercise of stock appreciation rights granted after March 31, 2021, with a weighted-average exercise price of $16.40 per share;
- 93,007 shares of our common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2021, with a weighted-average exercise price of $1.00 per share;
- 545,639 shares of our common stock reserved for future issuance under our 2020 Plan as of March 31, 2021;
- shares of our common stock reserved for future issuance under our 2021 Plan, which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our 2021 ESPP, which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 ESPP.

Dilution

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

Our historical net tangible book (deficit) value per share is determined by dividing our total tangible assets less our total liabilities and redeemable convertible preferred stock, which are not included within stockholders' deficit by the number of shares of common stock outstanding. Our historical net tangible book (deficit) value as of March 31, 2021 was ($101.8 million), or $(18.19) per share.

Our pro forma net tangible book (deficit) value as of March 31, 2021 was $ million, or $ per share. Our pro forma net tangible book (deficit) value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of March 31, 2021, assuming (i) the conversion of all outstanding shares of our redeemable convertible preferred stock as of March 31, 2021 into an aggregate of 14,006,929 shares of common stock immediately prior to the completion of this offering; (ii) the issuance of shares of common stock upon the conversion of all outstanding principal and accrued interest on the Convertible Notes upon the completion of this offering, assuming an initial public offering price per share of $, the midpoint of the price range set forth on the cover of this prospectus, and assuming that the offering is completed on , 2021; and (iii) the consummation of the Totient Acquisition (other than the potential payment of the additional $15.0 million for achievement of certain milestones).

Our pro forma as adjusted net tangible book (deficit) value represents our pro forma net tangible book (deficit) value, plus the effect of the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering. After giving effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2021 would have been $ million, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net

tangible book value of $ per share to purchasers of common stock in this offering, as illustrated in the following table:

Assumed initial public offering price per share			$	
Historical net tangible book value (deficit) per share as of March 31, 2021	$	(18.19)		
Pro forma increase in net tangible book value (deficit) per share as of March 31, 2021	$	—		
Pro forma net tangible book value per share as of March 31, 2021	$	—		
Increase in pro forma 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			$	

If the underwriters' option to purchase additional shares from us is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be $ per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing shares in this offering would be $ per share.

Each $1.00 increase (decrease) in the assumed public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value by $ million, or $ per share, and dilution per share to investors in this offering by $ per share, assuming that the number of shares offered by us, as set forth on the cover of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) our pro forma as adjusted net tangible book value by approximately $ million, or approximately $ per share and would increase or decrease, as applicable, dilution per share to investors in this offering by approximately $ per share, assuming the assumed initial public offering price per share remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' option to purchase additional shares from us is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be $ per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing shares in this offering would be $ per share.

The following table shows, as of March 31, 2021, on a pro forma as adjusted basis (but before deducting underwriting discounts and commissions and estimated offering expenses payable by us), the differences between the existing stockholders and the purchasers of shares in this offering with respect to the number of shares purchased from us, the total consideration paid, which includes net proceeds received from the issuance of common and redeemable convertible preferred stock, cash

received from the exercise of stock options, and the value of any stock issued for services and the average price paid per share (in thousands, except per share amounts and percentages):

	Shares purchased		Total consideration		Average price per share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering		%		%	$
New investors participating in this offering					$
Totals		100 %		100 %	

The foregoing tables and calculations (other than the historical net tangible book value calculations) are based on 5,934,236 shares of common stock outstanding as of March 31, 2021 and also reflects (i) the conversion of the outstanding shares of our redeemable convertible preferred stock as of March 31, 2021 into an aggregate of 14,006,929 shares of our common stock immediately prior to the completion of this offering; (ii) the issuance of shares of common stock upon the conversion of all outstanding principal and accrued interest on the Convertible Notes upon the completion of this offering, assuming an initial public offering price per share of $, the midpoint of the price range set forth on the cover of this prospectus, and assuming that the offering is completed on , 2021; and (iii) the consummation of the Totient Acquisition (other than the potential payment of the additional $15.0 million for achievement of certain milestones), and excludes:

- 1,625,055 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of $3.63 per share;
- 765,881 shares of our common stock issuable upon the exercise of options granted after March 31, 2021, with a weighted-average exercise price of $14.78 per share;
- 31,126 shares of our common stock issuable upon exercise of stock appreciation rights granted after March 31, 2021, with a weighted-average exercise price of $16.40 per share;
- 93,007 shares of our common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2021, with a weighted-average exercise price of $1.00 per share;
- 545,639 shares of our common stock reserved for future issuance under our 2020 Plan as of March 31, 2021;
- shares of our common stock reserved for future issuance under our 2021 Plan, which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our 2021 ESPP, which will become available for issuance upon the effectiveness of the registration statement of which this prospectus is a part, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2021 ESPP.

To the extent that any outstanding options are exercised, new options are issued under our stock-based compensation plans or we issue additional shares of common stock or convertible debt in the future, there will be further dilution to investors participating in this offering.

Selected Consolidated Financial Data

The following selected consolidated statements of operations and comprehensive loss data for the years ended December 31, 2019 and 2020 and the selected consolidated balance sheet data as of December 31, 2019 and 2020 have been derived from our audited consolidated financial statements appearing elsewhere in this prospectus, and the following selected consolidated statements of operations and comprehensive loss data for the three months ended March 31, 2021 and 2020 and the selected consolidated balance sheet data as of March 31, 2021 have been derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus, in each case, except for the pro forma and pro forma adjusted data. We have prepared the unaudited interim financial statement data on the same basis as our audited financial statements and, in the opinion of management, these financial statements reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair presentation of our unaudited interim financial statements. You should read the following summary consolidated financial data together with the “Summary Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of this prospectus and our consolidated financial statements and the related notes appearing elsewhere in this prospectus. Our historical

results are not necessarily indicative of the results that may be expected in any future periods, and our interim results are not necessarily indicative of results that may be expected for the full year.

	For the Years Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except for share and per share data)			
Consolidated Statements of Operations Data:				
Revenues				
Technology development revenue	$ 2,044	$ 4,117	$ 525	$ 940
Collaboration revenue	16	663	47	123
Total revenues	2,060	4,780	572	1,063
Operating expenses				
Research and development	4,311	11,448	1,907	7,050
Selling, general and administrative	3,523	5,502	971	4,685
Depreciation and amortization	491	1,131	184	476
Total operating expenses	8,325	18,081	3,062	12,211
Operating loss	(6,265)	(13,301)	(2,490)	(11,148)
Other income (expense)				
Interest expense, net	(268)	(634)	(98)	(455)
Other expense	(51)	(418)	(70)	164
Total other expense, net	(319)	(1,052)	(168)	(291)
Loss before income taxes	(6,584)	(14,353)	(2,658)	(11,439)
Income tax benefit	—	—	—	477
Net loss and other comprehensive loss	(6,584)	(14,353)	(2,658)	(10,962)
Adjustment of redeemable convertible preferred units and stock	(17,286)	(34,336)	(11,154)	—
Cumulative undeclared preferred stock dividends	—	(780)	—	(995)
Net loss attributable to common stockholder and unitholders	$ (23,870)	$ (49,469)	$ (13,812)	$ (11,957)
Net loss per share attributable to common stockholder and unitholders: Basic and diluted	$ (5.18)	$ (10.55)	$ (3.00)	$ (2.33)
Weighted-average common shares and units outstanding: Basic and diluted	4,606,505	4,691,020	4,606,505	5,140,648
Pro forma net loss per share attributable to common stockholders and unitholders: Basic and Diluted[(1)]				
Pro forma weighted-average common shares and units outstanding: Basic and Diluted[(1)]				

	March 31	December 31,	
	2021	2020	2019
			(in thousands)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 180,756	$ 69,867	$ 13,086
Working capital[(2)]	167,953	63,139	10,181
Total assets	222,833	88,569	19,471
Total liabilities	159,959	21,564	7,867
Redeemable convertible preferred stock	161,377	156,433	52,763
Accumulated deficit	(101,027)	(90,065)	(41,376)
Total equity	(98,503)	(89,428)	(41,159)

(1) See the subsection titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Pro Forma Information” for an explanation of the calculations of our basic and diluted pro forma net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.
(2) We define working capital deficit as current assets less current liabilities. See our financial statements appearing elsewhere in this prospectus.

Unaudited Pro Forma Condensed Combined Financial Information

On June 4, 2021, we entered into a merger agreement with Totient, Inc. (“Totient”), under which, at the effective time, our wholly owned entity, or Merger Sub, merged with Totient, with Merger Sub surviving as our wholly owned subsidiary.

Pursuant to the merger agreement, at closing, Totient stockholders will receive $55.0 million in cash, of which $40.0 million in cash was paid at closing, subject to customary purchase price adjustments and escrow restrictions, and $15.0 million in cash shall be paid upon the achievement of expected milestones, and 669,743 shares of our Common Stock, of which a portion vest immediately and the remainder are subject to a stock restriction agreement.

The following unaudited pro forma condensed combined financial information of Absci and Totient is presented to illustrate the estimated effects of the acquisition, which estimated effects are collectively referred to as adjustments or transaction accounting adjustments.

The unaudited pro forma condensed statements of operations and comprehensive loss for the year ended December 31, 2020, and the three months ended March 31, 2021 combine our historical consolidated statements of operation and other comprehensive loss with Totient’s, after giving effect to the acquisition as if it had occurred on January 1, 2020. The unaudited pro forma condensed combined balance sheet as at March 31, 2021 combines our historical consolidated balance sheet with Totient’s as of March 31, 2021, after giving effect to the acquisition as if it had occurred on March 31, 2021.

These unaudited pro forma condensed combined statements of operations and comprehensive loss and unaudited pro forma condensed combined balance sheet are collectively referred to in this section as the pro forma financial information.

The unaudited pro forma financial information should be read in conjunction with the accompanying notes in this section. In addition, the pro forma financial information is derived from and should be read in conjunction with the following historical consolidated financial statements and accompanying notes of Absci and Totient in this section:

- our audited consolidated financial statements as of and for the fiscal year ended December 31, 2020 and the related notes;
- our unaudited condensed consolidated financial statements as of and for the three months ended March 31, 2021 and the related notes;
- audited consolidated financial statements of Totient as of and for the fiscal year ended December 31, 2020 and the related notes; and
- unaudited condensed consolidated financial statements of Totient as of and for the three months ended March 31, 2021 and the related notes.

The pro forma financial information has been prepared by us in accordance with Regulation S-X Article 11, *Pro Forma Financial Information*, as amended by the final rule, Release No. 33-10786, which is referred to herein as Article 11. The pro forma financial information is based on various adjustments and assumptions and is not necessarily indicative of what our consolidated statements of operations and comprehensive loss or consolidated balance sheet actually would have been had the merger been completed as of the dates indicated or will be for any future periods. The pro forma financial information does not purport to project our future financial position or operating results following the completion of the merger. The pro forma financial information does not include adjustments to reflect any potential revenue, synergies or dis-synergies, or cost savings that

may be achievable in connection with the merger, or the associated costs that may be necessary to achieve such revenues, synergies or cost savings.

We and Totient prepared the respective financial statements in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The acquisition will be accounted for using the acquisition method of accounting.

The pro forma adjustments are preliminary, based upon available information as of the date of this prospectus, and prepared solely for the purpose of this pro forma financial information. These adjustments are based on preliminary estimates and will be different from the adjustments that may be determined based on final acquisition accounting, and these differences could be material. The pro forma adjustments are based on preliminary estimates of the consideration to be paid in the merger, and of the fair values of assets acquired and liabilities assumed. The estimated fair values assigned in this unaudited pro forma financial information are preliminary and represent our current best estimate of fair value and are subject to revision.

Unaudited Pro Forma Condensed Combined Balance Sheet as of March 31, 2021

(In thousands)	Historical Absci	Historical Totient (Note 6)	Transaction Accounting Adjustment	Notes	Combined
ASSETS					
Current assets:					
Cash and cash equivalents	$ 180,756	$ 1,650	$ (50,319)	[6A] [6B]	$ 132,087
Receivables under development arrangements	1,040	—	—		1,040
Prepaid expenses and other current assets	3,548	54	88	[6B]	3,690
Total current assets	185,344	1,704	(50,231)		136,817
Operating lease right-of-use assets	7,610	392	(124)	[6B]	7,878
Property and equipment - net	21,623	139	(21)	[6B]	21,741
Intangibles	2,410	—	54,600	[6B]	57,010
Goodwill	1,055	—	23,552	[6B]	24,607
Restricted cash	4,367	—	23,000	[6A]	27,367
Other assets	424	—	23	[6B]	447
TOTAL ASSETS	$ 222,833	$ 2,235	$ 50,799		$ 275,867
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT					
Current liabilities:					
Accounts payable	$ 8,449	$ 170	$ (76)	[6B]	$ 8,543
Accrued expenses	2,432	211	6,989	[6B]	9,632
Current portion of long-term debt	917	34,767	(34,767)	[6D]	917
Current portion of operating lease obligations	1,121	222	(99)	[6B]	1,244
Current portion of financing lease obligations	2,069	—	—		2,069
Deferred revenue	2,403	—	—		2,403
Other current liabilities	—	—	8,000	[6C]	8,000
Total current liabilities	17,391	35,370	(19,953)		32,808
Convertible promissory notes	125,000	—	—		125,000
Long-term debt - net of current portion	4,138	425	(425)	[6B]	4,138
Operating lease obligations - net of current portion	9,192	196	(51)	[6B]	9,337
Finance lease obligations - net of current portion	2,537	—	—		2,537
Contingent Consideration	—	—	10,600	[6C]	10,600
Deferred income tax liability	156	—	13,787	[6B]	13,943
Other long-term liabilities	1,545	1,843	(1,779)	[6B]	1,609
TOTAL LIABILITIES	159,959	37,834	2,179		199,972
Commitments (See Note 6)					
Redeemable convertible preferred stock	161,377	—	—		161,377
OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT					
Common stock	—	—	—		—
Additional paid-in capital	2,524	4,257	9,634	[6F]	16,415
Accumulated deficit	(101,027)	(39,856)	38,986	[6E] [6F]	(101,897)
TOTAL OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	(98,503)	(35,599)	48,620		(85,482)
TOTAL LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	$ 222,833	$ 2,235	$ 50,799		$ 275,867

Unaudited Pro Forma Condensed Combined Statements of Operations and Comprehensive Loss for the Year Ended December 31, 2020

(In thousands, except for share and per share data)	Historical Absci	Historical Totient (Note 6)	Transaction Accounting Adjustment	Notes	Combined
Revenues					
Technology development revenue	$ 4,117	$ —	$ —		$ 4,117
Collaboration revenue	663	—	—		663
Total revenues	4,780	—	—		4,780
Operating expenses					
Research and development	11,448	2,430	2,236	[7A] [7C]	16,114
Selling, general and administrative	5,502	1,248	4,233	[7A] [7B] [7C]	10,983
Depreciation and amortization	1,131	22	2,905	[7D] [7E]	4,058
Total operating expenses	18,081	3,700	9,374		31,155
Operating loss	(13,301)	(3,700)	(9,374)		(26,375)
Other income (expense)					
Interest expense	(634)	(12)			(646)
Other income (expense), net	(418)	(1,299)	1,369	[7F]	(348)
Total other expense, net	(1,052)	(1,311)	1,369		(994)
Net loss and other comprehensive loss	(14,353)	(5,011)	(8,005)		(27,369)
Adjustment of redeemable preferred units and stock	(34,336)	—	—		(34,336)
Cumulative undeclared preferred stock dividends	(780)	—	—		(780)
Net loss applicable to common stockholders and unitholders	$ (49,469)	$ (5,011)	$ (8,005)		$ (62,485)
Net loss per share, basic and diluted (Note 10)	$ (10.55)				$ (12.23)

Unaudited Pro Forma Condensed Combined Statements of Operations and Comprehensive Loss for the Three Months Ended March 31, 2021

(In thousands, except for share and per share data)	Historical Absci	Historical Totient (Note 6)	Transaction Accounting Adjustment	Notes	Combined
Revenues					
Technology development revenue	$ 940	$ —	$ —		$ 940
Collaboration revenue	123	—	—		123
Total revenues	1,063	—	—		1,063
Operating expenses					
Research and development	7,050	2,190	404	[8A]	9,644
Selling, general and administrative	4,685	549	603	[8A]	5,837
Depreciation and amortization	476	7	726	[8B] [8C]	1,209
Total operating expenses	12,211	2,746	1,733		16,690
Operating loss	(11,148)	(2,746)	(1,733)		(15,627)
Other income (expense)					
Interest expense	(455)	(3)			(458)
Other income (expense), net	164	(19,717)	19,892	[8D]	339
Total other expense, net	(291)	(19,720)	19,892		(119)
Loss before income taxes	(11,439)	(22,466)	18,159		(15,746)
Income tax benefit	477	—	—		477
Net loss and other comprehensive loss	(10,962)	(22,466)	18,159		(15,269)
Adjustment of redeemable preferred units and stock	—	—	—		—
Cumulative undeclared preferred stock dividends	(995)	—	—		(995)
Net loss applicable to common stockholders and unitholders	$ (11,957)	$ (22,466)	$ 18,159		$ (16,264)
Net loss per share, basic and diluted (Note 10)	$ (2.33)				$ (2.88)

Notes to Unaudited Pro Forma Condensed Combined Financial Statements

Note 1—Description of the Transaction

On June 4, 2021, the Company entered into a merger agreement with Totient, Inc. (“Totient”), under which, at the effective time, a wholly owned entity, or Merger Sub, merged with Totient, with Merger Sub surviving as a wholly owned subsidiary of Absci.

Pursuant to the merger agreement, at closing, Totient shareholders will receive $55.0 million in cash, of which $40.0 million in cash was paid at closing, subject to customary purchase price adjustments and escrow restrictions, and $15.0 million in cash shall be paid upon the achievement of expected milestones, and 669,743 shares of Absci Common Stock. All common stock issued is unrestricted, except for those shares granted to certain members of management, of which 25% of the shares issued will vest upon the closing of the Transaction and the remaining 75% will vest over 2.5 years in installments each six months subject to their continuing service relationships with the Company.

Note 2—Basis of Presentation

The pro forma financial information was prepared accounting for the acquisition using the acquisition method of accounting in accordance with Accounting Standards Codification (“ASC”) Topic 805, “Business Combinations,” which is referred to as ASC 805, and is derived from the Company’s and Totient’s audited and unaudited historical financial statements.

The pro forma financial information has been prepared in accordance with Article 11. The pro forma financial information is not necessarily indicative of what the Company’s consolidated statements of operations or consolidated balance sheet would have been had the acquisition been completed as of the dates indicated or will be for any future periods. The pro forma financial information does not purport to project our future financial position or results of operations following the completion of the acquisition. The pro forma financial information reflects pro forma adjustments management believes are necessary to present fairly our pro forma results of operations and financial position following the closing of the acquisition as of and for the periods indicated. The pro forma adjustments are based on currently available information and assumptions management believes are, under the circumstances and given the information available at this time, reasonable, and reflective of adjustments necessary to report our financial condition and results of operations as if the acquisition was completed.

The acquisition method of accounting uses the fair value concepts defined in ASC 820, “Fair Value Measurements and Disclosures,” which is referred to as ASC 820. Fair value is defined in ASC 820 as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” Fair value measurements can be highly subjective and can involve a high degree of estimation.

The determination of the fair value of the identifiable assets and liabilities of Totient and the allocation of the estimated consideration to these identifiable assets and liabilities is preliminary and is pending finalization of various estimates, inputs and analyses.

Since this pro forma financial information has been prepared based on preliminary estimates of consideration and fair values attributable to the acquisition, the actual amounts eventually recorded for the purchase accounting, including the identifiable intangibles and goodwill, may differ materially from the information presented.

At this preliminary stage, the estimated identifiable finite-life intangible assets include the monoclonal antibody library and the developed software platform, including the related methods

patent. Goodwill represents the excess of the estimated purchase price over the estimated fair value of Totient's identifiable assets acquired and liabilities assumed, including the fair value of the estimated identifiable finite assets and liabilities described above. Goodwill will not be amortized but will be subject to periodic impairment testing. The goodwill balance shown in the pro forma financial information is preliminary and subject to change as a result of the same factors affecting both the estimated consideration and the estimated fair value of identifiable assets and liabilities acquired. The goodwill balance represents the combined company's expectations of the strategic opportunities available to it as a result of the acquisition, as well as other synergies that will be derived from the acquisition. Goodwill also reflects the requirement to record deferred tax balances for the difference between the assigned values and the tax bases of assets acquired and liabilities assumed in the business combination. Goodwill is not deductible for tax purposes.

Upon consummation of the acquisition and the completion of a formal valuation study, the fair value of the acquired assets and liabilities assumed will be updated, including the estimated fair value and useful lives of the identifiable intangible assets and allocation of the excess purchase price, if any, to goodwill. The calculation of goodwill and other identifiable intangible assets could be materially impacted by changing fair value measurements caused by the volatility in the current market environment. Under ASC 805, transaction costs related to the acquisition are expensed in the period they are incurred. Total transaction related costs incurred by us and Totient in connection with the acquisition subsequent to March 31, 2021 are estimated to be $0.9 million. The total amount is reflected as a transaction adjustment in the unaudited condensed combined statement of operations for the year ended December 31, 2020. These costs are non-recurring.

The pro forma financial information does not reflect the following items:

- the impact of any potential revenues, benefits or synergies that may be achievable in connection with the merger or related costs that may be required to achieve such revenues, benefits or synergies; and
- changes in cost structure or any restructuring activities as such changes, if any, have yet to be determined.

Note 3—Conforming Accounting Policies and reclassifications

At the current time, the Company is not aware of any material differences in accounting policies that would have a material impact on the pro forma financial information.

Accounting policies that were assessed but deemed to have an immaterial impact to the pro forma financial information include:

- ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which is referred to as ASC 326. Totient's historical financial statements used to derive the pro forma financial information do not reflect the adoption of ASC 326. For the purposes of the pro forma financial information, the Company has not adjusted Totient's adoption of ASC 326 to January 1, 2020 as the estimated impact on the pro forma financial information would be immaterial.

Certain historical balances on the pro forma balance sheet and pro forma statements of operations and comprehensive loss for the periods presented have been reclassified to conform to Absci's presentation. The Company will continue to review Totient's accounting policies during its integration to determine if there are any additional material differences that require reclassification of Totient's expenses, assets or liabilities to conform to our accounting policies and classifications. As a result of that review, the Company may identify further differences between the accounting policies of the two companies that, when conformed, could have a material impact on the pro forma financial information.

Note 4— Preliminary Estimated Purchase Price

The estimated preliminary purchase price is calculated as follows:

Estimated purchase price consideration (in thousands)	Estimated Fair Value	
Estimated cash payment to Totient stockholders	$ 35,368	(i)
Estimated stock payment to Totient stockholders	13,891	(ii)
Estimated cash payment contingent on achieving specified milestone	10,600	(iii)
Total	$ 59,859	

(i) Pursuant to the merger agreement, the initial purchase price includes $40 million of cash adjusted for the agreed upon working capital value which includes the payment of Totient's transaction and other expenses as well as payments to Totient stock option holders for the cancellation and extinguishment of Totient stock options.

(ii) Pursuant to the merger agreement, 669,740 common shares issued in payment to Totient stockholders with 388,349 vesting immediately and therefore included in the purchase price consideration. The remaining 281,391 shares will vest ratably, every six months over five equal installments of a 2 1/2-year service period and will be expensed over the service period. These shares are subject to a stock restriction agreement that requires certain key Totient executives to maintain a continued service relationship throughout the service period.

(iii) Represents the estimated fair value of the contingent consideration that is payable upon the achievement of the milestone of Absci entering into one or more definitive commercialization agreements, or technology partnering or licensing agreements, or collaboration agreements, with third parties using, or related to, Totient's technology, a target discovered or identified by using Totient's technology, or a peptide, protein complex or amino acid sequence assembled using Totient's technology, including any Totient product or enabled product, pursuant to which (a) Absci is entitled to receive at least $2 million in aggregate upfront cash or equity payments (provided, that the minimum upfront payment under any individual agreement shall be $1 million) and (b) an option for a license or a license or similar right is granted to the third party; or (ii) First Commercial Sale of a Totient product or enabled product. These values are based on the most recent estimate of the fair value available and will be updated as we obtain more information.

Note 5—Preliminary Fair Value Estimate of Purchase Price Allocation to Assets Acquired and Liabilities

The table below outlines the initial allocation of the preliminary estimated consideration to the identifiable assets and liabilities acquired by us as of June 4, 2021.

Estimated purchase price consideration (in thousands)	$ 59,859

(In thousands, except for share and units, and per share and per units data)	Preliminary Purchase Price Adjustment	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,751	
Prepaid expenses and other current assets.	141	
Total current assets	1,892	
Right of Use Asset	268	
Property and equipment, net	118	
Goodwill	23,552	(i)
Intangible assets	54,600	(ii)
Other Assets	23	
TOTAL ASSETS	$ 80,453	
Current liabilities:		
Accounts payable	94	
Short Term Lease Liability	123	
Accrued expenses	6,381	
Total current liabilities	6,598	
Operating lease obligations	145	
Deferred income tax liability	13,787	
Other long-term liabilities	64	
TOTAL LIABILITIES	$ 20,594	
Fair value of net identifiable assets acquired and liabilities assumed	$ 59,859	

(i) Goodwill represents the excess of the estimated purchase price over the estimated fair value of Totient's identifiable assets acquired and liabilities assumed. Goodwill also reflects the requirement to record deferred tax balances for the difference between the assigned values and the tax bases of assets acquired and liabilities assumed in the business combination. Goodwill is not deductible for tax purposes.

(ii) The estimated fair value of and useful lives of the intangible assets acquired is as follows:

	Estimated fair value (in thousands)[(a)]	Estimated useful lives (in years)[(b)]
Monoclonal antibody library	$ 46,300	20
Developed software platform and the related methods patents	8,300	15
Total	$ 54,600	

(a) The estimated fair values were categorized within Level 3 of the fair value hierarchy and were determined using an income-based approach, which was based on the present value of the future estimated after-tax cash flows attributable to each intangible asset. The significant assumptions inherent in the development of the values, from the perspective of a market participant, include the amount and timing of projected future cash flows (including revenue, regulatory success and profitability), and the discount rate selected to measure the risks inherent in the future cash flows, which was between 20%-24%. These fair values are based on the most recent estimate of the fair value available and will be updated as we obtain more information.

(b) The estimate of the useful life was based on an analysis of the expected use of the asset by us, any legal, regulatory or contractual provisions that may limit the useful life, the effects of obsolescence, competition and other relevant economic factors, and consideration of the expected cash flows used to measure the fair value of the intangible asset.

The Company has not yet fully completed the analysis to assign fair values to all assets acquired and liabilities assumed, and therefore the purchase price allocation is preliminary. The remaining items include the finalization of working capital adjustments, income taxes, valuation of identifiable intangible assets and contingent consideration liability, and the resulting impact to goodwill. The preliminary purchase price allocation will be subject to further refinement as the Company

continues to refine its estimates and assumptions based on information available at the acquisition date. These refinements may result in material changes to the estimated fair value of assets acquired and liabilities assumed. The purchase price allocation adjustments can be made throughout the end of the Company's measurement period, which is not to exceed one year from the acquisition date.

Note 6—Adjustments to the Unaudited Pro Forma Condensed Combined Balance Sheet

[6A] To reflect the estimated cash payment to Totient stockholders of $50.4 million as described in Note 4, of which $23.0 million is held in escrow as restricted cash.

[6B] To reflect the recognition of goodwill and other purchase price adjustments as part of the purchase price allocation as described in Note 5.

[6C] To reflect the recognition of the liabilities related to the $8.0 million for the deferred cash payment as part of the consideration held in escrow, due in one year, and the fair value of the contingent consideration due based on the achievement of certain milestones, as described in Note 4 above.

[6D] To reflect Totient's convertible notes that were converted to Totient common stock prior to the acquisition and subsequently exchanged for cash and Absci common stock as part of the acquisition.

[6E] To reflect the transaction costs estimated to be incurred subsequent to March 31, 2021 to complete the acquisition of Totient of $0.9 million.

[6F] To eliminate Totient's historical stockholders' equity.

Note 7—Adjustments to the Unaudited Pro Forma Condensed Combined Statement of Income (Loss) for the Year Ended December 31, 2020

[7A] To reflect the acceleration of SAR and Employee Stock Ownership Plan awards due to preexisting change in control provisions of $0.6 million in Research and development expense and $1.0 million in Selling, general and administrative expense.

[7B] To reflect the transaction costs estimated to be incurred to complete the acquisition of Totient of $0.9 million.

[7C] To reflect the vesting of incremental Absci common shares issued to Totient shareholders

[7D] To reflect the incremental straight-line depreciation related to the increase in fair value of the property, plant and equipment consistent with Absci's accounting policy.

[7E] To reflect the incremental straight-line amortization related to the acquisition of the monoclonal antibody library and developed software platform and the related methods patents over a period of 20 years and 15 years, respectively, as outlined in Note 5 above.

[7F] To reverse the mark-to-market adjustment of the convertible notes issued by Totient as at December 31, 2020.

Note 8—Adjustments to the Unaudited Pro Forma Condensed Combined Statement of Income (Loss) for the Three Months Ended March 31, 2021

[8A]To reflect the vesting of incremental Absci common shares issued to Totient shareholders

[8B] To reflect the incremental straight-line depreciation related to the increase in fair value of the property, plant and equipment consistent with Absci's accounting policy.

[8C] To reflect the incremental straight-line amortization related to the acquisition of the monoclonal antibody library and developed software platform and the related methods patents over a period of 20 years and 15 years, respectively, as outlined in Note 5 above.

[8D] To reverse the mark-to-market adjustment of the convertible notes issued by Totient as at March 31, 2021.

Note 9 — Loss Per Share

The pro forma combined basic and diluted loss per share presented below for the year ended December 31, 2020 and the three months ended March 31, 2021, is determined by using the weighted average number of common shares and dilutive common share equivalents outstanding during the period. We have excluded the effect to earnings per share related to the Absci Convertible Notes and other potentially dilutive instruments because including them would have been anti-dilutive.

(in thousands, except for share and per share amounts)	Year Ended December 31, 2020	Three Months Ended March 31, 2021
Pro forma net loss	$ (62,485)	$ (16,264)
Pro forma basic and diluted weighted-average shares outstanding	5,107,739	5,641,554
Pro forma basic and diluted loss per share	$ (12.23)	$ (2.88)

Management’s Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with the section entitled “Selected Financial Data” and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as our plans, objectives, expectations, intentions and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section entitled “Risk Factors” included elsewhere in this prospectus.

Overview

With our AI-powered Integrated Drug Creation Platform we enable the creation of novel protein-based drugs (biologics) by unifying biologic drug discovery and cell line development into one simultaneous process. We leverage proprietary synthetic biology technologies and deep learning AI to predict, identify, design, construct, screen, select and scale production of novel biologic drug candidates. We believe our approach delivers disruptive efficiency, but more importantly enables our partners to create novel and human/AI-designed new-to-nature biologics (next-generation biologics).

While next-generation biologics have exciting medical potential and are a rapidly growing field of drug development, because their protein architectures (scaffolds or modalities) are biologically foreign, they present challenges for conventional biologic discovery and cell line development methods. These methods typically involve a linear series of steps to screen and select desired molecular parts and reformat them into their final protein scaffold, and subsequent laborious and often unsuccessful generation of a suitable manufacturing cell line. We are transforming the biologic discovery and cell line development process by rapidly screening up to billions of drug candidates *in* the desired final protein scaffold that goes into patients and *in* the scalable manufacturing cell line that scales up for clinical and commercial manufacturing.

We believe our platform integrates a fragmented set of processes and bypasses the molecular reformatting and cell line development challenges that can lead to inefficiencies and failures. To accomplish this, we use proprietary high-throughput single cell assays that can evaluate billions of drug sequence variants, each within its production cell line, for target binding affinity, protein quality, and production level (titer). We also harness the large datasets we generate to train and refine our deep learning models which guide our protein and cell line designs, and enable *in silico* optimization of multiple attributes.

We believe our platform is the only commercially available solution that allows for high-throughput screening for simultaneous biologic drug discovery and cell line development for next-generation biologics. With our recent acquisition of Totient, we are expanding our platform to include identification of disease- and tissue-specific targets and fully human antibodies as enhancements to our Discovery applications. We believe our unique approach to biologic drug creation has the potential to significantly accelerate preclinical development timelines and expand therapeutic possibilities for the biopharmaceutical industry.

Our goal is to become the partner of choice for biologic drug discovery and cell line development. As a technology development company, we generate biologic drug candidates and production cell lines for our partners to develop; we do not conduct or sponsor preclinical validation studies or clinical trials, or seek regulatory approvals for drug candidates. Our business model is to establish partnerships with biopharmaceutical companies and use our platform for rapid creation of next-generation biologic drug candidates and production cell lines. Our partners are responsible for all

preclinical and clinical testing of biologics generated using our platform, and our goal is to become the partner of choice for biologic drug discovery and cell line development.

We expect our partnerships to provide us with the opportunity to participate in the future success of the biologics generated utilizing our platform, through milestone payments as well as royalties on sales by our partners of any approved products. We aim to assemble economic interests in a diversified portfolio of partners' next-generation biologic drug candidates across multiple indications.

We currently have drug candidates in nine Active Programs (across seven current partners' preclinical or clinical pipelines) for which we have negotiated, or expect to negotiate upon completion of certain technology development activities, license agreements with potential downstream milestone payments and royalties. Eight of the Active Programs are focused on developing production cell lines for drug candidates that our partners (including Merck, Astellas, Alpha Cancer Technologies, and other undisclosed biotechnology companies) are developing (five preclinical, one Phase 1, one Phase 3, and one animal health), reflecting the 2018 commercial launch of our Cell Line Development (CLD) applications. We have one Discovery program under way, focused on lead optimization with Astellas, which we signed shortly after our December 2020 expansion of our platform to include our initial Discovery applications. We define Active Programs as programs that are subject to ongoing technology development activities intended to determine if the program can be pursued by our partner for future clinical development, as well as any program for which our partner obtains and maintains a license to our technology to advance the program after completion of the technology development phase. There is no assurance, however, that our partners will advance any drug candidates that are currently the subject of Active Programs into further preclinical or clinical development or that our partners will elect to license our technologies upon completion of the technology development phase in a timely manner, or at all.

We are still in the very early stages of implementing our business model and, to date, no partner has entered into a license for clinical or commercial use of any intellectual property rights related to biologic drug candidates or cell lines generated utilizing our platform. Moreover, we have only agreed upon clinical or commercial license terms for two of our Active Programs in the event an option is exercised by a partner to license such intellectual property rights. With initial success, we aim to increase the number of molecules with each partner, as well as expand the application of our platform across each partner's discovery and cell line development activities.

Total revenue increased 132% to $4.8 million for the year ended December 31, 2020, as compared to $2.1 million for 2019, due to the increased scale and volume of new and ongoing programs utilizing our Integrated Drug Creation Platform. Total revenue increased 86% to $1.1 million for the three months ended March 31, 2021, as compared to $0.6 million for the three months ended March 31, 2020. Throughout 2020, we continued making investments in our operating capacity which enabled us to achieve additional project-based milestones in our technology development agreements. Since our inception in 2011, we have devoted substantially all of our resources to research and development activities, including with respect to our Integrated Drug Creation Platform, establishing and maintaining our intellectual property portfolio, hiring personnel, raising capital and providing general and administrative support for these activities. As a result, we have incurred net losses in each year. Our net losses were $6.6 million and $14.4 million for the years ended December 31, 2019 and 2020, respectively. For the three months ended March 31, 2021, our net losses were $11.0 million. Research and development expenses increased to $11.4 million for the year ended December 31, 2020, as compared to $4.3 million for 2019. As of March 31, 2021, we had an accumulated deficit of $101.0 million and cash and cash equivalents totaling $180.8 million. Research and development expenses increased to $7.1 million for the three months ended March 31, 2021, as compared to $1.9 million for the three months ended March 31, 2020.

To date, we have financed our operations through private placements of redeemable convertible preferred stock and convertible notes. From the date of our company formation through March 31, 2021, we have raised aggregate gross proceeds of $230.0 million.

We expect to continue to incur significant expenses, and we expect such expenses to increase substantially in connection with our ongoing activities, including as we:

- implement an effective business development strategy to drive adoption of our Integrated Drug Creation Platform by new and existing partners;
- continue to engage in research and development efforts and scale our technology development activities to meet potential demand at a reasonable cost;
- develop, acquire, in-license or otherwise obtain technologies that enable us to expand our platform capabilities;
- attract, retain and motivate highly qualified personnel;
- implement operational, financial and management information systems; and
- operate as a public company.

We currently lease a 14,549 square foot office and laboratory space and due to our continued growth, in December 2020, we entered into an operating lease, which was subsequently amended in March 2021, for a 77,974 square foot corporate headquarters facility that will include office and laboratory space. We are currently in the process of relocating our operations to the new facility and expect to complete our relocation by the end of 2021.

Recent Developments

In October 2020, we completed an equity financing, raising an aggregate of $65.0 million in gross proceeds through the sale and issuance of Series E redeemable convertible preferred stock.

In January 2021, we completed the Denovium acquisition as part of our strategy to utilize AI technology that includes deep learning computational models of protein function. We are currently integrating the acquired technology and team into our business model and partnership strategy.

In February 2021, Merck Global Health Innovation Fund purchased 254,886 shares of our Series E Preferred Stock for an aggregate price of $5.0 million.

In March 2021, we issued $125.0 million aggregate principal amount of Convertible Notes to certain existing and new investors. The Convertible Notes are convertible upon a qualifying financing into shares of our common stock under certain circumstances. The Convertible Notes will convert into an aggregate of million shares upon the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus, and that the offering is completed on , 2021.

In June 2021, we completed our acquisition of Totient, Inc., or Totient, a discovery company harnessing human immune responses to identify novel antibodies and their therapeutic targets, in exchange for a combination of cash and equity consideration. We paid the former stockholders and noteholders of Totient upfront cash consideration of $40.0 million, subject to customary purchase price adjustments, including consideration in exchange for the cancellation of (i) unexercised outstanding options to purchase shares of Totient common stock, whether vested or unvested, and (ii) outstanding stock appreciation rights previously granted by Totient. Holders of Totient's Class A common stock also received an aggregate of 669,743 shares of our common stock, subject to certain vesting conditions. In addition, Totient's Class A common stockholders and noteholders are eligible to receive up to an additional $15.0 million in cash upon the achievement of certain milestones. We

are currently integrating the acquired technology and team into our business model and partnership strategy.

COVID-19 Pandemic

As a result of the COVID-19 pandemic, we have experienced and may continue to experience severe delays and disruptions, including, for example:

- interruption of or delays in receiving products and supplies from third parties;
- limitations on our business operations by local, state and/or federal governments that could impact our ability to conduct our technology development and other activities;
- delays in negotiations with partners and potential partners;
- increases in facilities costs to comply with physical distancing guidance;
- business disruptions caused by workplace, laboratory and office closures and an increased reliance on employees working from home, travel limitations, cyber security and data accessibility, or communication or mass transit disruptions; and
- limitations on employee resources that would otherwise be focused on the conduct of our activities, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

While these delays continue to cause short-term disruptions, the overall impact to our financial statements is expected to continue to be immaterial.

The ongoing build-out of our expansion facilities may also be delayed by COVID-related restrictions. Furthermore, COVID-19 has adversely affected the broader economy and financial markets, resulting in an economic downturn that could curtail the research and development budgets of our partners, our ability to hire additional personnel and our financing prospects. Any of the foregoing could harm our operations and we cannot anticipate all the ways in which our business could be adversely impacted by health epidemics such as COVID-19.

For additional details, see the section titled “Risk Factors.”

LLC Conversion

We were originally formed in August 2011 as an Oregon limited liability company and later converted into a Delaware limited liability company in April 2016 under the name AbSci LLC. In October 2020, we completed a reorganization whereby we were converted from a Delaware limited liability company named AbSci LLC to a Delaware corporation named under the name Absci Corporation (the LLC Conversion) and all outstanding membership interests in AbSci LLC were exchanged for equity interests in Absci Corporation. All of the share information referenced throughout this prospectus has been retroactively adjusted to reflect the change in capital structure.

Key Factors Affecting Our Results of Operations and Future Performance

We believe that our future financial performance will be primarily driven by multiple factors as described below, each of which presents growth opportunities for our business. These factors also pose important challenges that we must successfully address in order to sustain our growth and improve our results of operations. Our ability to successfully address these challenges is subject to various risks and uncertainties, including those described in the section of this prospectus titled “Risk Factors.”

- **Establish new partnerships:** Our potential to grow revenue and long-term earnings will require us to successfully identify and establish technology development arrangements with

new partners. We have been expanding and expect to continue to expand our business development team and our capabilities to find new partners and we believe that we have a significant opportunity to continue to increase the number of partners and programs we address with our Integrated Drug Creation Platform.

- **Increase the number of molecules and programs under existing partnerships:** The execution of our long term strategy relies substantially on the value our partners believe can be recognized from the product candidates and/or production cell lines that we provide to them. Our continued growth depends on our ability to expand the scope of our existing partnerships and add new molecules for Cell Line Development or Discovery partnerships with current partners.
- **Successfully complete our technology development activities and enter licensing arrangements with our partners:** Our business model depends upon partners licensing the technologies we develop and advancing the drug candidates we generate through clinical development to commercialization. Both our ability to successfully complete technology development activities to meet the needs of our partner, and the partner's prioritization of the subject program, impact the likelihood and timing of any election by a partner to license the technologies we develop. There is no assurance that a partner will elect to license the technologies we develop.
- **Our partners successfully developing and commercializing the drug candidates generated with our technology:** Our business model is dependent on the eventual progression of biologic drug candidates discovered or initially developed utilizing our Integrated Drug Creation Platform into clinical trials and commercialization. Given the nature of our relationships with our partners, we do not control the progression, clinical development, regulatory strategy or eventual commercialization, if approved, of these product candidates. As a result, our future success and the potential to receive milestones and royalties are entirely dependent on our partners' efforts over which we have no control. The timing and scope of any approval that may be required by the U.S. Food and Drug Administration (FDA), or any other regulatory body, for drugs that are developed based on molecules discovered and/or manufactured using our Integrated Drug Creation Platform technologies can significantly impact our results of operations and future performance.
- **Continued significant investments in our research and development of new technologies and platform expansion:** We are seeking to further refine and expand our platform and the scope of our capabilities, which may or may not be successful. This includes, but is not limited to, novel target identification, *de novo* discovery, incorporation of non-standard amino acids (Bionic Protein creation), and application of artificial intelligence across our Integrated Drug Creation Platform. We may in the future also invest significantly in developing our own proprietary lead drug candidates and advancing them through preclinical validation. We expect to incur significant expenses to advance these research and development efforts or to invest in or acquire complementary technologies, but these efforts may not be successful.
- **Drive commercial adoption of our Integrated Drug Creation Platform capabilities:** Driving the adoption of our Integrated Drug Creation Platform across existing and new markets will require significant investment. We plan to further invest in research and development to support the expansion of our platform capabilities including new molecules to existing partners or help deliver our platform to new markets.

Key Business Metrics

We are in the process of identifying key business metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. Currently, given our stage of development, we believe that the following

metrics are the most important for understanding our current business trajectory. These metrics may change or may be substituted for additional or different metrics as our business develops. For example, as our business matures and to the extent drug candidates generated with our technologies enter clinical development, or as we may enter partnerships addressing programs over multiple years, or as certain programs may be discontinued by partners, we anticipate updating these metrics to reflect such changes.

	Year Ended December 31,		Three Months Ended March 31,
	2019	2020	2021
Partners, Cumulative	12	16	17
Programs, Cumulative	23	29	31
Active Programs [(1)]	4	8	10

(1) Subsequent to March 31, 2021, we were notified by a partner that one of our then Active Programs was discontinued for strategic reasons, and accordingly, we have reduced our current Active Programs count to nine.

Partners represents the unique number of partners with whom we have executed technology development agreements. We view this metric as an indication of our ability to execute our business development activities and level of our market penetration.

Programs represents the number of molecules we have addressed or are addressing with our platform. We view this metric as an indication of the robustness of our technology and the commercial success of our platform.

Active Programs represents the number of programs that are subject to ongoing technology development activities intended to determine if the program can be pursued by our partner for future clinical development, as well as any program for which our partner obtains and maintains a license to our technology to advance the program after completion of the technology development phase. There is no assurance, however, that our partners will advance any drug candidates that are currently the subject of Active Programs into further preclinical or clinical development or that our partners will elect to license our technologies upon completion of the technology development phase in a timely manner, or at all. In light of the inherent risks and uncertainties associated with drug development, we anticipate that our partners may from time to time abandon or terminate the development of one or more drug candidates generated from our platform. As we are notified of such terminations, we will remove the subject programs from our Active Programs count.

We have not negotiated terms for a sufficient number of royalty- and milestone-bearing licenses, to enable us to make accurate predictions regarding our potential revenue and financial performance.

Components of Results of Operations

Revenue

Our revenue currently consists primarily of fees earned from our partners in conjunction with technology development agreements (TDAs), which are delineated as technology development revenue in our results of operations. These fees are earned and paid at various points throughout the terms of these agreements including upfront and upon the achievement of specified project-based milestones. In addition, in certain TDAs, we earn success-based fees upon achievement of specified technology goals.

We expect revenue to increase over time as we enter into additional partnership agreements and grant licenses to our partners for the clinical and commercial use of intellectual property rights to the biological assets we create, and as the partners advance product candidates into and through clinical development and commercialization. We expect that our revenue will fluctuate from period

to period due to the timing of executing additional partnerships, the uncertainty of the timing of milestone achievements and our dependence on the program decisions of our partners.

KBI BioPharma, Inc. Collaboration Agreement

In December 2019, we executed a four-year Joint Marketing Agreement (JMA) with KBI BioPharma, Inc. (KBI) to co-promote technologies through joint marketing efforts. The JMA provides for a non-refundable upfront payment of $0.75 million and milestone payments of $2.75 million in the aggregate, of which $2.25 million had been received as of December 31, 2020 and March 31, 2021. Additionally, KBI is obligated to make royalty payments to us during the fourth year of the JMA representing a percentage of its sales generated through the arrangement.

Operating Expenses

Research and Development

Research and development expenses include the cost of materials, personnel-related costs (comprised of salaries, benefits and share-based compensation), consulting fees, equipment and allocated facility costs (including occupancy and information technology). These expenses are exclusive of depreciation. Research and development activities consist of technology development for partners as well as continued development of our Integrated Drug Creation Platform. We derive improvements to our platform from both types of activities. As our research and development efforts apply to our platform broadly and across programs, we have not historically tracked our research and development expenses on a partner-by-partner basis or on a program-by-program basis.

We expect research and development to continue to increase in absolute dollars as we enter into additional partnerships and continue to invest in platform enhancements.

Selling, General, and Administrative

Selling, general, and administrative expenses include personnel-related costs (comprised of salaries, benefits and share-based compensation) for executive, business development, alliance management, legal, finance and other administrative functions. Marketing expenses include costs associated with attending conferences and other promotion efforts of our Integrated Drug Creation Platform. Additionally, these expenses include external legal expenses, accounting and tax service expenses, consulting fees, and allocated facilities costs (including occupancy and information technology). These expenses are exclusive of depreciation.

We expect our selling costs to increase in absolute dollars as we continue to grow our business development efforts, and increase marketing activities to drive awareness and adoption of our platform. We expect selling costs to fluctuate as a percentage of total revenue due to the timing and magnitude of these expenses, and to decrease as a percentage of total revenue in the long term.

We expect general and administrative expenses to continue to increase in absolute dollars as we increase headcount and incur costs associated with operating as a public company, including expenses related to legal, accounting, regulatory, maintaining compliance with exchange listing and requirements of the U.S. Securities and Exchange Commission (SEC), director and officer insurance premiums and investor relations. We expect these expenses to increase in absolute dollars and vary from period to period as a percentage of revenue in the near term, and to decrease as a percentage of revenue in the long term.

Depreciation and amortization

Depreciation and amortization expense consists of the depreciation expense of our property and equipment. Our equipment is used most actively as part of our lab operations.

We expect depreciation expense to continue to increase in absolute dollars as we increase purchases of lab equipment to expand our operating facilities.

Other Expenses

Interest Expense

Interest expense, net, consists primarily of interest related to borrowings under our term debt and laboratory equipment leases.

Other Expense, net

Other expenses to date consist primarily of adjustments of our preferred stock warrant liability to fair value and a gain on extinguishment for the forgiveness of our PPP Loan.

Results of Operations

The results of operations presented below should be reviewed in conjunction with the condensed consolidated financial statements and notes included elsewhere in the prospectus. The following tables set forth our results of operations for the periods presented:

	For the Years Ended December 31,		For the Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except for share and per share data)			
Revenues				
Technology development revenue	$ 2,044	$ 4,117	$ 525	$ 940
Collaboration revenue	16	663	47	123
Total revenues	2,060	4,780	572	1,063
Operating expenses				
Research and development	4,311	11,448	1,907	7,050
Selling, general and administrative	3,523	5,502	971	4,685
Depreciation and amortization	491	1,131	184	476
Total operating expenses	8,325	18,081	3,062	12,211
Operating loss	(6,265)	(13,301)	(2,490)	(11,148)
Other income (expense)				
Interest expense	(268)	(634)	(98)	(455)
Other income (expense), net	(51)	(418)	(70)	164
Total other expense, net	(319)	(1,052)	(168)	(291)
Loss before income taxes	$ (6,584)	$ (14,353)	$ (2,658)	$ (11,439)
Income tax benefit	$ —	$ —	$ —	$ 477
Net loss and other comprehensive loss	$ (6,584)	$ (14,353)	$ (2,658)	$ (10,962)

Comparison of the Three Months Ended March 31, 2020 and 2021

The following table summarizes our results of operations for the for three months ended March 31, 2020 and 2021 (In thousands):

Revenue

	For the Three Months Ended March 31,			
	2020	2021	$ Change	% Change
Revenues				
Technology development revenue	$ 525	$ 940	$ 415	79 %
Collaboration revenue	47	123	76	162
Total revenues	$ 572	$ 1,063	$ 491	86 %

Total revenue was $1.1 million for the three months ended March 31, 2021 compared to $0.6 million for the three months ended March 31, 2020, representing an increase of $0.5 million, or 86%.

Technology development revenue increased by $0.4 million, or 79%, for the three months ended March 31, 2021 compared to the three months ended March 31, 2020, driven by an increase in the number of technology development agreements and the achievement of additional project-based milestones under such agreements during the period.

Collaboration revenue increased by $0.1 million, or 162%, for the three months ended March 31, 2021 compared to the three months ended March 31, 2020, as a result of achieving a significant milestone under the JMA with KBI in 2020 resulting in a milestone payment and prospective revenue recognition.

Operating Expenses

	For the Three Months Ended March 31,			
	2020	2021	$ Change	% Change
Operating expenses				
Research and development	1,907	7,050	5,143	270 %
Selling, general and administrative	971	4,685	3,714	382 %
Depreciation and amortization	184	476	292	159 %
Total operating expenses	$ 3,062	$ 12,211	$ 9,149	299 %

Research and development

Research and development expenses increased by $5.1 million, or 270%, from the three months ended March 31, 2020 to the three months ended March 31, 2021. The increase was generally driven by increased costs associated with increased technology development activity with our partners and increased costs associated with continued platform development. These increased costs were primarily attributable to increased headcount and related personnel costs in the amount of $2.6 million, increased stock-based compensation from the phantom unit exchange and equity grants in the ordinary course in the amount of $1.1 million, increases in facility overhead and administrative expenses of $0.4 million and increased costs from lab operations in the amount of $1.1 million specifically for our technology development agreements and internal research activities.

Selling, General and Administrative Expenses

Selling, general, and administrative expenses increased by $3.7 million, or 382%, from the three months ended March 31, 2020 to the three months ended March 31, 2021. The increase was primarily driven by increased headcount and related personnel and recruitment costs in the amount of $1.5 million, increased stock-based compensation from the phantom unit exchange and equity grants in the ordinary course in the amount of $1.1 million and increased professional service fees in the amount of $0.8 million.

Depreciation and amortization

Depreciation and amortization expense increased by $0.3 million, or 159%, from the year ended March 31, 2020 to March 31, 2021. The increase was primarily due to the increased purchases of lab equipment necessary to complete our increased level of technology development agreements and research and development.

Other Expenses

	For the Three Months Ended March 31,			
	2020	**2021**	**$ Change**	**% Change**
Other income (expense)				
Interest expense	(98)	(455)	$ (357)	364 %
Other income (expense), net	(70)	164	$ 234	(334)%
Total other expense, net	$ (168)	$ (291)	$ (123)	73 %

Interest Expense

Interest expense, was $0.5 million for the three months ended March 31, 2021 compared to $0.1 million for the three months ended March 31, 2020, representing an increase of $0.4 million, or 364%. We increased borrowings on our term debt in May 2020, which led to an increase in interest expense. In addition, we incurred additional interest expense in connection with finance leases of additional laboratory equipment as we expanded our laboratory capacity from 2020 through 2021. We also recognized increased interest expense related to the convertible promissory notes issued in March 2021.

Other Income (Expense), net

Other income (expense), net, increased by $0.2 million, or (334)%, from the three months ended March 31, 2020 to the three months ended March 31, 2021. The increase was primarily driven by recognition of a gain on extinguishment for the forgiveness of our PPP loans in the amount of $0.6 million, offset by a change in the preferred stock warrant liability's fair value in the amount of $0.5 million.

Comparison of the Years Ended December 31, 2019 and 2020

The following table summarizes our results of operations for the years ended December 31, 2019 and 2020 (In thousands):

Revenue

	For the Years Ended December 31,			
	2020	2019	$ Change	% Change
Revenues				
Technology development revenue	$ 4,117	$ 2,044	$ 2,073	101 %
Collaboration revenue	663	16	647	4,044 %
Total revenues	$ 4,780	$ 2,060	$ 2,720	132 %

Total revenue was $4.8 million for the year ended December 31, 2020 compared to $2.1 million for the year ended December 31, 2019, representing an increase of $2.7 million, or 132%.

Technology development revenue increased by $2.1 million, or 101%, for the year ended December 31, 2020 compared to the year ended December 31, 2019, driven by an increase in the number of technology development agreements and the achievement of additional project-based milestones under such agreements during the period.

Collaboration revenue increased by $0.6 million, or 4044%, for the year ended December 31, 2020 compared to the year ended December 31, 2019 as a result of achieving a significant milestone under the JMA with KBI, entered into in December 2019.

Operating Expenses

	For the Years Ended December 31,			
	2020	2019	$ Change	% Change
Operating expenses				
Research and development	11,448	4,311	7,137	166 %
Selling, general and administrative	5,502	3,523	1,979	56 %
Depreciation and amortization	1,131	491	640	130 %
Total operating expenses	$ 18,081	$ 8,325	$ 9,756	117 %

Research and development

Research and development expenses increased by $7.1 million, or 166%, from the year ended December 31, 2019 to the year ended December 31, 2020. The increase was generally driven by increased costs associated with increased technology development activity with our partners and increased costs associated with continued platform development. These increased costs were primarily attributable to increased headcount and related personnel costs in the amount of $2.7 million, increases in facility overhead and administrative expenses in the amount of $0.5 million, and increased costs from lab operations in the amount of $3.7 million.

Selling, General and Administrative Expenses

Selling, general, and administrative expenses increased by $2.0 million, or 56%, from the year ended December 31, 2019 to the year ended December 31, 2020. The increase was primarily driven by increased headcount and related personnel and recruitment costs in the amount of $1.9 million

and increased professional service fees in the amount of $0.5 million, offset by a reduction in marketing costs of $0.5 million.

Depreciation and amortization

Depreciation and amortization expense increased by $0.6 million, or 130%, from the year ended December 31, 2019 to December 31, 2020. The increase was primarily due to the increased purchases of lab equipment necessary to complete our increased level of technology development agreements.

Other Expenses

	For the Years Ended December 31,			
	2020	**2019**	**$ Change**	**% Change**
Other income (expense)				
Interest expense	(634)	(268)	$ (366)	137 %
Other expense, net	(418)	(51)	$ (367)	720 %
Total other expense, net	$ (1,052)	$ (319)	$ (733)	230 %

Interest Expense

Interest expense, was $0.6 million for the year ended December 31, 2020 compared to $0.3 million for the year ended December 31, 2019, representing an increase of $0.4 million, or 137%. We increased borrowings on our term debt in May 2020, which led to an increase in interest expense. In addition, we incurred additional interest expense in connection with finance leases of additional laboratory equipment as we expanded our laboratory capacity from 2019 through 2020.

Other Expense, net

Other expense, net, increased by $0.4 million, or 720%, from the year ended December 31, 2019 to the year ended December 31, 2020. The increase was primarily driven by an adjustment to the preferred stock warrant liability's fair value.

Pro Forma Information

Immediately prior to the completion of this offering, all outstanding shares of our redeemable convertible preferred stock will automatically convert into shares of our common stock assuming the sale of shares in this offering at the assumed public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. The pro forma basic and diluted net loss per share for the year ended December 31, 2020 and the three months ended March 31, 2021 were computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later. Pro forma net loss per share does not include the shares expected to be sold in this offering.

The following table sets forth the computation of the pro forma basic and diluted net loss per share of common stock for the periods presented: (in thousands, except share and per share data)

	For the Year Ended December 31, 2020	For the Three Months Ended March 31, 2021
Numerator:		
Net loss	$ (14,353)	$ (10,962)
Adjustment of redeemable convertible preferred stock and units	(34,336)	—
Cumulative undeclared preferred stock dividends	(780)	(995)
Net loss available to common stockholder and unitholders	$ (49,469)	$ (11,957)
Denominator:		
Weighted-average common shares outstanding	4,691,020	5,140,648
Weighted-average redeemable convertible preferred stock		
Weighted-average convertible debt		
Pro forma weighted-average shares outstanding, basic and diluted	4,691,020	5,140,648
Pro forma net loss per share, basic and diluted		

Liquidity and Capital Resources

Overview

As of March 31, 2021, we had $180.8 million of cash and cash equivalents. As of December 31, 2020, we had $69.9 million of cash and cash equivalents.

We have incurred net operating losses since inception. As of March 31, 2021, our accumulated deficit was $101.0 million. As of December 31, 2020, our accumulated deficit was $90.1 million. To date, we have funded operations through issuances and sales of equity securities and debt, in addition to revenue generated from our technology development agreements. We believe that our existing cash and cash equivalents will be sufficient to meet our operating expenses, working capital and capital expenditure needs over at least the next 12 months following the date of this prospectus.

Our future capital requirements will depend on many factors, including, but not limited to our ability to raise additional capital through equity or debt financing, our ability to successfully secure additional partnerships under contract with new partners and increase the number of programs covered under contracts with existing partners, the successful preclinical and clinical development by our partners of product candidates generated using our Integrated Drug Creation Platform and the successful commercialization by our partners of any such product candidates that are approved. If we are unable to execute on our business plan and adequately fund operations, or if our business plan requires a level of spending in excess of cash resources, we may be required to negotiate partnerships in which we receive greater near-term payments at the expense of potential downstream revenue. Alternatively, we may need to seek additional equity or debt financing, which may not be available on terms acceptable to us or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants restricting our ability to take specific actions, such as incurring additional debt, selling or licensing our assets, making product acquisitions, making capital expenditures, or declaring dividends. If we are unable

to generate sufficient revenue or raise additional capital when desired, our business, financial condition, results of operations and prospects would be adversely affected.

Sources of Liquidity

Since our inception, we have financed our operations primarily from the issuance and sale of our redeemable convertible preferred stock, borrowings under long-term debt agreements, and to a lesser extent, cash flow from operations.

Redeemable convertible preferred stock

Through March 31, 2021 and December 31, 2020, we have raised a total of $104.3 million and $99.4 million, respectively, from the issuance of redeemable convertible preferred stock, net of issuance costs. In 2020, we issued shares of Series E redeemable convertible preferred stock for net proceeds of $64.7 million. In 2021, we issued additional shares of Series E redeemable convertible preferred stock for net proceeds of $4.9 million.

Bridge Bank Loan and Security Agreement

In June 2018, we entered into a Loan and Security Agreement with Bridge Bank. We initially borrowed the first tranche of $0.3 million in June 2018. We increased our borrowings to $3.0 million in March 2019, and to $5.0 million in May 2020. As of March 31, 2021, we had borrowed $5.0 million in outstanding principal under the facility. The loan matures in May 2022, at which time all outstanding principal and accrued and unpaid interest is due and payable. This loan is secured by substantially all our tangible assets; intellectual property is excluded from this secured collateral, but is subject to a negative pledge in favor of Bridge Bank.

Convertible notes

In March 2021, we issued $125.0 million aggregate principal amount of Convertible Notes to certain existing and new investors. The Convertible Notes are convertible into our preferred shares or common shares under certain circumstances or qualified financings, including upon the closing of this offering. The Convertible Notes converted upon the closing of this offering will convert at a price per share equal to the lower of (a) 82% of the initial public offering price or (b) a price determined based on the pre-money valuation of $1.5 billion divided by the total outstanding shares of the common stock immediately prior to this offering, as calculated on as converted and fully diluted basis as set forth in the Convertible Notes.

Cash Flows

The following summarizes our cash flows for the years ended December 31 and three months ended March 31 (In thousands):

	For the Years Ended December 31,		For the Three Months Ended March 31,	
	2019	**2020**	**2020**	**2021**
Net cash provided by (used in)				
Operating activities	$ (6,032)	$ (10,970)	$ (2,429)	$ (7,285)
Investing activities	(1,089)	(2,171)	(189)	(8,876)
Financing activities	12,706	70,973	566	129,576
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 5,585	$ 57,832	$ (2,052)	$ 113,415

Cash Flows from Operating Activities

In the three months ended March 31, 2021, net cash used in operating activities was $7.3 million and consisted primarily of a net loss of $11.0 million adjusted for non-cash items, including

depreciation and amortization expense of $0.5 million, stock-based compensation of $2.2 million, gain on extinguishment of our PPP loan of $0.6 million, an increase to our preferred stock warrant liability of $0.5 million and was partially offset by a net decrease in operating assets and liabilities in the amount of $1.7 million.

In the three months ended March 31, 2020, net cash used in operating activities was $2.4 million and consisted primarily of a net loss of $2.7 million adjusted for non-cash items, including depreciation and amortization expense of $0.2 million and an increase to our preferred stock warrant liability of $0.1 million.

In the year ended December 31, 2020, net cash used in operating activities was $11.0 million and consisted primarily of a net loss of $14.4 million adjusted for non-cash items, including depreciation and amortization expense of $1.1 million, loss on disposal of assets of $0.4 million, stock-based compensation of $0.4 million, an increase to our preferred stock warrant liability of $0.5 million and net increase in operating assets and liabilities in the amount of $1.0 million.

In the year ended December 31, 2019, net cash used in operating activities was $6.0 million and consisted primarily of a net loss of $6.6 million adjusted for non-cash items, including depreciation and amortization expense of $0.5 million, and was partially offset by a net decrease in operating assets and liabilities in the amount of $0.1 million.

Cash Flows from Investing Activities

In the three months ended March 31, 2021, net cash used in investing activities was $8.9 million. The net cash used resulted primarily from purchases of lab equipment and leasehold improvements of $6.4 million as we expanded our operations and overall capacity and cash paid as part of our acquisition of Denovium in January 2021 of $2.5 million.

In the three months ended March 31, 2020, net cash used in investing activities was $0.2 million primarily from purchases of lab equipment.

In the year ended December 31, 2020, net cash used in investing activities was $2.2 million primarily from purchases of lab equipment.

In the year ended December 31, 2019, net cash used in investing activities was $1.1 million primarily from purchases of lab equipment.

Cash Flows from Financing Activities

In the three months ended March 31, 2021, net cash provided by financing activities was $129.6 million. The net cash provided resulted primarily from the issuance of Series E redeemable convertible preferred stock, net of issuance costs, in the amount of $4.9 million, the issuance of $125.0 million of convertible promissory notes in March 2021, and was partially offset by principal payments made for leased equipment under finance leases in the amount of $0.4 million.

In the three months ended March 31, 2020, net cash provided by financing activities was $0.6 million. The net cash provided resulted primarily from the issuance of Series D redeemable convertible preferred units, net of issuance costs, in the amount of $1.0 million, and was partially offset by principal payments made toward our term debt in the amount of $0.3 million and for principal payments made for leased equipment under finance leases in the amount of $0.1 million.

In the year ended December 31, 2020, net cash provided by financing activities was $71.0 million. The net cash provided resulted primarily from the issuance of redeemable convertible preferred stock and units, net of issuance costs, in the amount of $69.3 million, the issuance of long-term debt in the amount of $2.6 million, proceeds from our PPP loan in the amount of $0.6 million and was partially offset by principal payments made toward our long-term debt in the amount of $0.5 million and for principal payments made for leased equipment under finance leases in the amount of $1.1 million.

In the year ended December 31, 2019, net cash provided by financing activities was $12.7 million. The net cash provided resulted primarily from the issuance of redeemable convertible preferred units, net of issuance costs, in the amount of $10.3 million, the issuance of long-term debt in the amount of $2.8 million, and was partially offset by principal payments made toward our long-term debt in the amount of $0.1 million and for principal payments made for leased equipment under finance leases in the amount of $0.3 million.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of March 31, 2021 (in thousands):

	<1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years
Debt obligations, including interest	$ 917	$ 139,648	$ 452	$ —
Operating lease commitments	1,444	4,385	4,008	4,751
Finance lease commitments	1,499	3,110	3,110	—
	$ 3,860	$ 147,143	$ 7,570	$ 4,751

The following table summarizes our contractual obligations as of December 31, 2020 (in thousands):

	<1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years
Debt obligations, including interest	$ 903	$ 3,348	$ 899	$ —
Operating lease commitments	1,318	3,658	3,233	501
Finance lease commitments	1,784	2,606	495	—
	$ 4,005	$ 9,612	$ 4,627	$ 501

Income taxes

Our effective income tax rate was 4% for the first three months of 2021 and 0% in the years ended December 31, 2019 and 2020. The effective income tax rates reflect the impact of non-deductible expenses, state and local taxes and tax credits. Benefit from income taxes in the three months ended March 31, 2021 consists of the release of the valuation allowance on net deferred tax assets triggered by the deferred tax liabilities recorded as a result of our acquisition of Denovium in January 2021.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements and do not have holdings in any variable interest entities.

Internal Control over Financial Reporting

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles (GAAP). Under standards established by the Public Company Accounting Oversight Board (PCAOB) a deficiency in internal control over financial reporting exists when the design or operation of a control does not allow management or personnel, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. The PCAOB defines a material weakness as a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented, or detected and corrected, on a timely basis.

While we and our independent registered public accounting firm did not and were not required to perform an audit of our internal control over financial reporting, in connection with the audits of our consolidated financial statements included elsewhere in this prospectus, we and our independent registered public accounting firm identified material weaknesses related to there being an insufficient complement of accounting and finance personnel with the necessary U.S. GAAP technical expertise to timely identify and account for complex or non-routine transactions.

Under standards established by the PCAOB, a material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis.

We are working to remediate the material weakness and are taking steps to strengthen our internal control over financial reporting through the hiring of additional finance and accounting personnel. With the additional personnel with the requisite technical knowledge and skills, we intend to take appropriate and reasonable steps to remediate the material weakness through the implementation of appropriate segregation of duties, formalization of accounting policies and controls and retention of appropriate expertise for complex accounting transactions. However, we cannot assure you that these measures will significantly improve or remediate the material weakness described above.

The actions that we are taking are subject to ongoing executive management review, and will also be subject to audit committee oversight. If we are unable to successfully remediate the material weakness, or if in the future, we identify further material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

Our cash and cash equivalents consist of cash in readily available checking accounts and money market funds. As a result, the fair value of our portfolio is relatively insensitive to interest rate changes.

Critical Accounting Polices and Significant Judgments and Estimates

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

While our significant accounting policies are described in more detail in Note 2 to our financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our financial statements.

Revenue recognition

We recognize revenue as control of our products and services are transferred to the customer in an amount that reflects the consideration expected to be received in exchange for those products and

services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when (or as) the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. We consider a performance obligation satisfied once control of a good or service has been transferred to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. Technology development revenue includes revenue associated with the development and technology readiness phases of our technology development agreements. We refer to our customers as “partners” when describing their relationship in an agreement.

Technology development revenue

Our Technology Development Agreements (TDAs) generally include multiple phases of Cell Line Development (CLD) such as library design, assay development, strain screening, fermentation optimization, purification, and analytics that all represent a single performance obligation. These agreements may include options for additional goods and services such as readying the technology to transfer to the partner and licensing terms. The transaction prices for these arrangements include fixed consideration for the single performance obligation as well as variable consideration for success-based achievements. Any variable consideration is constrained to the extent that it is probable that a significant reversal of cumulative revenue will not occur. Depending on the specific terms of the arrangement, we either recognize revenue over time or at a point in time. While there is no alternative use to us for the asset created, the agreement’s terms vary as to whether an enforceable right to payment for performance completed as of that date exists. Primarily all of our contracts include an enforceable right to payment.

We measure progress toward the completion of the performance obligations satisfied over time using an input method based on an overall estimation of the effort incurred to date at each reporting period to satisfy a performance obligation. This method provides an appropriate depiction of completed progress toward fulfilling our performance obligations for each respective arrangement. In certain technology development agreements that require a portion of the contract consideration to be received in advance at the commencement of the contract, such advance payment is initially recorded as a contract liability.

KBI BioPharma, Inc. Collaboration Agreement

In December 2019, we executed a four-year Joint Marketing Agreement (JMA) with KBI BioPharma, Inc. (KBI) to co-promote technologies through joint marketing efforts. The JMA provides for a non-refundable upfront payment of $0.75 million and milestone payments of $2.75 million in the aggregate, of which $2.25 million had been received as of December 31, 2020 and March 31, 2021. Upfront payments that relate to ongoing collaboration efforts required throughout the contract term such as joint marketing are recognized ratably throughout the contract term. We fully constrain revenue associated with the milestone payments until the specified milestones are achieved. Additionally, KBI is obligated to make royalty payments to us during the fourth year of the JMA representing a percentage of its sales generated through the arrangement. Any costs incurred to KBI through the duration of the JMA are recognized as a reduction to collaboration revenue in the period in which they are incurred.

Business combinations

We utilize the acquisition method of accounting for business combinations and allocate the purchase price of an acquisition to the various tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. We establish fair value using either the replacement cost approach or the income approach based upon a discounted cash flow model. The replacement cost approach measures the value of an asset by the cost to reconstruct or replace it with another of

like utility. The income approach requires the use of many assumptions and estimates including future revenues and expenses, as well as discount factors and income tax rates. Other estimates include:

- The use of carrying value as a proxy for fair values of fixed assets and liabilities assumed from the target; and
- Fair values of intangible assets and contingent consideration.

While we use our best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business acquisition date, these estimates and assumptions are inherently uncertain and subject to refinement. As a result, during the purchase price measurement period, which is no more than one year from the business acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Business combinations also require us to estimate the useful life of certain intangible assets that we acquire and this estimate requires significant judgment.

Stock-Based Compensation

We measure stock options and other stock-based awards granted to employees, directors and non-employees based on their fair value on the date of grant and recognize compensation expense of those awards over the requisite service, or vesting period of the respective award. We recognize the impact of forfeitures on stock-based compensation expenses as forfeitures occur. We apply the straight-line method of expense recognition to all awards with only service-based vesting conditions.

To determine the estimated fair value of our stock options on the grant date, we use the Black-Scholes option pricing model, which required the input of highly subjective assumptions and generally requires significant judgment. These assumptions include:

- Fair Value of Common Stock. See the subsection titled “—Common Stock Valuation” below.
- Expected Term. The expected term represents the period that the options granted are expected to be outstanding. The expected term of stock options issued is determined using the simplified method (based on the average of the vesting term and the original contractual term) as we have concluded that our stock option exercise history does not provide a reasonable basis upon which to estimate expected term.
- Expected Volatility. Given that our common stock is privately held, there is no active trading market for our common stock. We derived the expected volatility from the average historical volatilities over a period approximately equal to the expected term of comparable publicly traded companies within our peer group that were deemed to be representative of future stock price trends as we have limited trading history for our common stock. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.
- Risk-Free Interest Rate. The risk-free interest rate is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of the options.
- Expected Dividend Yield. We have never paid dividends on our common stock and do not anticipate paying any dividends in the foreseeable future. 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. Certain of such 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 $0.0 million and $0.4 million for the years ended December 31, 2019 and 2020, respectively, compared to 2.2 million for the three months ended March 31, 2021. As of December 31, 2020, there was $0.7 million of total unrecognized stock-based compensation expense related to unvested stock options which we expect to recognize over a remaining weighted-average period of 3.8 years. As of March 31, 2021, there was $4.8 million of total unrecognized stock-based compensation expense. Prior to the LLC Conversion, we granted phantom units awards to employees and non-employees. Upon the occurrence of a liquidity event, 100% of phantom units would vest. Upon a liquidity event, the phantom unit holders were entitled to a payment equal to the fair value of common units less a strike price. The payment is to be made in the same form of consideration as received by other unit holders as a result of the liquidity event. Other than this payment upon a liquidity event, Phantom units provide no economic value and they provide no voting rights. Due to the presence of an exercise condition contingent upon a liquidity event, the Company determined that it was not probable that the phantom units would become exercisable and no compensation expense has been recognized as of December 31, 2020. Following the LLC Conversion, and subsequent to December 31 2020, the phantom units were exchanged for a combination of cash payment rights, stock appreciation rights (SARs), and stock options granted under the 2020 Plan. The cash payment rights and SARs are contingent upon a liquidity event, which is not probable of occurring. Therefore, no compensation cost has been recognized as of December 31, 2020 or March 31, 2021.

We expect to continue to grant stock options and other equity-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 intrinsic value of all outstanding options as of December 31, 2020 was $ million 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), of which approximately $ million was related to vested options and approximately $ million was related to unvested options.

The intrinsic value of all outstanding options as of March 31, 2021 was $ million 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), of which approximately $ million was related to vested options and approximately $ million was related to unvested options.

Determination of the Fair Value of Common Stock

We are required to estimate the fair value of the common stock underlying our stock-based awards when performing fair value calculations using the Black-Scholes option pricing model. Because our common stock is not currently publicly traded, the fair value of the common stock underlying our stock-based awards has been determined on each grant date by management and approved by our board of directors, considering our most recently available third-party valuation of common shares. All options to purchase shares of our common stock are intended to be granted with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known to us on the date of grant.

Our determination of the value of our common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants (AICPA), Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation (AICPA Practice Aid). In addition, our board of directors considered various objective and subjective factors to determine the fair value of our common stock, including:

- valuations of our common stock performed by third-party valuation specialists;

- the anticipated capital structure that will directly impact the value of the currently outstanding securities;
- our results of operations and financial position;
- the composition of, and changes to, our management team and board of directors;
- the lack of liquidity of our common stock as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;
- U.S. and global economic conditions;
- the likelihood of achieving a liquidity event for the holders of our common stock, such as an IPO or a sale of our company, given prevailing market conditions; and
- the market value and volatility of comparable companies.

The AICPA Practice Aid prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of our future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics.

In accordance with the AICPA Practice Aid, we considered the various methods for allocating the enterprise value to determine the fair value of our common stock at the valuation date. Under the option pricing method (OPM), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The value of the common stock is inferred by analyzing these options. The probability weighted expected return method (PWERM) is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class. In connection with the preparation of our condensed consolidated financial statements for the years ended December 31, 2020 and 2019, we reassessed our estimate of fair value of our common stock for financial reporting purposes. Following this reassessment, it was determined that for financial reporting purposes the fair value of our common stock was higher than the fair value determined by the board of directors at the time of grant on October 28, 2020. The fair value for financial reporting purposes was determined to be $5.14 per share, compared to a value of $3.63 per share approved by the board of directors. Our third-party valuation reports estimated a valuation of our common stock of $12.31 as of March 31, 2021.

Starting in 2020, we used a hybrid method to determine the estimated fair value of our common stock, which included both the OPM and PWERM models.

Recent Accounting Pronouncements

See Note 2 to our Financial Statements “Summary of Significant Accounting Policies—Recently Issued Accounting Pronouncements” for more information.

Emerging Growth Company Status and JOBS Act Accounting Election

We qualify as an “emerging growth company” as defined in the JOBS Act. An emerging growth company may take advantage of reduced reporting requirements that are not otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements on the effectiveness of our internal controls over financial reporting;
- not being required to comply with any requirement that may be adopted by the PCAOB regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements (auditor discussion and analysis); and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

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

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

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, until those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an emerging growth company or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which we will adopt the recently issued accounting standard.

Letter from Sean McClain, founder & CEO

Creating new possibilities is at the core of Absci's DNA. We fully embrace my personal mantra: *"believe in the impossible."*

Belief in the impossible can take you many places. Ten years ago, it took me to a 200-square-foot basement lab in Portland, Oregon, which I outfitted with surplus and second-hand equipment. I set out to use the universal code of life - DNA - to program living organisms - specifically *E. coli* bacteria - to make valuable protein products, the same way a software engineer would write a piece of useful code.

Why proteins? Life as we know it depends on the proteins encoded by DNA. Proteins do all the heavy lifting to make life happen. They carry our oxygen, move our bodies, turn light into vision, and spark ideas. Over the last several decades, humans have been harnessing proteins to fight diseases. We've seen the protein-based drug landscape grow exponentially. Just a few decades ago, insulin was isolated from pig or cow pancreases to treat patients with diabetes. Now, insulin is routinely and reliably produced in the lab. A wealth of other protein-based drugs have since been generated in labs and deployed to treat diseases ranging from breast cancer to arthritis to COVID-19. These only scratch the surface of the medical potential for proteins as therapeutics. Biopharmaceutical pipelines are full of up-and-coming biologics, and the industry has nearly *boundless ideas for new proteins* that have yet to enter clinical development.

To treat patients with these new proteins, we first have to make them, and proteins are tricky to make. The genetic code for translating DNA sequences into proteins - which are intricately folded amino acid chains - has been well understood since the 1960s. That said, the process of actually synthesizing proteins presents challenges. It relies on an evolved set of cellular machinery -- requiring, in essence, "living factories."

Queue *E. coli*. Back when Genentech was still a startup, it achieved the breakthrough of producing human insulin in *E. coli* bacteria. But traditional *E. coli* fell short when it came to making more complex human proteins, and the majority of biologics today, including monoclonal antibodies, rely on mammalian cells - Chinese hamster ovary (CHO) cells - for manufacturing. Mammalian cells are costly to maintain, slow and intractable to engineer, and although they have proven capable of making human antibodies, they are not readily adaptable to making new types of proteins.

While doing undergraduate research in molecular and cellular biology, I asked a fateful question: *what if* I could engineer *E. coli* to make complex mammalian proteins such as monoclonal antibodies? This feat was dismissed as impossible in the 1980s and 1990s, but armed with the molecular biology tools of the 2010s, and driven by my belief in the impossible and a willingness to try hard things and fail, and come back the next day and fail again, I stepped onto the path that has led to the Absci of today.

What *Absci is pioneering* is not just a way to use *E. coli* to make complex proteins. We've reimagined the entire process of biopharmaceutical drug discovery and cell line development. By tackling challenges that others dismiss as impossible, we are pursuing our mission to *change the world, one protein at a time*.

We have built a platform with the potential to create better medicines, faster and more efficiently. We believe we can expand biologic possibilities, generate entirely new types of protein-based drugs, and give the best potential drug designs the opportunity to become therapeutic realities for patients. By marrying cutting-edge artificial intelligence with synthetic biology, we are stepping beyond the constraints of nature's evolutionary trajectory, opening up a new sequence space for potential proteins, and even adding new letters to the amino acid alphabet to *realize new possibilities* for drug discovery.

This is only the beginning. We envision a future in which we identify novel disease-specific targets and design optimized lead drugs and cell lines to manufacture them all *at the click of a button*. The COVID-19 mRNA vaccines have demonstrated the power of using well-understood rules of genetic coding to shortcut discovery timelines. We believe that deep learning models trained on the right data have the potential to develop comprehensive understanding of biologic drug function and target specificity, and thus transform the protein therapeutic discovery process to a similar magnitude. We intend to generate the right data, train the comprehensive models, and realize the industry-transforming potential of *in silico drug creation*.

Absci is about more than breakthroughs in biopharmaceuticals—we're going from solving daunting challenges today to applying science, technology, and revolutionary thinking to out-evolve nature, revealing possibilities that would not otherwise exist. *We are forging paths* from *what if* to *what is* and translating *ideas* to *impact* at every step.

I'm grateful to everyone who has been part of our story so far, from those who've been with us as we've outgrown three lab spaces, to those who've more recently taken the leap to join our company and contribute to achieving our shared vision. Our extraordinary employees are the soul of Absci. We refer to ourselves as *unlimiters.* Our team is overflowing with incredibly talented, experienced, passionate people who are united around our mission. Every day we show up and relentlessly invent, run assays, manipulate DNA, load gels, program robots, grow bacteria, screen samples, code models, crunch numbers, purify proteins, manage facilities, file patents, and lead the way to new possibilities.

Thank you to everyone who has been part of our story—everyone whose drive, creativity, and belief in creating the impossible has gotten us to where we are today and will take to where we are going tomorrow. I am so excited for our next chapter.

Sean McClain

Business

Our Mission

Our mission is to change the world, one protein at a time. We founded Absci with the goal of creating better medicines and helping them reach patients sooner. We recognized the extraordinary medical and economic potential of protein-based drugs (biologics), but also the significant challenges the biopharmaceutical industry faces to both discover novel biologics and generate cell lines to manufacture them at commercial scale. We looked at the end game – getting better medicines to patients, faster — and asked: *how?* We built our technology to be that *how*.

We believe we are replacing the fragmented steps and inefficiencies of the conventional biologic drug discovery and cell line development processes with our fully integrated, end-to-end platform designed to create new and better biologics and accelerate their advancement into clinical trials and ultimately into the marketplace where they can serve patients. Combining innovative approaches, including synthetic biology, high-throughput single-cell screening, and deep learning artificial intelligence (AI), we seek to identify optimal drug candidates by exploring expansive protein sequence solution spaces — including considering sequences that nature's evolutionary trajectory has yet to propose. We believe our platform allows us to expand biological possibilities and generate proteins intractable to produce with other technologies to ensure the best drug candidates have the opportunity to become therapeutic realities for patients. Our goal is to enable the creation of better medicines by *Translating Ideas into Drugs.*

And we are just getting started. Proteins are everywhere making biology happen. We believe commercial applications for novel proteins extend far beyond the realm of therapeutics and into other industries including materials science, industrial chemicals, cosmetics, synthetic foods, and agriculture. Today, we are focused on bringing value to the biopharmaceutical industry and generating better medicines. Our near term vision is to enable discovery of novel, targeted biologic drug candidates, and the cell lines to manufacture them, with the click of a button. Looking ahead, we envision a future in which Absci will be the universal engine creating protein-based solutions to advance the bio-based economy, one protein at a time.

Overview

With our AI-powered Integrated Drug Creation Platform we enable the creation of novel biologics by unifying biologic drug discovery and cell line development into one simultaneous process. We leverage proprietary synthetic biology technologies and deep learning AI to predict, identify, design, construct, screen, select and scale production of novel biologic drug candidates, and learn from the data we generate. We believe our approach delivers disruptive efficiency, but more importantly enables our partners to create novel and human/AI-designed new-to-nature biologics (next-generation biologics).

While next-generation biologics have exciting medical potential and are a rapidly growing field of drug development, because their protein architectures (scaffolds or modalities) are biologically foreign, they present challenges for conventional biologic drug discovery and cell line development methods. These methods typically involve a linear series of steps to screen and select desired molecular parts and reformat them into their final protein scaffold, and subsequent laborious and often unsuccessful generation of a suitable manufacturing cell line. We are transforming the biologic drug discovery and cell line development processes by rapidly screening up to billions of drug candidates *in* the desired final protein scaffold that goes into patients and *in* the production cell line that scales up for clinical and commercial manufacturing.

We believe our platform integrates a fragmented set of processes and bypasses the molecular reformatting and cell line development challenges that can lead to inefficiencies and failures. To accomplish this, we use proprietary high-throughput single cell assays that can evaluate billions of

drug sequence variants, each within its production cell line, for target binding affinity, protein quality, and production level (titer). We also harness the large datasets we generate to train and refine our deep learning models which guide our protein and cell line designs and enable *in silico* optimization of multiple attributes.

We believe our platform is the only commercially available solution that allows for high-throughput screening for simultaneous biologic drug discovery and manufacturing cell line development for next-generation biologics. With our recent acquisition of Totient, we are expanding our platform to include identification of disease- and tissue-specific targets and fully human antibodies as enhancements to our Discovery applications. We believe our unique approach to biologic drug creation has the potential to significantly accelerate preclinical development timelines and expand therapeutic possibilities for the biopharmaceutical industry.

Our goal is to become the partner of choice for biologic drug discovery and cell line development. As a technology development company, we generate biologic drug candidates and production cell lines for our partners to develop; we do not conduct or sponsor preclinical validation studies or clinical trials or seek regulatory approvals for drug candidates. Our business model is to establish partnerships with biopharmaceutical companies and use our platform for rapid creation of next-generation biologic drug candidates and production cell lines. We expect our partnerships to provide us with the opportunity to participate in the future success of the biologics generated utilizing our platform, through potential milestone payments as well as royalties on sales by our partners of approved products. We aim to assemble economic interests in a diversified portfolio of partners' next-generation biologic drug candidates across multiple indications.

We currently have drug candidates in nine Active Programs (across seven current partners' preclinical or clinical pipelines) in which we have negotiated, or expect to negotiate upon completion of certain technology development activities, license agreements with potential downstream milestone payments and royalties. Eight of the Active Programs are focused on developing production cell lines for drug candidates that our partners (including Merck & Co., Inc. (Merck), Xyphos Biotechnology, an Astellas Company (Astellas), Alpha Cancer Technologies, Inc. and other undisclosed biotechnology companies) are developing (five preclinical, one Phase 1, one Phase 3, and one animal health), reflecting our 2018 commercialization of our Cell Line Development (CLD) applications. We have one Discovery program underway focused on lead optimization with Astellas, which we signed shortly after our December 2020 expansion of our platform to include our initial Discovery applications. The Active Programs include programs that are subject to ongoing technology development activities intended to determine if the program can be pursued by our partner for future clinical development, as well as any program for which our partner obtains and maintains a license to our technology to advance the program after completion of the technology development phase. There is no assurance, however, that our partners will advance any drug candidates that are currently the subject of Active Programs into further preclinical or clinical development or that our partners will elect to license our technologies upon completion of the technology development phase in a timely manner, or at all.

Over the last two decades, biologics have emerged as one of the fastest growing class of drugs, with the Evaluate Pharma data reflecting that they account for approximately $254 billion in sales worldwide and represent 12 of the top 20 selling therapeutics in 2020. The majority of recently-approved biologic drugs are monoclonal antibodies, but interest and investment are increasingly shifting towards the development of next-generation biologics, which we estimate, based on our analysis of the Evaluate Pharma data, account for 32% of biologics in Phase 1 clinical development today. Despite this increase, we believe that the biopharmaceutical industry remains constrained in pursuing these new biologic modalities because it lacks suitable approaches to efficiently create next-generation biologics. Existing solutions are largely limited to operating within the scope of what nature has already created. They are not adaptable to the full range of possible human-designed scaffolds or to the incorporation of non-standard amino acids (nsAAs) into the protein-of-interest. They do not effectively leverage AI either to derive and apply non-obvious insights across

the discovery and manufacturing process development value chain, or to explore potential drug sequences and structures that lie beyond nature's boundaries.

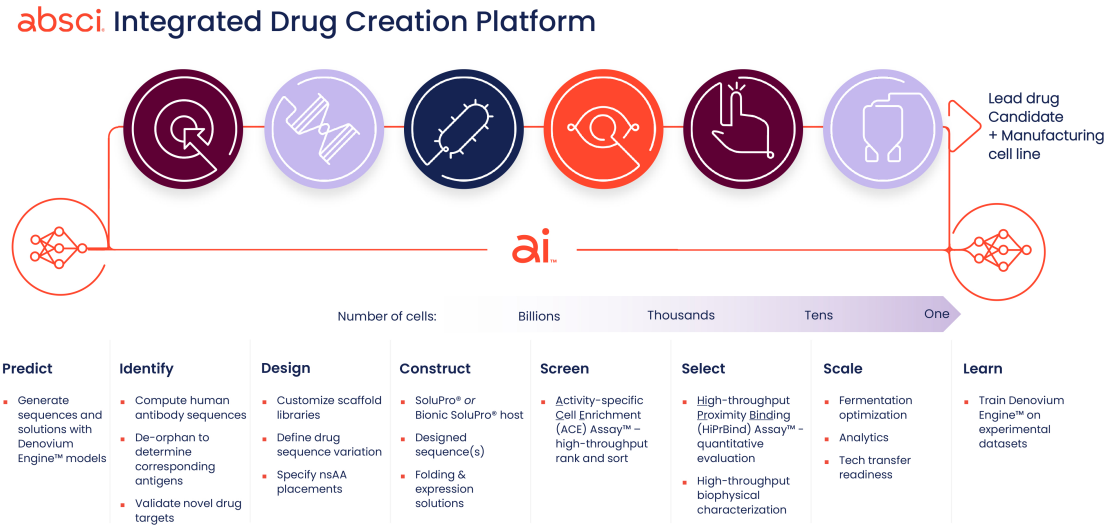
Our Integrated Drug Creation Platform enables novel target identification, and parallel discovery of next-generation biologics and with optimized production cell lines by uniquely incorporating engineered biodiversity, proprietary high-throughput single cell assays, and deep learning AI models. We use our platform to predict, identify, design, construct, screen, select and scale production of biologic drug candidates for our partners, and we learn from the data we generate. Our designs are AI-informed and our technology platform is scaffold-agnostic. Our AI leverages deep learning models that are trained on our growing datasets. Our datasets delineate detailed determinants of protein function and manufacturability across billions of single-cell experiments. Our single-cell experiments are performed in our patented production cell lines.

The foundational technologies that power our platform are:

- **SoluPro & Bionic SoluPro:** SoluPro is our patented bioproduction system based on bioengineered *E. coli* that we designed to be fundamentally good at making complex mammalian proteins. We further engineered our Bionic SoluPro to facilitate site-specific incorporation of nsAAs into what we call Bionic proteins. We believe our SoluPro cell lines unlock evolutionary opportunities by expanding the biological repertoire of proteins that can be produced to include new-to-nature proteins such as next-generation biologics.
- **Custom Scaffold Libraries:** We can design and generate up to billions of drug candidate sequence variants for each Discovery program. Our platform creates libraries in any scaffold our partner specifies, whether natural, pre-existing, or newly invented. These drug candidate sequence libraries are custom because they are specifically generated for each program and scaffold. We can also specify nsAA incorporation sites as we design these libraries.
- **Folding & Expression Solutions:** We curate a diverse collection of folding and expression solutions, which are genetic tools that we use to customize SoluPro and optimize production of the desired protein. We create up to billions of different cell lines and measure each cell's performance to find the solutions that work best for the protein-of-interest.
- **Breakthrough Assays:** Our proprietary Activity-specific Cell Enrichment (ACE) and High-Throughput Proximity Binding (HiPrBind) Assays allow us to evaluate and sort the millions to billions of drug sequences and cell line variants we generate. Tailored for each of our programs, our high-throughput assays can rank and sort billions of cells based on desired parameters such as target affinity, protein quality, and titer. We capture datasets that have the potential to provide us with highly relevant insights about protein function and manufacturability in our system and beyond.
- **Denovium Engine:** Our Denovium Engine is an AI technology that includes deep learning computational models of protein function. The Denovium Engine models, trained on our high-quality data that are particularly relevant to our system, generate non-obvious predictions about the impact of amino acid sequence and cell line engineering parameters on a given protein's function and manufacturability. In the future, we expect to use AI to inform the choice of drug scaffold, define the scope of sequence variants to generate, and design the cell line attributes. We believe this technology may eventually enable us to optimize complex solution space fully *in silico* without the need to physically screen billions of options.
- **Computational Antibody & Target Discovery:** Our computational antibody and target discovery technology is a bioinformatics and machine learning-based platform that allows us to computationally reconstruct sequences of human antibodies and other disease-specific

proteins from bulk RNA sequencing data (RNA-Seq). We can retrospectively select samples from patients who experienced distinct immune responses and assemble sequences of the most highly expressed monoclonal antibodies present in the tissue of interest. We use these antibodies to identify corresponding target proteins (antigens), and thus we uncover both novel and previously recognized immunogenic targets. We are building a library of tissue- and disease-specific target antigens paired with unique human derived antibodies. Our approach is extensible to identifying other disease state-specific macromolecules relevant to therapeutic responses, such as T-cell receptors.

These foundational technologies work together as our Integrated Drug Creation Platform. The diagram below depicts the core activities we accomplish on our platform.



Our process using our Integrated Drug Creation Platform involves the following steps:

- **Predict:** We expect to use our Denovium Engine AI models to generate non-obvious predictions about what are likely to be optimal drug candidate sequences and cell line designs for any protein-of-interest. The AI combines the collective learnings available in public databases with our own experimental data specifically documenting protein functionality and manufacturability factors relevant to our system. Importantly, our Denovium Engine considers sequences and solutions that it has not seen before, and it may predict entirely new-to-nature protein scaffold elements and sequence motifs or design new biologic modalities. In addition, with data we produce through computational antibody and target discovery technology, we intend to train our Denovium Engine to predict likely drug targets from antibody or other binding protein sequences.
- **Identify:** Starting with disease tissue samples or bulk RNA sequencing data of interest to our partners, we expect to apply our newly acquired computational antibody and target discovery technology to reconstruct sequences of human monoclonal antibodies that are prevalent in the tissue. With our SoluPro expression system and adapted versions of our ACE Assay we believe we can rapidly de-orphan the antibodies, using them as probes to identify their corresponding antigens. Not only are the antigens, whether known or novel, of potential interest as therapeutic targets, but also the fully human antibody sequences themselves may serve as starting points for lead drug candidate design.

- **Design:** Based on the program goals, we design custom libraries of protein-of-interest variants in the desired scaffold architecture and specify any desired nsAA placements. Using our Denovium Engine models, we may recommend modifications to the scaffold architecture, as well as define the scope of protein variation to evaluate options beyond sequences that exist in nature. In addition, we also incorporate designs based on folding and expression solutions predicted as relevant by our Denovium Engine models. This entire step is accomplished *in silico*.
- **Construct:** Using synthetic biology approaches, we construct up to billions of genetically distinct SoluPro or Bionic SoluPro cells to evaluate. Each cell contains the instructions to make one version of the protein-of-interest, as well as a different assortment of folding and expression solutions.
- **Screen:** Our proprietary high-throughput ACE Assay allows us to evaluate and sort up to billions of cells. We collect subsets of the population of cells that express the best versions of the protein-of-interest (hits), based on target binding, protein quality, and titer. We also collect large datasets on the genetic determinants of protein function and manufacturability in our system that we use to train our Denovium Engine models.
- **Select:** With our HiPrBind Assay, using automated multiplexed plate-based methods, we grow micro-batches of each of the thousands of hits from the ACE Assay and perform quantitative characterization of protein function, quality, and titer. We also perform high-throughput biophysical characterization to collect additional data on relevant biophysical attributes that impact developability. We are able to select the best several candidates (leads) in their putative production cell lines for further analytics, as well as collect further data insights to enhance our Denovium Engine models.
- **Scale:** We optimize fermentation conditions for the selected lead strain(s) to demonstrate desired productivity, quality, and scalability. We perform comprehensive analytics on the lead drug candidate(s) for evaluation and technology transfer to our partners.
- **Learn:** Throughout our process, we generate large and complex datasets specifying determinants of protein function and manufacturability. We use these data to train our Denovium Engine to enable its models to make increasingly refined predictions for target identification, drug scaffold sequence variation, and cell line designs. Our goal is to train the deep learning models with enough data to be able to input a sequence of a new drug target and have the model output a unique, optimal drug scaffold sequence and cell line architecture that we construct and confirm: a process that we refer to as *de novo* biologic drug creation *in silico*.

Because of the flexibility of our platform, we can partner with biopharmaceutical companies to address specific challenges, or we can open up opportunities to create new modalities and generate lead drug candidates that previously had not been possible. Programs we undertake vary across the range of our capabilities, from novel target identification and *de novo* drug discovery in bespoke scaffolds incorporating nsAAs to development of optimized production systems for existing lead drug candidates. Our goal is to demonstrate the value of our fully integrated approach and expand our work with an increasing number of partners on broad multi-molecule discovery partnerships. We believe we offer a compelling value proposition to our partners by:

- Accelerating timelines from idea to drug candidate;
- Enabling the creation of new biologic modalities;
- Improving the production capability of next-generation biologics;
- Designing better drug candidates; and

- Raising biologics production yields and lowering manufacturing costs.

Our initial focus is on enabling the biopharmaceutical industry by transitioning biologic drug discovery and cell line development processes onto our Integrated Drug Creation Platform and providing access to an expanded solution space for drug creation. Over time we envision deploying our platform into other industries as we live by our mission of changing the world, one protein at a time.

Strategy

We believe we represent a new breed of biotechnology company, integrating powerful artificial intelligence with new synthetic biology technologies to create next-generation biologics. We aim to become a partner of choice to both large pharmaceutical companies and biotechnology companies to enable and empower discovery and cell line development capabilities for biologics. We intend to use our Integrated Drug Creation Platform to empower innovation by identifying new targets, creating new modalities, discovering next-generation biologics, driving efficiencies, broadening pipelines, and accelerating preclinical timelines.

Our strategy to accomplish this is as follows:

- **Enable the discovery and development of next-generation biologics and new modalities through our proprietary platform.** Our ability to design, construct and rapidly screen large populations of genetically distinct cells enables us to evaluate billions of unique protein variants and increase the probability of finding the most promising biologic drug candidate. We design and optimize new-to-nature modalities with insights from our Denovium Engine models. We also harness the power of nature, using synthetic biology approaches with our *E. coli* SoluPro strains to produce complex proteins and new modalities. Unlike other biologic drug discovery methods, we evaluate the variants of these desired proteins in the fully-constructed scaffold to enable creation of next-generation biologics while optimizing for target affinity as well as high-titer expression and scalable manufacturability from the beginning of the discovery process. We believe that our platform will empower our partners to bring new and better drugs to market.
- **Accelerate biologic drug discovery and cell line development by unifying these processes as "Integrated Drug Creation."** Our platform seamlessly integrates multiple steps across the biologic drug discovery and cell line development process and our foundational technologies that power our Integrated Drug Creation Platform improve efficiencies at each step. Our approach also has the flexibility to address challenges at specific points in the biologic drug discovery and cell line development process and enable our partners to pursue more efficient biologic drug discovery across expanded solution spaces. By accessing our platform, infrastructure and expertise, our partners have the potential to eliminate extended timelines, reduce costs associated with setting up biologic drug discovery applications and cell line process development, and advance their preclinical programs more efficiently.
- **Drive rapid adoption by becoming a partner of choice for large pharmaceutical companies and biotechnology companies.** Many large pharmaceutical companies and biotechnology companies are seeking a partner with technologies, resources and teams to enable next-generation biologic drug discovery and execute on early stage preclinical programs. We strive to form strong partnerships across our target partner base and to drive rapid market adoption through increased business development activities designed to gain new partners and expand our existing partnerships to cover additional programs. We believe our innovative approach and ability to create better biologics faster, along with the scalability of our platform, will enable us to build a diversified portfolio of potential milestone revenues and royalty streams from a variety of next-generation biologics across multiple indications.

- **Advance the promise of *in silico* drug creation by leveraging proprietary data and AI.** Our Denovium Engine AI learns with each new program we undertake. We are enhancing the predictive power of Denovium by training its deep learning models with our unique multi-dimensional data sets. With enough data and iterations, we aim to achieve *in silico* creation of novel drug candidates with desired pharmacologic attributes, in bespoke scaffolds, along with high titer production cell lines. With our computational antibody and target discovery technology, added through our acquisition of Totient, we will be expanding the content of our training datasets to develop models that understand immune protein interactions and determinants of antibody-antigen specificity. Our Denovium AI technology is the link that correlates business scale with speed and precision. The more partners we have, the more data we generate, the more Denovium learns. As Denovium gets smarter, we can create new and better biologic constructs for our partners faster.
- **Continuously invest in our platform to push the boundaries of science and unlock the untapped power of biology.** We intend to maintain our technological differentiation through investments in teams and technologies, and to continue bolstering our capabilities in areas such as bioinformatics, molecular sciences, biology and chemistry, computation, and protein engineering. We expect to grow and enhance our intellectual property portfolio to protect and secure the value of our innovations. Similar to our acquisitions of Denovium and Totient, we believe we will continue to evaluate strategic technology acquisitions that would be additive to expand and strengthen the capabilities of our platform and deepen our expertise in biologic drug discovery and cell line development.
- **Maintain an entrepreneurial, founder-led, scientifically rigorous, data-driven and inclusive corporate culture.** Our founder-led team lives by the mantra: *"believe in the impossible."* We are disrupting the pharmaceutical industry with bold ideas and fulfilling the promise of life-saving medicines for patients by *Translating Ideas into Drugs*. Each of our team members brings their energy, expertise, and enthusiasm to bear as we pursue the shared mission of changing the world, one protein at a time.

Industry

Over the last two decades, biologics have been at the forefront of medical advances in a wide range of disease areas including oncology, immunology, infectious and metabolic disease, and many more. Biologics have emerged as one of the fastest growing class of drugs. According to publicly available data aggregated by Evaluate Pharma, the global protein-based biologics market, which we define as including monoclonal antibodies (mAbs), monoclonal antibody conjugates and recombinant products, reached approximately $254 billion in 2020 and is expected to reach $418 billion by 2026, representing a compound annual growth rate of approximately 9%.

Fueled by the medical promise of protein-based drugs, the biopharmaceutical industry has continued to expand its horizons in terms of the different diseases targeted by biologic drug developers as well as the design and different modalities of biologics. The desire by drug developers to manipulate biological mechanisms to fight diseases, explore targets that have not yet been addressed, and succeed in conquering difficult-to-drug targets has led to the development of increasingly complex biologic modalities and the emergence of the field of next-generation biologics. As we define them, next-generation biologics comprise a broad class of new protein-based modalities designed by scientists rather than found in nature. They include modified antibodies such as antibody-drug conjugates and bispecific mAbs, scaffolds based on antibody parts such as Fabs, scFvs, and VHHs, hybrid fusion proteins including T-cell engagers, multivalents, cytokine derivatives, and biologics incorporating nsAAs, and any other new-to-nature protein-based drug imaginable. According to our analysis of Evaluate Pharma data, next-generation biologics currently make up approximately 32% of the Phase 1 protein-based biologics in development.

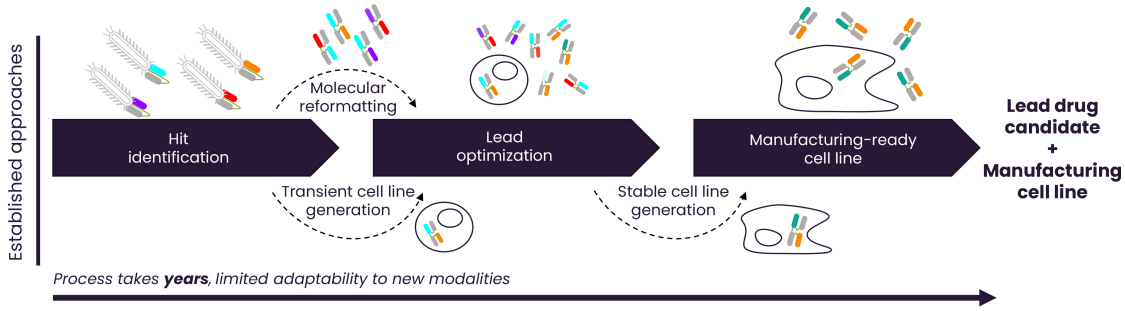
Established methods for biologic drug discovery and cell line development

The biologics industry has experienced significant growth and technology advancement, but the process of developing a clinical stage-ready biologic drug candidate remains complex, inefficient, and failure-prone, and is typically accomplished through an assembly of isolated technologies. Generating a clinical stage-ready candidate includes two broad sets of technology development processes: *biologic drug discovery* and *cell line development*.

Conventional Biologic Drug Discovery: Given a target, conventional methods for biologic drug discovery involve fishing for "hits" that bind the target using methods such as phage display, yeast display or immune cell screening. Unless the hits are already in the desired scaffold, they then must undergo a molecular reformatting step to incorporate the hits into the desired scaffold. It is only once assembled that these "leads" can be evaluated. This reformatting is a low throughput one-by-one process that is prone to challenges such as loss of target specificity once the hit is reformatted into the lead scaffold, or inability to make enough of the lead to even evaluate its promise as a drug candidate. The discovery process, including screening, reformatting, and lead optimization, occurs across several technologies outside of the eventual production cell lines.

Conventional Cell Line Development: Biologics must be biologically synthesized in bespoke cell lines, rather than chemically synthesized like small molecule drugs. Development of cell lines suitable for manufacturing at scale is undertaken only after lead candidates have been selected using transient cell lines for expression. With conventional methods, stable manufacturing cell line development involves introducing a lead candidate into the host cell line, typically Chinese Hamster Ovary (CHO) cells, and then laboriously optimizing conditions and strain characteristics for scalable production of the new drug candidate, if possible. The limited adaptability of CHO cell lines and engineering challenges have constrained the scope of protein-based drugs that can be successfully developed. This can be particularly true for next-generation biologics, which may be impossible to produce with conventional approaches.

The below diagram illustrates the general steps of established approaches for biologic drug discovery and manufacturing cell line development:



Limitations of existing approaches

With conventional fragmented approaches, preclinical timelines are extensive. According to a 2010 publication in Nature Reviews Drug Discovery authored by Paul and colleagues, the time from target discovery to IND was estimated at approximately 5.5 years. Moreover, the authors concluded that failure rates are high, with roughly only one in three lead drug candidates advancing to clinical testing in patients. For those drug candidates that do enter Phase 1 testing, the same publication estimated that 12% go on to receive marketing authorization, taking another eight years to do so. We believe that these long timelines and high failure rates are reflective of an industry reliant on aging systems and processes. It is our view that existing approaches are burdened by the design constraints of their technologies' evolution, with the current processes representing the culmination of many iterations on the first technologies employed by the industry. New technologies may be

tacked on to add incremental expansion of capabilities, but on the whole, the biologic drug discovery and cell line development processes remain fragmented and reliant on legacy component tools. This fragmentation of the processes discourages innovative potential, especially since the current approaches are not readily adaptable to development of next-generation biologics.

We believe the industry suffers from the following challenges and limitations of existing solutions:

- **Current methods involve fragmented steps and a patchwork of outdated technologies; new technologies generally focus on isolated steps and do not integrate the processes.** We believe drug developers primarily use legacy technologies and fragmented processes to accomplish discrete steps in either biologic drug discovery or cell line development. Moving between steps in the process and different technologies may not be seamless, introducing inefficiencies and creating insurmountable hurdles to advancement of a promising drug candidate. While new technologies and new methods for hit identification or cell line development have been commercialized, these methods do not allow for discovery screening to be performed while the candidate is in its production cell line and therefore cannot enable discovery of a new biologic in parallel with generating its production cell line. As a result, even with updated technologies, established methods contribute to long development timelines and low probabilities of success.
- **Commercially available biologic drug discovery platforms are generally constrained as to the types of biologic modalities they can explore.** We believe that most of the current approaches to biologic drug discovery impose technological and biological limitations as to the nature of proteins that can be evaluated. High diversity and high-throughput methods are primarily capable of identifying target specificity of small protein fragments or variants of native mammalian proteins. Consequently, newly-designed proteins in novel scaffolds generally require laborious “one by one” evaluation and/or screening by parts and then iterative assembly into the full scaffold. Similarly, conventional methods do not facilitate efficient discovery of new-to-nature proteins that incorporate nsAAs, a desirable feature for post purification chemical modifications. Constraints on the nature of screenable proteins limit the breadth of opportunities for discovery, and may result in suboptimal lead candidates, extended timelines and susceptibility to failure at different steps throughout the process.
- **Current approaches to biologic drug production are not readily adaptable to novel protein modalities.** Proteins require biological assembly by cellular machinery. Developers of more complex biotherapeutics such as monoclonal antibodies have adapted CHO cells to be reasonably adept bioproduction hosts. However, generation of a CHO cell line to produce any new biologic is not trivial, and an adequate cell line generally takes a year or more to develop. In addition, CHO systems have limited flexibility to produce next-generation modalities; the mammalian cells are difficult to engineer and are not adapted or adaptable to make new-to-nature proteins such as those built in novel scaffolds or incorporating nsAAs. The challenge of generating high-titer manufacturing cell lines is a critical impediment to advancing many novel biologic drug candidates into and through clinical development.
- **Current approaches do not leverage artificial intelligence to explore beyond opportunities within nature.** The scale and complexity of proteins present significant challenges for developing biotherapeutics. There are more potential protein variants than can ever be evaluated even with the highest throughput approaches. While some computational insights are being gained from experimental observations, there are few if any existing biotherapeutic drug design approaches that make impactful use of high-throughput data in combination with machine learning. We believe there is lost opportunity to train and use deep learning models to predict promising new proteins that lie outside the bounds of what already exists in nature or even what human intelligence can

rationally design. The biopharmaceutical industry is still in the early days of augmenting human efforts with artificial intelligence, operating within the bounds of sequence similarities to natural precursors, even when considering functional impact.

- **Existing production organisms, or systems, can be inefficient and costly.** The vast majority of biopharmaceutical production processes today rely on CHO cell systems. The ongoing drug product costs of operating CHO cell bioproduction processes are high due to the nature of the cells' growth characteristics and requirements. As reported by Tripathi and Shrivastava in Frontiers in Bioengineering and Biotechnology (2019), CHO cells grow slowly and at low densities, so a single production run generally requires 10 to 14 days of growth in the bioreactor, which limits batch cycles and plant flexibility. The overall productivity of a CHO cell line producing a drug candidate at a 5 gram/liter titer may be less than half a gram per liter per day on average due to the extended growth cycle. Costly growth media and the requirement for downstream viral clearance steps also contribute to the high cost of CHO processes.

As a result of these limitations, we believe the biopharmaceutical industry can benefit from a newly-designed approach that incorporates the best current technologies and AI to accomplish the goal of discovering and advancing promising new biologic drug candidates into clinical development as quickly as possible.

Our Integrated Drug Creation Platform

We built our Integrated Drug Creation Platform to create next-generation biologics including those that lie beyond the scope of nature. To achieve this, we leverage synthetic biology technologies, engineered biodiversity, proprietary functional assays and data-driven deep learning computational models to discover novel disease- and tissue-specific drug targets and next-generation biologic drug candidates while generating optimized production cell lines in parallel. Our platform enables functional evaluation of billions of variants of desired proteins, including complex biologic drug candidates, with simultaneous generation of scalable production cell lines, all in a time- and cost-effective manner. We screen *in* the desired scaffold format and *in* the scalable manufacturing cell line. We believe our platform is the only commercially available solution with this capability, enabling costly and lengthy processes to be collapsed into one integrated step.

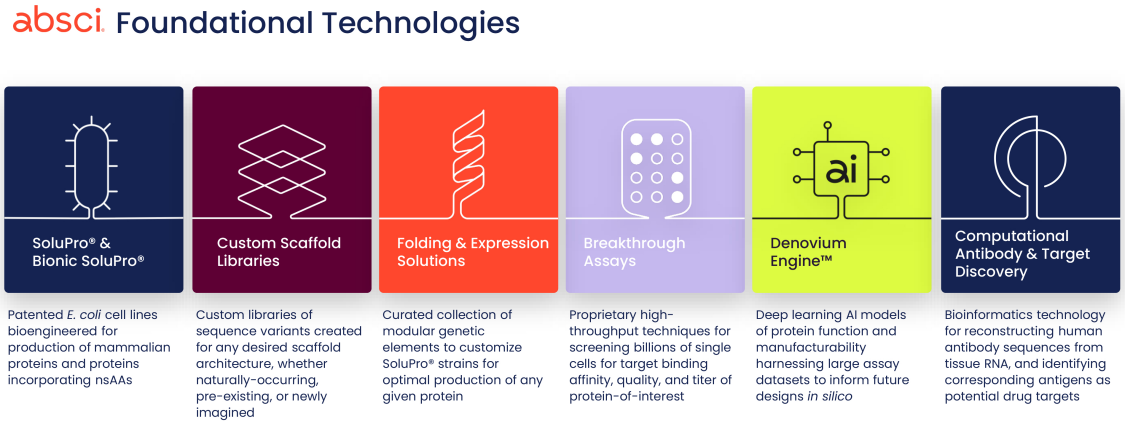
We use our platform to predict, identify, design, construct, screen, select and scale production of biologic drug candidates for our partners, and learn from the data we generate. Our designs are AI-informed and our technology platform is scaffold-agnostic. Our AI leverages deep learning models that are trained on our growing datasets. Our datasets delineate detailed determinants of protein function and manufacturability across billions of single-cell experiments. Our single-cell experiments are performed in our patented production cell lines.

The foundational technologies that power our platform are:

- **SoluPro & Bionic SoluPro:** SoluPro is our patented bioproduction system based on bioengineered *E. coli.* Using synthetic biology techniques, we designed SoluPro to be our chassis cell line and be fundamentally good at making complex mammalian proteins. We believe our SoluPro unlocks evolutionary opportunities by expanding the biological repertoire of proteins that can be produced to include complex new-to-nature proteins such as next-generation biologics. We further engineered a version of SoluPro to facilitate site-specific incorporation of nsAAs into proteins for scaled production. We refer to these nsAA-containing proteins as Bionic Proteins and the SoluPro strain we use to produce them as Bionic SoluPro.
- **Custom Scaffold Libraries:** We can design and generate custom collections of drug candidate sequence variants for each Discovery program, starting with whatever scaffold our partner specifies, whether natural, pre-existing, or newly-invented, and building out up

to billions of different versions to test. These libraries are specifically generated for each program and scaffold, and our AI predictions coupled with our ability to generate libraries in any given scaffold allow us to consider relevant variants that nature could not have proposed. We can also specify nsAA incorporation sites as we design these libraries.

- **Folding & Expression Solutions:** We curate a diverse collection of folding and expression solutions, which are genetic tools that we use to customize SoluPro and optimize production of the desired protein. Each protein we work on has different characteristics when it comes to manufacturability factors, and with the folding and expression solutions parts library and our synthetic biology methods, we create up to billions of different cell lines and measure each cell's performance to find the solutions that work best for the protein-of-interest. The folding and expression solutions collectively comprise an expansive set of genetic modules and techniques we have assembled including ribosome binding site sequences, molecular chaperones, and codon-optimization conventions.
- **Breakthrough Assays:** Our proprietary ACE and HiPrBind Assays allow us to evaluate and sort the millions to billions of drug sequence and cell line variants we generate. Tailored for each of our programs, our high-throughput assays can rank and sort billions of cells based on desired parameters such as target affinity, protein quality, and titer. We are also able to capture datasets correlating protein sequence variants and folding and expression solutions with cell line characteristics. These large, highly complex datasets have the potential to provide us with highly relevant insights about protein function and manufacturability in our system and beyond.
- **Denovium Engine:** Our Denovium Engine is an AI technology that includes deep learning computational models of protein function. The Denovium Engine models, trained on our high-quality data that are particularly relevant to our system, generate non-obvious predictions about the impact of amino acid sequence and cell line characteristics on a given protein's function and manufacturability. A deep learning neural network approach is well-suited to our complex datasets because the models learn what is relevant to the specific objective, without human annotation or bias. We expect the capabilities of the Denovium Engine to grow with each new set of data we generate and input. In the future, we intend to use AI to inform the choice of drug scaffold, define the scope of sequence variants to generate, and design the cell line attributes. We believe this technology may eventually enable us to optimize complex solution space fully *in silico* without the need to physically screen billions of options.
- **Computational Antibody & Target Discovery:** Our computational antibody and target discovery technology is a bioinformatics and machine learning-based platform that allows us to reconstruct sequences of antibodies and other disease-specific proteins from bulk RNA sequencing data (RNA-Seq). We can retrospectively select samples from patients who experienced distinct immune responses and assemble sequences of the most highly expressed monoclonal antibodies present in the tissue of interest. We use these antibodies to identify corresponding target proteins (antigens), and thus we uncover both novel and previously recognized immunogenic targets. We are building a library of tissue- and disease-specific target antigens paired with unique fully human antibodies. Our approach is extensible to identifying other disease state-specific macromolecules relevant to therapeutic responses, such as T-cell receptors.



We perform our process using our Integrated Drug Creation Platform to predict biologically interesting variants, identify novel disease targets, design custom libraries of sequence variants, construct diverse populations of cells with these libraries and our folding and expression solutions, screen and sort these cells based on our desired criteria, select lead drug candidate/cell line combinations having the desired functionality and manufacturability qualities, optimize these leads for scaled manufacturing readiness, and learn by feeding data from our multitude of single cell experiments into our AI models to continually refine our predictions. Our process using our Integrated Drug Creation Platform includes the following steps:

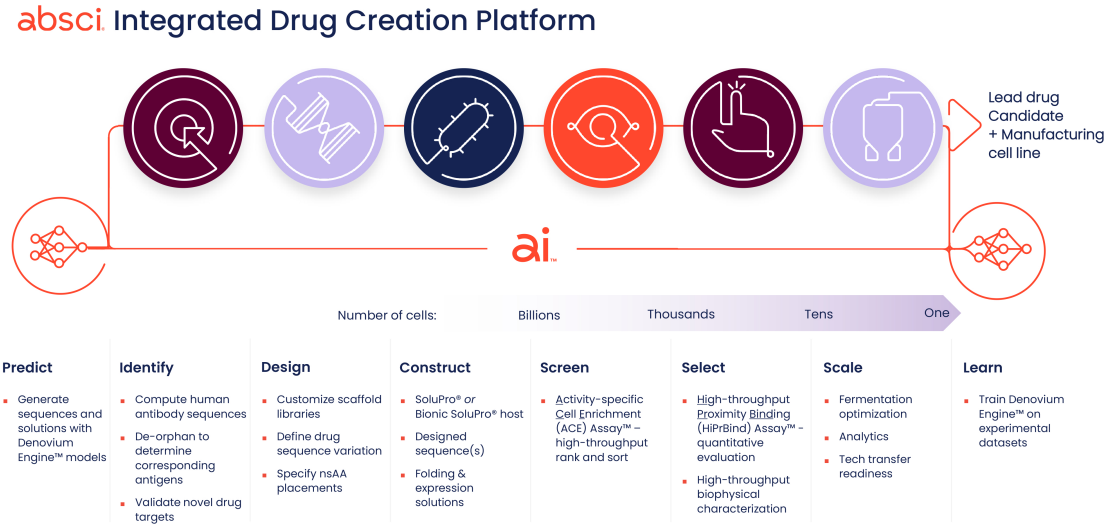
- **Predict:** We expect to use our Denovium Engine AI models to generate non-obvious predictions about what are likely to be optimal drug candidate sequences and cell line designs for any protein-of-interest. The AI combines the collective learnings available in public databases with our own experimental data specifically documenting protein functionality and manufacturability factors relevant to our system. Importantly, our Denovium Engine considers sequences and solutions that it has not seen before, and it may predict entirely new-to-nature protein scaffold elements and sequence motifs or design new biologic modalities. In addition, with data we produce through computational antibody and target discovery technology, we intend to train our Denovium Engine to predict likely drug targets from tissue-derived antibody or other binding protein sequences.
- **Identify:** Starting with disease tissue samples or bulk RNA sequencing data of interest to our partners, we expect to apply our newly acquired computational antibody and target discovery technology to reconstruct sequences of human monoclonal antibodies that are prevalent in the tissue. With our SoluPro expression system and adapted versions of our ACE Assay we believe we can rapidly de-orphan the antibodies, using them as probes to identify their corresponding antigens. Not only are the antigens, whether known or novel, of potential interest as therapeutic targets, but also the fully human antibody sequences themselves may serve as starting points for lead drug candidate design.
- **Design:** Based on the program goals we design custom libraries of protein-of-interest variants in the desired scaffold architecture and specify any desired nsAA placements. This entire step is accomplished *in silico*, and we incorporate predictions our Denovium Engine models have extracted from our proprietary datasets to improve our designs. We design the synthetic biology components at the DNA level, including gene(s) for the protein-of-interest that will encode the potential future drug candidates. We design custom plasmid libraries for each program we undertake. Plasmids are the carriers of the DNA for the protein-of-interest that will ultimately be delivered into the cell line. We may start with a generic DNA sequence for the desired scaffold and, using our AI predictions, define the parameters of the sequence variation to be evaluated for discovery and/or any targeted nsAA placements.

Having designed the gene-of-interest sequences, we augment the computational plasmid designs with a random assortment or selected range of our synthetic biology folding and expression solutions that are included to impart characteristics to the cell lines that optimize production of the protein-of-interest.

- **Construct:** Using synthetic biology approaches, we construct up to billions of genetically distinct SoluPro or Bionic SoluPro cells to evaluate. Each cell contains the instructions to make one version of the protein-of-interest, as well as a different assortment of folding and expression solutions. We synthesize the designed plasmid libraries and deliver them into our host organism, creating a large population of these host cells for screening. These populations of distinct plasmids modify our base SoluPro strains and generate a large population of genetically distinct cells. The population of cells is cultivated under manufacturing-relevant fermentation conditions to induce production of the protein-of-interest for screening.
- **Screen:** We screen this large population of cells for the desired characteristics using our proprietary ACE Assay, which enables rapid identification of hits from large genetically diverse populations of cells. The ACE Assay is a binding-based assay that allows us to sort SoluPro cells based on protein-of-interest functionality (such as target affinity) as well as expression level (titer). To accomplish this, we introduce fluorescently labeled binding targets (e.g., the antigen against which we are trying to develop a drug) and use fluorescence activated cell sorting (FACS) to evaluate and sort each cell based on how brightly it fluoresces. Using proprietary methods, we correlate the fluorescent signal with the quantity, quality, and function of the protein-of-interest, and thus we utilize the ACE Assay to characterize millions or billions of independent strains and collect the desired variants based on the parameters we set. In this way we are quickly able to identify the most promising subset of cells from among millions or billions. Our ACE Assay is compatible with a diverse range of protein modalities, including next-generation biologics. We are also generating billions of data points describing sequence modifications and combinations of folding solutions contributing to protein affinity, solubility and manufacturability that we use to train our Denovium Engine deep learning model.
- **Select:** We use our proprietary High-Throughput Proximity Binding (HiPrBind) Assay to select the best leads from among the screened hits. For expanded clonal populations of each of the hits identified we can quantitatively evaluate and characterize functional parameters of the protein-of-interest such as target binding affinity, titer, and product quality. Our proprietary techniques allow us to discriminate between full length properly folded protein and any other improperly folded or incomplete product-related impurities, in a fully quantitative manner, and again collect the data for training the Denovium Engine models. Like the ACE Assay, the HiPrBind Assay is designed to be readily adaptable to a diverse range of protein modalities. We also perform high-throughput biophysical characterization to collect additional data on relevant biophysical attributes that impact developability. We are able to select the best several candidates (leads) in their putative production cell lines for further analytics, as well as collect further data insights to enhance our Denovium Engine models.
- **Scale:** We optimize fermentation conditions for the selected lead strain(s) to demonstrate desired productivity, quality, and scalability. Having narrowed the cell population down from millions or billions to closer to a dozen, we employ several banks of state-of-the-art 250 mL fed batch fermenters to perform fermentation process optimization using design of experiments (DOE) methodologies to identify scalable production processes. To generate purified material for internal analytics and evaluation by our partners, we use standard chromatography purification methods to make small batches of protein-of-interest from the selected strains. We perform comprehensive protein analytics to evaluate product quality

and purity, and we generate cell banks and documentation suitable for technology transfer to partners or the contract manufacturers they specify.

- **Learn:** Throughout our process, we generate large and complex datasets specifying determinants of protein function and manufacturability. We use these data to train our Denovium Engine to enable its models to make increasingly refined predictions for target identification, drug scaffold sequence variation and cell line design. Our goal is to train the deep learning models with enough data to be able to input a sequence of a new drug target and have the model output a unique, optimal drug scaffold sequence and cell line architecture that we construct and confirm: a process that we refer to as *de novo* biologic drug creation *in silico*.



Applications of our Integrated Drug Creation Platform

Our platform is flexible, and we are able to onboard a given program at multiple points in the biologic target identification, drug discovery, and cell line development process. Starting with a given target and a desired scaffold format for an eventual drug candidate, we may perform comprehensive *de novo* biologic drug discovery through to cell line development. We may enhance discovery opportunities with our partners by building new scaffolds and designing new molecules to incorporate nsAAs to facilitate post-purification chemical modifications. We may further expand program scope to start with target identification activities incorporating our recently acquired computational antibody and target discovery technology. We may also design and optimize a high titer production cell line for a partner's already-established lead drug candidate. We classify our applications into two key categories: Discovery and Cell Line Development (CLD). Since we deliver a production cell line for each of our projects, we define Discovery as any projects for which we are evaluating variants of the protein-of-interest, and we define CLD as a program for which the production cell line alone is the goal of the partnership.

- **Discovery:** We commercially launched our initial Discovery applications in December 2020, and to date we have one Discovery program underway for lead optimization. Discovery involves screening for lead drug hits directed to the desired target; the target may be provided by a partner or identified using our computational antibody and target discovery

technology. Unlike other commonly used screening methods used for biologic drug discovery, we are screening for hit variants in the complete scaffold, not a domain fragment to be subsequently reformatted. We also screen in production cell line variants. Our Discovery applications are scaffold-agnostic. Whether we are screening variants of an antibody, a T-cell engager, a multivalent Fc-fusion, or any other human- or AI-designed modality, our platform is adaptable to simultaneously optimize for functionality and manufacturability of lead candidates. We believe there is no other commercially available solution that enables comprehensive scaffold-agnostic drug discovery in the desired scaffold format. The Discovery applications that we currently or in the future expect to address with our Integrated Drug Creation Platform are the following:

- *Novel target identification* - From tissue samples that are of particular therapeutic interest, we identify prevalent immune-response molecules such as antibodies along with the corresponding antigens, offering new therapeutic targets as well as cognate binding partners for further validation. Whatever the desired biologic modality, we can design, construct, and select the appropriate sequence for lead drug development. And we create an optimized production cell line.

- *Scaffold design and drug platform development* - We are uniquely capable of assembling and producing new-to-nature next-generation biologic scaffolds. We may therefore empower our partners with the ability to execute on theoretical modalities, creative fusions, and multivalent molecular hybrids. Within the context of those assembled scaffolds we can evaluate variants to discover new drug candidates designed for optimal target affinity and other desired characteristics. And we create optimized production cell lines.

- *De novo discovery* - We may perform *de novo* discovery by starting with a desired scaffold format for the desired drug and creating a library of relevant sequence variants that will establish the target specificity (e.g., CDR regions of antibody). And we create an optimized production cell line.

- *Bionic Protein creation (nsAA incorporation)* - We may engineer a signal into the gene encoding the drug candidate that directs incorporation of an nsAA into the growing protein chain in a site-specific manner. The nsAA provides a handle for chemical modifications including glycosylation, PEGylation, ADC-payload conjugation, and novel branched proteins and chemical conjugates. And we create an optimized production cell line.

- *Human antibody discovery* - From our catalog of human-derived antibody sequences we are building a collection of unique fully-human monoclonal antibodies with specificity for validated targets of interest. We may optimize monoclonal antibodies or next-generation biologics derived from these sequences as lead drug candidates in partnered programs. And we create an optimized production cell line.

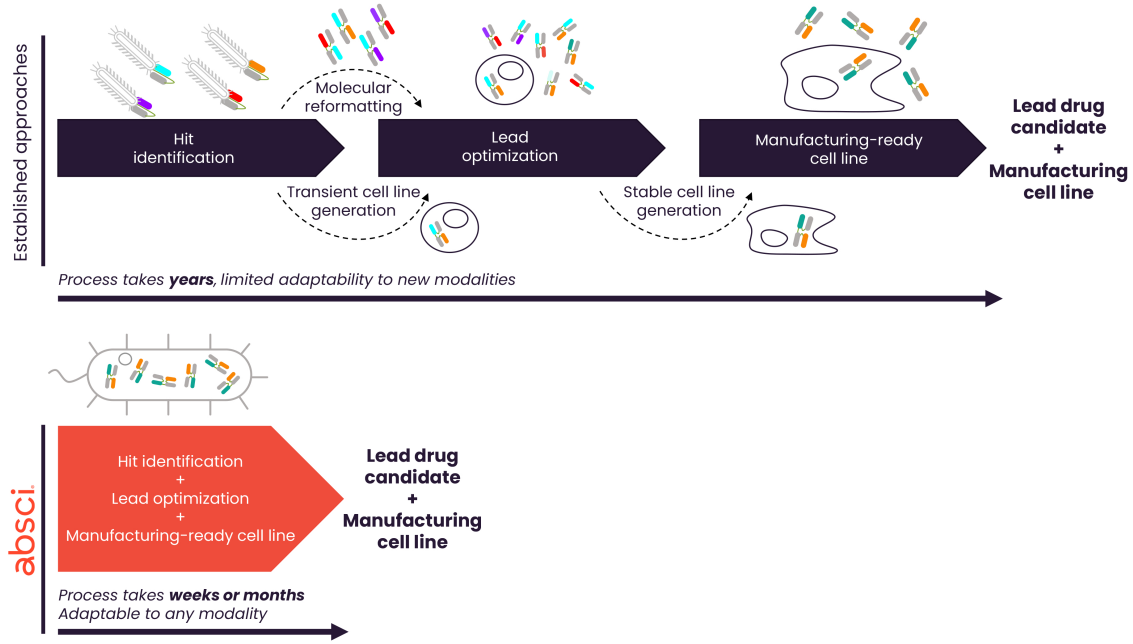
- *Lead optimization* - We may start with drug discovery leads and introduce modifications into the sequences to evaluate variants for improved target affinity, manufacturability, and other pharmacologic characteristics. Thus we can optimize leads that our partners may advance through preclinical development. And we create an optimized production cell line.

- **Cell Line Development (CLD):** We launched our CLD applications in 2018, as our first commercial offering, and all but one of our ongoing programs are for CLD. Because we deliver a production cell line for each of our projects, we classify a program as CLD only when the production cell line alone is the goal of the partnership, or in other words, when

the sequence of the lead drug candidate is locked in. Fundamentally, the process utilizing our Integrated Drug Creation Platform is the same as for our Discovery programs, except that the plasmid libraries we design include a fixed lead drug sequence, with variation limited to the assortment of the folding and expression solutions. Screening and selection steps are aimed at identifying the cell lines with highest titer expression of the drug candidate. Partners typically have come to us with late-preclinical or clinical-stage next-generation biologics for which they have not been able to develop a manufacturing process or for which an existing manufacturing process is poorly performing. As we succeed in these CLD programs, we believe we enable the advancement of next-generation biologic candidates that otherwise would not proceed in development due to manufacturability challenges.

Advantages of our Integrated Drug Creation Platform

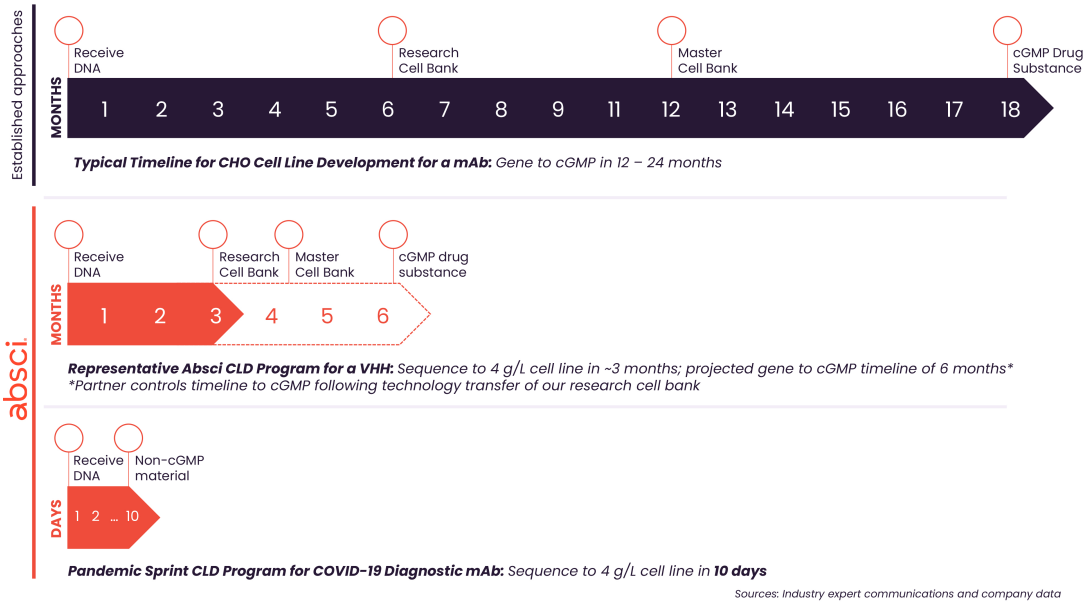
Our platform integrates biologic drug discovery and cell line development processes, accomplishing these activities in parallel rather than sequentially, as illustrated relative to established approaches in the figure below.



We have designed our Integrated Drug Creation Platform to provide the following potential benefits for our partners:

- **Accelerated timelines from idea to drug candidate:** Our platform integrates biologic drug discovery and cell line development, collapsing time-consuming fragmented activities into one concise process. Because from the start we screen for hits *in* the desired scaffold format and *in* the cell line that will scale up for manufacturing, we can bypass common failure points and avoid the need for molecular reformatting or subsequent cell line development. We optimize drug candidate properties and cell line performance in parallel from the outset of the project. We leverage our Integrated Drug Creation Platform and foundational technologies to accelerate novel target identification, biologic drug discovery, and cell line development timelines, whether we start with a lead candidate for which a partner needs a cell line, a new target against which a partner wants to create a next-generation drug candidate, or a scope that falls somewhere in between. Depending on the

complexity of the project and the priorities specified by the partner, we can create a cell line for a defined biologic in as little as 10 days. Our timelines for CLD may enable transition from gene to production of material designed to comply with current good manufacturing practice (cGMP) requirements in six months, versus one to two years for standard CHO cell line development. Because our discovery occurs in the same process, we expect to meet similar timelines with our Discovery programs. Our timelines relative to industry standards are depicted in the figure below.



- **Creation of new biologic modalities:** Our Discovery applications are scaffold-agnostic. We use a synthetic biology approach and harness the power of nature using our SoluPro strains, which we have bioengineered to produce complex proteins rapidly and effectively. Utilizing our Integrated Drug Creation Platform, we specialize in creating new biologic modalities, discovering next-generation biologics in engineered scaffolds, and creating Bionic Proteins that incorporate nsAAs. Unlike other biologic drug discovery methods, from our initial screens we are looking for hit variants *in* the fully-constructed scaffold, not a domain fragment to be subsequently reformatted. By screening in the fully assembled molecular format and *in* the scalable production cell line, any leads we identify are designed to be readily manufacturable. Thus, we expect to enable entirely new biologic opportunities and reduce frustrating and costly preclinical failures that impede advancement of new-to-nature next-generation biologics. We believe there is no other commercially available solution that enables comprehensive, high-throughput, scaffold-agnostic biologic drug discovery in the desired scaffold format and cell line.

- **Efficient production of complex biologics:** We have bioengineered our SoluPro strains to excel at producing a wide variety of complex proteins. SoluPro overcomes the challenges encountered in using *E. coli* strains to synthesize complex biologics that first led the industry to turn to CHO cells. With our Integrated Drug Creation Platform, we deploy our synthetic biology toolkit and our folding and expression solutions libraries to customize the scaffold-agnostic base SoluPro strains to enable high titer production of the proteins we address. We are not restricted to making proteins that look like proteins found in nature; our SoluPro strains are readily adaptable to making biologics in new scaffolds or incorporating nsAAs. Because of the scope and throughput of our assays, we can evaluate millions or billions of

potential strains to efficiently identify configurations of folding and expression solutions that confer optimal protein production performance.

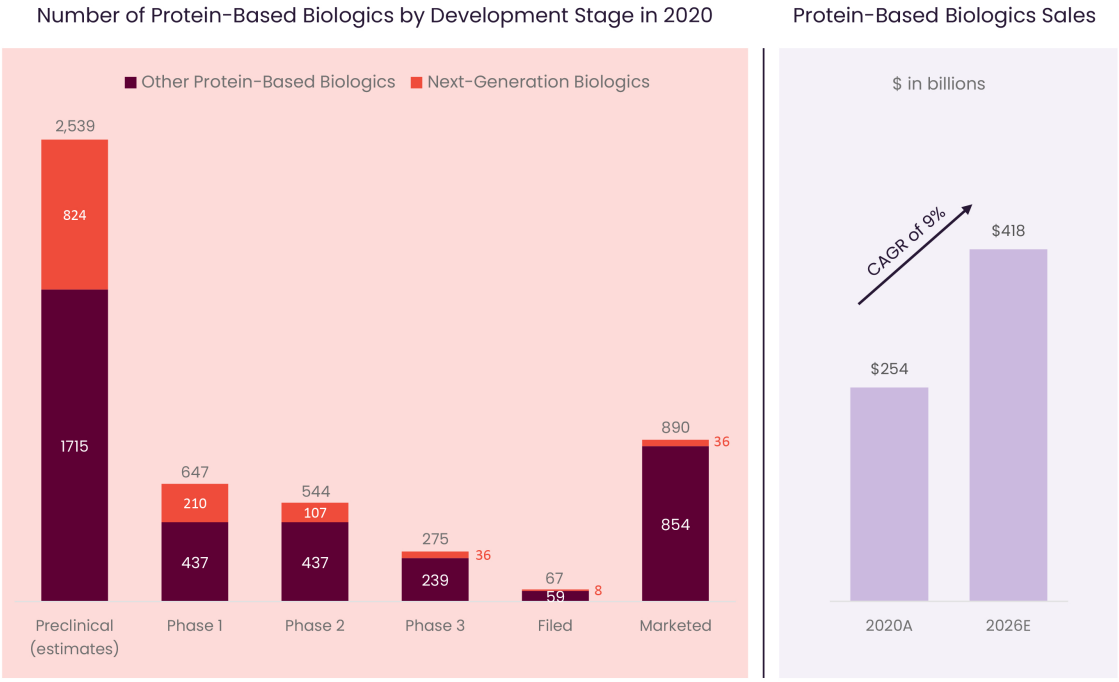
- **Design of better drug candidates based on AI predictions:** We use deep learning artificial intelligence models trained on our proprietary datasets as well as functional characteristics of millions of proteins represented in public databases to design new drug candidates to have desired pharmacologic performance without constraining ourselves to what nature has already discovered. We evaluate up to billions of distinct cell lines for each project. In addition to identifying the best performing drug sequences and cell lines, we are also generating immense datasets with the goal of substantiating and differentiating the relevant from the irrelevant, the optimal from the contraindicated, in the solution space of target specificity, drug sequence variation, and folding solutions. We harness this evidence to progressively train our deep learning Denovium Engine, which then outputs progressively more relevant and valuable predictions to direct our synthetic constructions. We believe this highly specialized deep learning approach is differentiated by both the technology that underpins the Denovium Engine and the proprietary data we feed it. Our Denovium Engine models enable multi-parameter predictions and simultaneous optimization of attributes in parallel, making predictions that solve for desired attributes such as bioavailability, stability, immunogenicity, as well as target affinity and manufacturability. We believe that insights we achieve through the integration of deep learning will ultimately help identify the new drug candidates with the best chances for clinical success.
- **Increase manufacturing productivity and reduce costs:** Beyond the savings afforded by reduced failure rates and accelerated timelines, we believe our SoluPro cell lines' high productivity can translate into significant reductions in drug substance cost of goods. We estimate that biologic drug substance cost of goods saving could be on the order of 50% relative to CHO production systems, the most widely used system in the biopharmaceutical industry today. As discussed by Tripathi and Shrivastava in Frontiers in Bioengineering and Biotechnology (2019), and according to our experience, the primary determinant is the rapid and high-density growth of *E. coli* SoluPro relative to CHO cell lines; the SoluPro bioreactor growth cycle time is 1-2 days, as compared to 10-14 days for CHO cell lines. Given cell lines that achieve comparable protein production titers in SoluPro and CHO systems, the SoluPro system's productivity would be roughly 5-10 times that of the CHO system on a grams per liter per day basis. In addition, SoluPro has other advantages associated with the use of *E. coli* as a biomanufacturing organism. In particular, its growth media ingredients are lower cost relative to the media required for mammalian cells, viral clearance studies are unnecessary, and heterogeneous glycosylation patterns do not hamper drug product quality or characterization.

Our Market

Our market opportunity is driven by the number of biologic candidates we generate and the successful development and commercialization of these candidates by our partners. As reflected in the Evaluate Pharma data, there are currently 1,250 companies involved in developing and marketing over 4,950 protein-based biologics, which we define as including candidates categorized as monoclonal antibodies (mAbs), monoclonal antibody conjugates (ADCs), and recombinant products (comprising novel fusion proteins as well as numerous conventional recombinant proteins, peptides, and hormones), but excluding those categorized as cell therapies, DNA and RNA based therapies, gene therapies, plasma-derived therapies, and vaccines. In 2020, cumulative global sales of these protein-based biologics reached approximately $254 billion, representing 33% of the sales of all drugs. In 2020, 72 protein-based biologics reached blockbuster status with annual worldwide sales higher than $1.0 billion. Of the total protein-based biologics sales, mAbs represent approximately 63%, with average per product peak sales of $2.7 billion (median $1.3 billion). The protein-based biologics market is expected to reach $418 billion by 2026, representing a compound annual growth rate of approximately 9%. In the near term, we are focused on the next-generation

biologics market, which we estimate based on our analysis of the Evaluate Pharma data to represent approximately 32% of protein-based biologics in Phase 1 clinical development. We estimate next-generation biologics represent a similar proportion of the 2,539 preclinical protein-based biologics. While our Integrated Drug Creation Platform is suited to generation of any type of protein-based biologic, we believe our capabilities are especially differentiated in the area of next-generation biologics. We expect our future programs to be principally in this category as we seek to provide an avenue to expand the number and variety of next-generation biologics in development by our existing and future partners, including with the addition of nsAA-containing Bionic Proteins to their pipelines.

The figures below illustrate the number of protein-based biologics in each phase of development, including our estimate of the number of next-generation biologics in preclinical development, and the projected sales of protein-based biologics.



Sources: Evaluate Pharma [April 2021], Evaluate Ltd. and company estimates

Other market opportunities

Proteins are fundamental components of a wide variety of current or potential biological products. We believe our platform is applicable beyond the biopharmaceutical market, including into markets such as diagnostics, materials science, agriculture, industrial, animal health, cosmetics and synthetic food. While our initial focus is on the biopharmaceutical market, we recognize there are broad market opportunities in these additional industries, and we may pursue those opportunities in due course. For example, we currently have one program in animal health.

Our Business Model and Partnerships

Our business model differs from the traditional biotechnology company model. As a technology development company, we generate biologic drug candidates and production cell lines for our partners to develop; we do not conduct or sponsor preclinical validation studies or clinical trials or seek regulatory approvals for drug candidates. Our business model is to establish partnerships with

biopharmaceutical companies and use our Integrated Drug Creation Platform for rapid creation of next-generation biologic drug candidates and production cell lines.

We are invested in the clinical and commercial success of the product candidates generated for our partners using our Integrated Drug Creation Platform. We expect that our partnerships will provide us with the opportunity to participate in the future success of the biologics generated utilizing our platform, through potential clinical, regulatory and commercial milestone payments as well as royalties on net sales of approved products. We aim to assemble economic interests in a diversified portfolio of partners' next-generation biologics across multiple indications. We believe our business model is capital efficient as our partners fund our technology development work, and we do not invest in clinical development or scaled manufacturing infrastructure.

We structure our partnerships as technology development agreements (each molecule we address for Discovery or CLD is a "program") with options for our partners to license intellectual property rights to the biological assets we create after completion of the technology development phase. For the technology development phase, partners may (i) provide a target for discovery of a new next-generation biologic and/or Bionic Protein or novel scaffold, (ii) supply a specified lead drug candidate sequence for cell line development, or (iii) request a scope that falls somewhere in between (i) and (ii) with optimization of a lead candidate or set of candidates as the primary goal. Regardless of the scope, the biology we ultimately provide to our partners is a manufacturing-ready cell line expressing the new or partner-provided protein-of-interest. Historically, our technology development agreements contemplated the negotiation of license terms following completion of the technology development phase, reflecting our early strategy in the beginning stages of our commercialization efforts to validate our capabilities with our partners before agreeing to license terms. For most future partnerships, we expect to negotiate and agree to downstream economic terms of any license to our intellectual property rights before initiating the technology development phase. We anticipate that these technology development and license agreements may provide us with rights to receive payments upon the achievement of various clinical, regulatory and commercial milestones for the applicable product candidates, as well as royalties on net sales at least during the marketing exclusivity period of candidates approved for commercialization.

We currently have drug candidates in nine Active Programs (across seven current partners' preclinical or clinical pipelines) in which we have negotiated, or expect to negotiate upon completion of certain technology development activities, license agreements with potential downstream milestone payments and royalties. Eight of the Active Programs are CLD programs, and one is a Discovery program; reflecting the 2018 commercial launch of our CLD applications and our more recent December 2020 commercial launch of our initial Discovery applications, which are designed to enable discovery of next-generation biologics in the desired scaffold. Five of the eight CLD programs address preclinical candidates, and we have CLD programs for one Phase 1 candidate and one Phase 3 candidate, each of which is currently in clinical development using drug substance manufactured through other technologies. In addition, we have one animal health CLD program. Our current partners include Merck, Astellas, Alpha Cancer Technologies, and other undisclosed biotechnology companies.

We define Active Programs as programs that are subject to ongoing technology development activities intended to determine if the program can be pursued by our partner for future clinical development, as well as any program for which our partner obtains and maintains a license to our technology to advance the program after completion of the technology development phase. We expect to enter into license agreements for each of our Active Programs and, based on proposed terms we have set forth for four CLD programs to date, we anticipate that license terms for CLD programs will generally provide that we are eligible to receive various milestone payments and specify that we are eligible to receive royalty payments in a low-single digit range as a percentage of our partner's net product sales if the applicable product candidate is approved and commercialized. We continue to invest in our platform to bring additional value to our partners. In addition to the December 2020 launch of our initial Discovery applications, since January 2021, we

have further enhanced our platform with our Bionic Protein nsAA capabilities, our Denovium AI integration, and our computational antibody and target discovery technology added through our acquisition of Totient. Accordingly, we expect that the financial terms of any potential license agreements for our Discovery programs will reflect the enhanced benefits that our Discovery applications provide to our partners in comparison to our CLD applications. Our Active Programs include one ongoing Discovery program, for which potential license terms are yet-to-be-negotiated.

In addition to our nine Active Programs, we have also completed CLD technology development for 22 additional molecules. These historical programs were both internal research programs and technology development programs with third parties, and they were intended to demonstrate our platform's capabilities as we addressed successively broader ranges of biologics and next-generation modalities. We did not transfer technology or grant licenses related to these programs, and we anticipate no further revenue or other downstream payments.

The following table summarizes the biologic modalities for all of our current and historical programs, including our Active Programs:

	# of Programs	
Biologic Modality	**Active Programs**	**All Programs**
Bispecific mAb	1	1
Bispecific T-cell engager	2	3
Cytokine	1	2
Fab*	1	4
Multivalent Fc*-fusion	2	2
Plasma protein	1	1
mAb	1	4
Fc-fusion		3
scFv*-fusion		2
VHH*-fusion		2
Enzyme		2
Hormone		5
Total	9	31

* Fab = antigen-binding fragment; Fc = crystallizable fragment; scFv = single-chain variable fragment; VHH = single variable domain on a heavy chain (nanobody)

Commercial

Our commercial strategy centers on entering into technology development partnerships with companies involved in biologic drug development, with a focus on the biopharmaceutical industry. Our goal is to secure new partners and expand our relationships with existing partners by solving challenges they face in discovery and cell line development and by enabling creation of new biologic modalities. With initial success, we aim to increase the number of molecules with each partner, as well as expand the application of our platform across each partner's discovery and cell line development activities. For example, we initiated a CLD program in partnership with Astellas, to develop cell lines for certain of its MicAdaptor molecules. As we worked on technology development for those programs, our ongoing relationship led to discussions surrounding our emerging Discovery applications. Based on our success in creating high performance cell lines for manufacturing MicAdaptor candidates, we expanded the scope of our partnership with Astellas to include a lead optimization Discovery program to evaluate a collection of variants of their MicAbody molecules, in addition to creating cell line(s).

Our business strategy involves forming partnerships with biopharmaceutical companies of all sizes and enabling our partners to bring their ideas to fruition. We currently have a core business

development team raising awareness of our platform within the biopharmaceutical industry and establishing adoption through partnerships. We are initially focusing our business development efforts on large pharmaceutical companies with the potential to create multi-program opportunities, as well as biotechnology companies that are, or desire to be, leaders in next-generation biologics creation. We expect to partner with companies that are highly enabled and at the forefront of next-generation biologics but which may have had limited success due to technological challenges. We also expect to partner with companies that may have some presence in biologics but limited capabilities in novel biologic drug discovery and are looking to expand their pipelines. We also see opportunities to partner with focused biotechnology companies that are highly enabled with a biologics platform or multi-product pipeline but limited capabilities in drug discovery or cell line development. We expect these companies to seek access to our integrated platform to improve the quality of their lead drug candidates and enable development of scalable manufacturing cell lines to accelerate their development efforts and push the frontier of therapeutics.

We also have an alliance management team focused on supporting our successful partnership programs and grow our relationship with existing partners to include additional biologic candidates as well as expand to broader discovery programs. We believe that exceptional alliance management execution is critical to the success of our existing partnership programs and to transforming first-time partners into repeat and broad scope collaborators. We emphasize mutually beneficial partnerships through alignment of performance objectives, and we foster our partners as champions of our technology. We expect to expand our business development and alliance management teams significantly as we scale our business in the near term.

We expect to establish ourselves in the biopharmaceutical industry before considering additional opportunities, but in the future we may pursue expansion into other markets such as materials science, industrial chemicals, cosmetics, synthetic foods, and agriculture.

Our Growth Strategy

Our goal is to establish our proprietary, end-to-end platform as the industry standard for biologic drug discovery and cell line development. We are laying the groundwork for integration into our partners' discovery organizations, with the goal to be the *de facto* starting point for new drug creation. Our growth strategy is to:

- **Establish new partnerships to create biologic drug candidates.** We believe that our platform has a clear and differentiated value proposition for biologic drug discovery and cell line development. We have been successful in attracting initial partners, and we are continuing to expand our capabilities and enhance our platform to offer an even more powerful integrated solution. Given the increasing level of biopharmaceutical industry interest in creating novel biologics, we believe there is a large untapped market of potential partners ranging from traditional large pharmaceutical companies to emerging biotechnology innovators who can realize benefits from our platform. We believe that we offer a way to transcend the discovery and production challenges faced by the many companies that are investing in developing innovative new protein-based medicines. As we continue to establish our platform as the go-to solution for biologic drug creation, we expect to continue to attract new partners. We employ a business development team focused on raising awareness of our capabilities and establishing new partnerships.
- **Increase the number of molecules on which we work with our existing partners.** We believe that achieving technical success with an existing partner's drug candidate is the best proof of concept, and we intend to leverage those successes to expand our existing partnerships to address additional molecules in our partners' respective pipelines. Partners may have a unique scaffold upon which they build successive drug candidates, hence pursuing additional programs based on the same scaffold is a clear opportunity for expanding existing partnerships. Regardless of modality, we expect to generate additional

business from existing partners as they experience firsthand the success and efficiency of our platform. Our alliance management team is focused on supporting our partnership success and growing the number of molecules on which work with our partners.

- **Expand the scope of our partnerships across the biologic drug discovery and cell line development value chain.** We launched our Cell Line Development applications in 2018 and our initial Discovery applications in December 2020. Our goal is to expand our partnerships to apply a broader set of our platform capabilities, including both Discovery and Cell Line Development. Because we launched our Cell Line Development applications first, we have historically initiated our partnerships with CLD programs for lead drug candidates that have proven challenging to produce. CLD program partners often become interested in our Discovery applications, which include novel target identification, lead optimization, *de novo* discovery, Bionic Protein creation (nsAA incorporation), human antibody discovery, and the enablement of novel scaffold designs that could spawn new modalities. We look to expand the scope of partnerships to address additional classes of molecules, thereby presenting additional milestone and royalty opportunities. We intend to continue to invest in growing our platform's capabilities and aim to expand our applications to offer even more comprehensive solutions for our partners.
- **Create new biologic modalities and novel conjugates with "Bionic Proteins" that incorporate nsAAs.** We aim to use our platform to pursue a wide range of applications and to enable the creation of new drug modalities and previously inaccessible conjugates. To achieve this, we introduce customized machinery into our Bionic SoluPro strain that empowers it to incorporate nsAAs at specified locations in proteins. We can create entirely new drug modalities and assemble previously inaccessible conjugates using straightforward chemistry in combination with the nsAA incorporation. We expect to apply this differentiated capability repeatedly across numerous programs to add substantial value to our partners' discovery and development processes.
- **Grow our platform through R&D and strategic acquisitions.** We intend to continue innovating and extending avenues for creating better new biologics and cell lines at a faster pace. Near term, we are investing in research and development activities to refine our nsAA incorporation, *de novo* discovery, and purification technologies to enable targeted chemical modifications and conjugations in a homogenous manner. With our acquisition of Totient, and the addition of computational antibody and target discovery technology, we expect to engage with partners seeking differentiated disease-specific discovery opportunities for biologics development. We are also integrating our recently-acquired Denovium Engine deep learning artificial intelligence across our technologies, and we are driving toward a future in which the Denovium Engine understands the relevant drug and cell line determinants so comprehensively that its models can predict what we believe is the best scaffold and drug sequence as well as cell line design for any given target, without screening. This would be the realization of our vision of *de novo* drug creation *in silico*. We also intend to pursue opportunities for expanding our platform using AI as well as other technologies that we may develop or acquire. Biological validation technologies, preclinical evaluation models, and downstream protein purification technologies are all potential areas of strategic interest that could further enhance our value proposition to partners and provide us with important insights to steer our internal efforts.
- **Create proprietary biologic assets.** We anticipate that in the future, we may selectively create our own lead drug candidates and advance them through preclinical validation and cGMP manufacturing scale-up. In such cases we may out-license IND-ready candidates for clinical advancement by a partner, with the expectation of more share in the economics relative to the milestones and royalties we may secure for our core platform technology development licenses.

- **Leverage our platform to address market opportunities outside of biopharmaceuticals.** Although we are currently focused on the biopharmaceuticals markets and we intend to maintain this focus in the near term, we believe our platform has the foundational technology and capabilities in place to capitalize on the opportunity to create proteins of value in many other industries. Such potential target applications include materials science, industrial chemicals, cosmetics, synthetic foods, and agriculture. Over the longer term, we may create new biological tools and designer enzymes that lead to applications spanning, but not limited to, bioremediation solutions, bioprocessing achievements, organic agricultural advances, and cost-effective protein-based consumables.

Competition

The market for technologies that enable biopharmaceutical research and development, such as ours, is global, characterized by intense competition and subject to significant intellectual property barriers. The solutions and applications offered by our competitors vary in size, breadth, and scope, and we face competition from many different sources. Due to the significant interest and growth in biopharmaceutical research and development more broadly, we expect the intensity of this competition to increase.

We do not believe there are any other commercially available solutions that enable high-throughput screening of next-generation biologic drug variants in the assembled scaffold in the production cell line. Moreover, we are not aware of technologies that allow for efficient discovery of full length next-generation protein based therapeutics. We are aware of potential competitors addressing certain steps in the target identification, biologic drug discovery, and cell line development processes or adjacent aspects of the broad process, including:

- in the field of novel target identification, we may face competition from academic, pharmaceutical, and biotechnology research initiatives, as well as companies focused on novel methods for target identification, including Insitro, Inc., TScan Therapeutics, Inc., and 3T Biosciences, Inc.;
- in the field of AI-guided drug design and discovery, we may face competition from companies designing novel proteins such as Generate Biomedicines, Inc., as well as adjacent technology companies pursuing small molecule design such as Schrodinger, Inc., Recursion Pharmaceuticals, Inc., Relay Therapeutics, Inc., Atomwise Inc., Valo Health, Inc., and Exscientia Limited;
- in the field of scaffold design and drug platform development, we may face competition from pharmaceutical and biotechnology companies developing novel biologic modalities including Amgen Inc., Crescendo Biologics Limited and Harpoon Therapeutics, Inc., among others;
- in the field of novel human/humanized antibody discovery, we may face competition from companies such as AbCellera Biologics Inc., Adimab LLC, and Alloy Therapeutics, Inc.;
- in the field of non-standard amino acid protein engineering, we may face competition from companies such as Ambrx Inc. and Sutro Biopharma, Inc. (Sutro); and
- in the field of cell line generation and single-cell screening, we may face competition from service providers, such as Lonza Group AG and Selexis SA, companies offering instrumentation, such as Berkeley Lights Inc., and companies with alternative protein production systems, such as Sutro.

In addition, we are aware of other synthetic biology companies focused on developing various custom cell lines in a variety of model organisms for biomanufacturing of molecules relevant to other industries. These companies, which include Ginkgo Bioworks, Inc., Zymergen Inc., Geltor, Inc.,

and Bolt Threads, Inc. may in the future pursue biopharmaceutical applications of their platforms that could compete with our technologies.

Our target partners may also elect to develop their own processes on legacy systems, use in house solutions, or use traditional methods, rather than implementing our platform and may decide to stop using our platform. In addition, there are many large established players in the life science technology market that we do not currently compete with but that could develop systems, tools or other products that will compete with us in the future. These large established companies have substantially greater financial and other resources than us, including larger research and development staff or more established marketing and sales forces.

For a discussion of the risks we face relating to competition, see “Risk Factors—Risks Related to our Business and Strategy—The biopharmaceutical platform technology market is highly competitive, and if we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenue, or sustain profitability.”

Our Foundational Technologies

The foundational technologies that synergize to make our Integrated Drug Creation Platform and its applications possible are:

- our bioengineered *E. coli* SoluPro & Bionic SoluPro strains as the host organisms for protein synthesis;
- our Custom Scaffold Library generation methods for designing protein-of-interest variants including Bionic Proteins;
- our Folding & Expressions Solutions toolkit for cell line customization;
- our Breakthrough Assays for high-throughput single cell assessment of protein function, quality, and titer;
- our Denovium Engine deep learning AI technology for harnessing our data to inform *in silico* design; and
- our Computational Antibody & Target Discovery technology for identifying novel disease- and tissue-specific human monoclonal antibodies and corresponding antigens.

These technologies are described below.

SoluPro & Bionic SoluPro

In contrast to the vast majority of the bioproduction industry which largely relies on Chinese hamster ovary (CHO) cells, we have chosen *E. coli* as our host organism. *E. coli* grows faster, at higher cell density, and at lower cost than mammalian or other eukaryotic systems. In addition, because it is not a mammalian cell, it is incapable of propagating mammalian viruses that might infect humans, thereby increasing the safety of the production process and enabling us to sidestep costly and time-consuming viral clearance and testing steps. *E. coli* was successfully used at the dawn of biotechnology for manufacturing insulin and other relatively simple proteins. Since then, *E. coli* has been largely displaced for therapeutic protein production because it was not a viable system for manufacturing complex mammalian proteins such as monoclonal antibodies; it is still used today for production of insulin, growth hormones, and a handful of other biologics. Using the tools of synthetic biology and metabolic engineering, we have heavily modified our *E. coli* SoluPro to be able to produce complex biologic proteins in an efficient and cost-effective manner.

Strain engineering

We have engineered our SoluPro strain of *E. coli* to be more capable of synthesizing properly folded mammalian proteins. Using a synthetic biology approach, we have introduced modifications that

render the cytoplasm of SoluPro more highly oxidized than the standard (wild type) *E. coli* which facilitates folding and allows formation of the disulfide bonds that typify mammalian proteins. We accomplished this through metabolic engineering of pathways involved in redox chemistry in the cell. Additional metabolic engineering was employed to ensure that protein production is accomplished in a uniform and dose-dependent manner across the population via low-cost chemical inducers.

To make our Bionic Proteins that incorporate nsAAs, we further engineered a version of SoluPro to facilitate site-specific incorporation of nsAAs into proteins it produces. We engineer a signal into the gene encoding the drug candidate that directs incorporation of a nsAA into the growing protein chain in a site-specific manner. In concert, we use our synthetic biology approach to introduce customized machinery into our SoluPro strain to enable it to mechanistically accomplish the nsAA incorporation. Ultimately, a Bionic Protein's nsAA handle is designed to enable targeted chemical modifications including glycosylation, PEGylation, ADC-payload conjugation, and novel branched proteins and chemical conjugates.

The genetic modifications we make to customize SoluPro for each program we work on are accomplished primarily through extra-genomic elements contained on a small, self-replicating circular DNA molecule called a plasmid. Plasmids can contain coding sequences and regulatory elements for a handful of proteins, and *E. coli* readily accepts the plasmid and expresses proteins encoded by it as well as replicating the plasmid itself it in the cytoplasm of the cell without incorporating it into the genomic DNA of the SoluPro strain. Thus, the SoluPro strain is the factory, but the actual instructions for what protein will come off the assembly line are contained in the plasmid. Plasmids are widely used in biologics production and are currently employed in FDA-approved *E. coli* processes like the production of insulin. We engineer the DNA sequence(s) for the desired protein into the plasmid architecture we designed, which includes inducible promoters that essentially offer independent rheostats for increasing or decreasing the amount of each protein encoded. This way we can fine-tune the optimal ratio of protein subunits to achieve high yields of complex multi-subunit proteins.

Our plasmids are designed with a modular architecture to enable rapid assembly of combinatorial plasmid libraries, where we can incorporate our libraries of genetic parts that are known to affect protein expression and folding (e.g., ribosome binding site libraries that affect protein production rates and molecular chaperone libraries composed of proteins that we co-express with the desired protein to assist with folding and solubility). This modular approach allows us to construct millions-to-billions of genetically unique plasmids in a single assembly reaction, with each plasmid encoding a discrete solution to the production of the protein-of-interest.

Considerations for protein manufacturing in E. coli

Authentic N-terminus: Our *E. coli* SoluPro and Bionic SoluPro strains are uniquely capable of producing proteins with any desired N- terminal residue. For example, partners who are interested in switching from a CHO platform to our *E. coli* platform are able to do so while maintaining the authentic N-terminal amino acid present in the CHO produced drug. Protein synthesis in other *E. coli* platforms includes incorporation of a methionine at the N-terminus of the drug sequence, which is removed in the SoluPro platform.

Cytoplasm vs. secretion. Monoclonal antibody production in CHO cells relies on secretion mechanisms; the cells synthesize the proteins into small cellular envelopes and eject the contents to the outside of the cell. This means that the protein being made is subjected not only to the intracellular environment, but also to the external media where the molecules are susceptible to chemical modification. In addition, the production process requires a cascade of intracellular events involving secretion machinery to execute. This can prove to be a bottleneck in production and limit protein size, as well as the titers achievable when challenging the cells to synthesize so much of one particular protein. In contrast, SoluPro produces proteins entirely in its cytoplasm, where they

remain until harvested. This simplifies the process, and the cells tolerate the protein well and grow to high densities with short doubling times.

Disulfide bonds: Spontaneous folding, disulfide bond formation, and quaternary structure are accomplished in the semi-oxidized cytoplasm with exquisite control of expression levels and ratios. We have demonstrated comparable disulfide bond characteristics to the reference material produced in mammalian systems by disulfide mapping via LC-MS.

Glycosylation: Our system produces aglycosylated proteins, which we believe in most cases is an advantage over mammalian systems, where glycosylation can be heterogeneous and difficult to characterize. For antibodies or next-generation biologics that do not require glycosylation for activity, the lack of glycosylation in the SoluPro platform has the potential to simplify characterization, increase quality, and decrease analytical development time. A small subset of biologics, among them monoclonal antibodies based on IgG1 scaffolds, rely on the presence of a particular glycan group for optimal effector function. We are developing our Bionic Protein technologies for nsAA incorporation to offer sites for highly uniform and targeted chemical modifications and conjugation, including glycosylation.

Phosphorylation: We have not produced any phosphorylated proteins to date, as the common therapeutic scaffolds do not require any phosphorylations. Were our partners to ask us to design phosphoprotein production strains, we could leverage our nsAA technology to incorporate phosphorylated amino acids directly during synthesis.

Fermentation methods: After isolating high-performing strains using our proprietary assays, we evaluate strains in fermentation. Our fermentation suite includes high-throughput ambr systems of 15 mL and 250 mL scale for strain evaluation. Our fed-batch fermentation processes are designed for excellent scalability to a cGMP manufacturing facility. Specifically, the oxygen uptake rate (OTR) is constrained at 250 mmol/L/hr to ensure similar fermentation performance upon scale-up to cGMP fermenters. Our fermentation group also performs initial upstream process screening, where media components, induction strategy, and other parameters are optimized for maximum titer and productivity using a Design of Experiment approach (DoE). Because the SoluPro fermentations are short (on the order of 48 hours), we are able to complete a thorough strain screening and fermentation process optimization in days, versus a much longer development time for a CHO based platform.

Protein purification: To purify proteins from SoluPro, cells must first be lysed by mechanical homogenization. Following lysis, the desired protein is typically purified by a 2 to 3-stage chromatography process. These processes are well developed, having been in use in FDA-approved processes since the early 1980s. We do not currently employ any proprietary purification technologies, thereby making technology transfer straightforward.

Endotoxin: As a gram-negative microbe, *E. coli* contains lipopolysaccharide (LPS) molecules in the membrane of the cell. These LPS molecules (endotoxin) trigger an immune response (from mild to severe depending on dosage) when introduced into the bloodstream. As a result of this, endotoxin clearance and monitoring is essential for molecules produced in *E. coli.* Mammalian systems like CHO do not produce endotoxins and therefore do not require endotoxin monitoring or clearance. Fortunately, biopharmaceuticals have been produced in *E. coli* for decades (and many, like insulin, continue to be produced in *E. coli* today), and the technologies for monitoring and clearing endotoxin are mature and routine.

Viral clearance: CHO cells are evolutionarily very similar to human cells and therefore are capable of being infected by and passaging diseases that are dangerous to humans. Because of this, drug products produced in CHO cells are subject to a time- and cost-intensive process of viral clearance. Because *E. coli* is from an entirely different domain of life compared to mammalian cells, and as a result is incapable of harboring or being infected by human diseases, this process is not required in *E. coli*.

Analytics: To generate purified material for evaluation by our partners, we use standard 2 to 3-step chromatography process to purify small batches of protein-of-interest from the selected strains. If larger batches of material are required, we have multiple 30 L fermenters onsite to support material generation. An analytics package is generated for the purified material using (if relevant) a partner's provided drug substance as a standard for comparison. Typical analytics include assessment of content by A280 absorbance, identity by peptide mapping (liquid chromatography with tandem mass spectrometry; LC-MS/MS), purity by electrophoretic methods (capillary electrophoresis sodium dodecyl sulfate (CE-SDS) and sodium dodecyl sulfate-polyacrylamide gel electrophoresis /SDS-PAGE), analytical size exclusion chromatography (SEC) and reverse phase chromatography, and characterization by intact mass (via liquid chromatography mass spectrometry; LC-MS) and peptide mapping to confirm disulfide bond formation (by LC-MS).

Scale-up: Once a fermentation process is defined, the lead producing SoluPro strain is scaled up further in our 30 L stainless steel fermenters. We consistently demonstrate that similar titers, ODs, and productivities observed at 250 mL fermentation scale are readily reproduced upon scale-up to 30 L fermentation scale. Furthermore, the fermentation media and processes we design can be seamlessly transferred to a CMO for cGMP manufacturing. For example, we have performed an internal program to demonstrate scalability of a SoluPro strain producing an antibody fragment (Fab). We developed a SoluPro strain capable of producing Fab at > 4 g/L in a 2-day process and achieved similar titers at both 250 mL and 30 L scale at our facility. We transferred the SoluPro strain, fermentation media, and fermentation processes to a CDMO for fermentation in their 30 L and 300 L single-use fermenters (SUF). At both the SUF scales, the Fab was produced at a similar high-titer (> 4 g/L), high-cell density (> 180 OD600), and high-productivity (2 g/L/day). We effected the technology transfer of the strain and fermentation process without the need for any additional development by the CDMO.

Technology transfer: During Technology Transfer, we generate and provide all necessary materials and documentation to our partners for high-titer cGMP manufacturing of their drug in SoluPro. We generate a Research Cell Bank (RCB) for the lead producing *E. coli* SoluPro strain and outsources the necessary post-bank bacteriophage, identity, and purity testing of the strain. We issue a Statement of Testing (SoT) summarizing that the RCB has satisfied all post-bank testing. We also generate a BSE/TSE Statement to certify that the RCB is manufactured completely from animal origin free raw materials. Our team generates all technology transfer protocol documentation for the upstream processes that includes information related to equipment, processes instructions, parameters, operational ranges, and media/solution preparation.

cGMP-readiness: After Technology Transfer of the RCB and upstream process documentation to our partner, their CDMO of choice, or one of our preferred CDMOs, additional development activities are initiated by the manufacturing facility and culminate in cGMP produced bulk drug substance. As described earlier, we transfer the high-titer manufacturing cell line and upstream process information, where no additional strain optimization and no to minimal additional upstream optimization is required. Once the RCB is received, the CDMO is responsible for generation of the Master Cell Bank to be used in preparation of the cGMP bulk drug substance. Prior to cGMP bulk drug substance preparation, the CDMO performs additional process development, as needed, including but not limited to further upstream process optimization, downstream process optimization, analytical method development and qualification, and formulation development. In addition to successfully transferring in upstream processes to a CDMO, we have also transferred downstream process conditions and analytical methods.

Productivity: E. coli is a microorganism that grows quickly and robustly in a laboratory context (these were the features that led to *E. coli*'s wide adoption as a model organism in the 1800s). Our *E. coli* SoluPro strain is a robust manufacturing cell line; we have routinely observed high-titer (4 g/L for full-length antibodies and next-generation biologics), high-cell density (200 OD600), and high-productivity (2 g/L/day per day for a 48-hour fermentation process). While CHO platforms may demonstrate similar absolute titers of 4 g/L, the daily productivities are much higher for SoluPro vs.

CHO systems (2 g/L/day vs 0.3 g/L/day) due to the shorter run times with *E. coli* (1-2.5 days vs. 10-14 days for CHO). We believe this higher productivity reduces the plant runtimes, which has the potential to accelerate production timelines and reduce operating expense. Furthermore, *E. coli* grows robustly on simple nutrient broths versus the complex nutrient formulations and apparatus required for CHO cell growth. Cost of goods (COGSs) modeling conducted in collaboration with a prospective partner suggests that SoluPro has the potential to reduce antibody drug substance production costs by approximately 50%.

Custom Scaffold Libraries

We can design and generate billions of drug candidate sequence variants for each Discovery program. Our platform creates libraries in any scaffold our partner specifies, whether natural, pre-existing, or newly invented. These drug candidate sequence libraries are custom because they are specifically generated for each program and scaffold. Furthermore, we anticipate that our AI predictions and ability to generate libraries in any given scaffold allow us to consider relevant variants that nature has not yet evolved. We can also specify nsAA incorporation sites as we design these libraries.

To discover novel drugs for any given target we have developed methods for generating large populations of our SoluPro cells each expressing a distinct drug sequence variant, as well as Bionic Protein technology for site-directed incorporation of nsAAs. We construct our plasmids incorporating modular parts libraries and the target gene(s) of interest using modern DNA assembly tools that allow us to rapidly and efficiently assemble up to billions of unique plasmids in a single test tube in a combinatorial fashion. The composition of “parts” and library diversity can be tailored for each project. If we are screening a library where variation is incorporated into the protein-of-interest sequence itself (e.g., for Discovery applications) diversity can be introduced using rational (i.e., constraining the diversity of CDR regions to a library with defined sequence composition) or random (e.g., mutagenic approaches like error-prone PCR) methods. If we are taking an unbiased approach, we will usually build and screen up to ten or more library designs per project, covering on the order of 100 million unique genetic solutions. As our Denovium Engine increasingly contributes predictions about optimal molecule, plasmid, or library design, synthetic DNA approaches can be used to synthesize the desired sequences.

Folding & Expression Solutions

Because each protein has distinct characteristics when it comes to manufacturability, we have curated a diverse collection of modular genetic parts that impact protein expression and folding which are incorporated as combinatorial libraries to our SoluPro populations in an effort to optimize protein production. The base SoluPro strain was good at making the initial monoclonal antibodies we worked on, but as we tested the system in evaluation studies to produce a variety of other types of proteins, we found each protein had its own distinct characteristics when it came to the preferences and conditions for optimal production. We developed an extensive library of genetic elements we call folding and expression solutions that we can mix and match to optimize SoluPro for each different protein. These modular genetic “parts” include chaperone proteins (a class of proteins that help other proteins fold), ribosomal binding sites (which alter translation rates), and codon preferences. These can be combined in various ways like building blocks in the same plasmid containing the gene(s) for the protein we are producing. Thus, the SoluPro or Bionic SoluPro chassis remains the same across all of our projects, but each cell line has a different plasmid that contains not only the gene(s) encoding the protein for production, but also the particular set and arrangement of folding and expression solutions that enable its optimal production.

Breakthrough Assays

To evaluate the billions of drug sequence and folding solutions variants we generate, we have developed revolutionary new high-throughput assays. With these methods, we are able to

efficiently screen billions of discrete strains and identify those that express the protein-of-interest with the desired functional, quality, and manufacturability characteristics.

Using synthetic biology tools and approaches, we may create billions of different plasmids for each project, with the gene(s) of interest plus an assortment of folding and expression solutions in various configurations. This so-called “library” approach enables us to evaluate the population of SoluPro cells to find the sequences and solutions that work best for the given protein. With billions of plasmids introduced into a batch of SoluPro cells, we create a batch of billions of cells each with a distinct plasmid and therefore a different potential to produce the protein-of-interest. To evaluate and select the subset that are the most promising for further analysis, we have developed a breakthrough high-throughput assay we call our ACE Assay.

ACE Assay: Our screening step employs our ACE Assay. For the ACE Assay we introduce fluorescently-labeled target proteins (e.g., the antigen against which we are trying to develop a drug) and use fluorescence activated cell sorting (FACS) to evaluate and sort each cell based on how brightly it fluoresces. Using proprietary methods, we correlate the fluorescent signal with the quantity, quality, and function of the protein-of-interest, and thus we can utilize the ACE Assay to characterize billions of independent strains and collect the desired variants based on the parameters we set. In this way we are quickly able to identify what we believe is the most promising subset of cells from among millions or billions. We are also generating billions of data points describing sequence modifications and combinations of folding solutions contributing to affinity, stability, solubility, and manufacturability that we use to train our Denovium Engine deep learning model.

HiPrBind Assay: As our selection step, we grow up ACE Assay isolates as unique clones in separate wells of micro-well plates. This allows us to evaluate each strain in isolation using our High-Throughput Proximity Binding (HiPrBind) Assay. The assay is a solution phase assay that operates on similar principles to ELISA and can be used to quantify the amount of functionally desirable and properly folded full-length protein for each strain. Our proprietary techniques are designed to allow us to discriminate between full length properly folded protein and any other improperly folded or incomplete product-related impurities, in a fully quantitative manner. Thus, we select the top dozen or so highest producing cell lines for further analytics and fermentation optimization, and again collect the data for training the Denovium Engine models.

Denovium Engine Deep Learning AI

For each protein we address, we generate datasets correlating sequence variants and folding solutions with modulation of protein function, quality, and manufacturability. We are using deep learning to harness these data to train models which can optimize desired therapeutic and manufacturability attributes *in silico*.

The Denovium Engine is an artificial intelligence that understands the fundamental properties of protein function. Trained on more than 100 million proteins, the Denovium Engine includes highly comprehensive deep learning models for protein function. Using a multi-task deep learning approach, our models can predict protein function directly from DNA or amino acid sequence in one single step. Importantly, our approach does not require a crystal structure and can take advantage of other protein properties that are also important for determining protein function, including solubility, stability, ability to be expressed in a particular host, and immunogenicity among other properties (including structure). Thus, our approach is distinct from AI protein design approaches that focus solely on modeling for structural prediction. Importantly, our functional deep learning approach allows us to design and optimize for multiple traits at a time.

About deep learning: Deep learning is a branch of machine learning which is characterized by the use of deep neural network models. For many complex real-world problems, these models have been shown to outperform traditional modeling approaches in terms of accuracy, generalizability, and operational speed. One key to their success is the ability of deep neural networks to identify rich patterns, known as features, directly from the data and with minimal influence from human

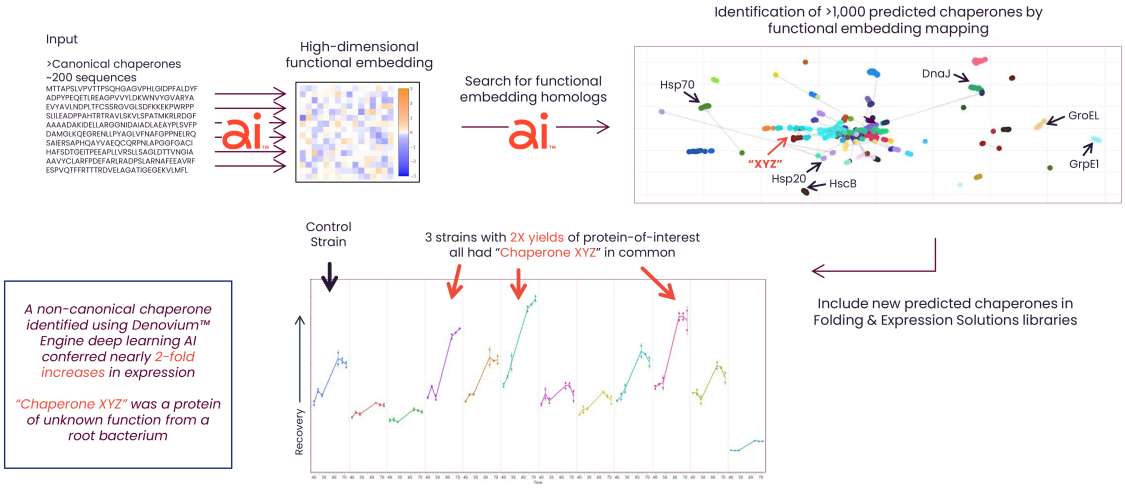
experts. Advanced model architectures and regularization techniques have also demonstrated increasing performance with larger models, contrary to the trends of most other machine learning approaches. This combination of self-improvement and scalability has proved to be transformational for many problems and modern AI can now perform at superhuman levels for tasks which have long been challenging for computers, such as image recognition and language translation.

About the Denovium Engine: The Denovium Engine is designed to simplify the process of solving deep learning challenges in biology. This includes collecting and processing data, finding optimal model architectures, training models on diverse data types, deploying them at scale, and applying them to solve problems in novel ways. The Denovium Engine was used to develop two key models, one for protein sequences and one for DNA sequences. The protein model was trained on more than 100 million protein sequences and turns primary amino-acid sequences into rich embedding vectors. The embeddings are tied directly to supervised and unsupervised tasks and allow for the rapid annotation of proteins using an ontology of over 700-thousand classes from more than 25 categories, including sequence similarity, folding structure, and function. The engine can also use embedding representations to rapidly search for novel proteins, even if they are previously unannotated. The Denovium Engine was also used to develop a DNA model which ties DNA sequences directly to function. This includes the simultaneous identification of both protein-coding and functional non-coding regions. In addition to finding these regions, the model predicts their function by tying directly into the protein model and a non-coding RNA model. This integration allows for the extremely rapid and rich analysis of genomes and metagenomes.

The rich embedding space representations produced by the protein and DNA models allow for deep transfer-learning to novel problems of interest. Laboratory data can be modeled in these spaces without the need to train a new deep learning model and with dramatically fewer examples. Such novel predictors can be combined with built-in generative tools for the engineering of sequences for desired properties. Any combination of the trained ontologies as well as any laboratory data of interest can be used to guide sequence engineering efforts. The model can also explain the importance of mutations in human terms through the mapping from embedding space to the laboratory data and ontologies.

Deep learning at Absci: Deep learning and AI can only be as useful as the data it is founded upon. Our Integrated Drug Creation Platform is designed to generate large, diverse, and high-quality data that we believe to be particularly relevant for training models and improving the pace of biologic drug discovery and production. The near-term potential of this opportunity is to inform our cell line designs. This includes identifying novel chaperones and other key elements which will be tailored to the rapid expression and quality folding of the target protein. Success in this area could take our already rapid process and reduce or even eliminate the laboratory strain selection process. This

could reliably reduce the time for developing strains for producing novel therapeutics. An example of how the Denovium Engine insights can be harnessed into practical solutions is depicted below.



To identify novel chaperones with the potential to confer protein folding and expression advantages, the Denovium Engine was fed ~200 sequences of known chaperones. With functional embedding homology clustering, it identified over 1000 novel potential chaperones. Upon including a selection of new predicted chaperones in our constructs, three strains that produced the protein-of-interest with higher yields all had "Chaperone XYZ," a protein of unknown function from a root bacterium, in common. There was no apparent sequence homology between "Chaperone XYZ" and known chaperones.

We are also investing in using the Denovium Engine for drug discovery. At first this will take advantage of sequence engineering and generative AI for improving the affinity, manufacturability, and/or immunogenicity profiles of promising candidates. As this technology develops, the quality of the starting candidate will matter less and may eventually not be needed at all. When combined with the AI-guided cell line design, we expect to be positioned to design proteins and cell lines principally *in silico*, followed by rapid construction and confirmation activities that could be accomplished in a matter of days.

Computational Antibody & Target Discovery

Through our acquisition of Totient, our Integrated Drug Creation Platform now includes the potential for our partners to work with us to address novel disease targets and access new fully human monoclonal antibody sequences either as therapeutics in their own rights, or as starting points for design of next-generation biologics in other scaffolds. Our bioinformatics approach allows us to infer antibody sequences from tissue RNA, and we use those sequences to identify target antigens.

Antibody discovery (sequence reconstruction): We reconstruct human antibodies from standard RNA-seq of whole tumor tissue. This allows us to retrospectively pick patients with distinct immune responses and assemble the most prevalent monoclonal antibodies expressed in the tissues of interest and presumed to be contributing to the immune response. Our methods do not require isolation of single immune cells or processing of fresh tumor tissues. Instead we can work with RNA-seq data we generate from banked tissue samples, including older formalin-fixed paraffin-embedded (FFPE) archival specimens, that have been collected by academic consortia, clinical trials, and commercial biobanks. Thus we have the opportunity to direct our technology toward curated source tissues selected for desired disease and therapeutic response profiles.

To assemble antibody sequences from RNA-seq we have developed computational pipelines incorporating proprietary algorithms and built our own software suite. Our antibody selection pipeline includes five elements: extraction of immunoglobulin reads and contamination filtering;

sequence assembly; immunoglobulin chain identification and annotation; chain abundance quantification; and pairing and prioritization. The ultimate prioritization step leverages a rule-based system to pair and prioritize high-quality candidates both within and across samples, using a variety of input information including chain abundance and clonality metrics as well as markers of immune activation such as plasma cell abundance and tertiary lymphoid structures gene expression signatures. We reconstruct a portion of the clonal lineage tree around both chains of the selected antibody which allows us to evaluate naturally-occurring sequence variations to identify fully human sequence variants with the best developability.

Target discovery (de-orphaning): Prior to the acquisition, Totient relied on several third party protein array services to de-orphan its assembled antibody sequences. These approaches are limited to evaluating one antibody at a time. One of the important initiatives we are pursuing as we integrate the Totient technology is adapting our ACE Assay to potentially enable comprehensive high-throughput de-orphaning of computationally assembled antibodies. We anticipate constructing libraries of prospective antigens and peptides deeply covering the human proteome, with intentional representation across subcellular localizations including membrane and secreted proteins, as well as isoforms and fusion proteins particular to specific developmental and disease states. With this approach we believe we will be able to rapidly identify highly specific antigens for most of the computationally derived antibody sequences, and expand a growing collection of proprietary disease-relevant human antibody-antigen pairs. Training our Denovium Engine deep learning on de-orphaning assay data may also yield models that predict antibody-antigen matching, enable *in silico* epitope mapping, and understand parameters of protein-protein interactions more broadly.

To date, we have analyzed millions of complementarity-determining regions (CDRs) from more than 50,000 patients and computationally assembled over 4,500 human monoclonal antibodies obtained from those patients experiencing exceptional immune responses. Predating the acquisition, Totient had synthesized, expressed and purified roughly ten percent of these antibodies, and subjected a subset of those to further characterization and de-orphaning to identify target antigens. Among roughly 100 putative oncology antibody-antigen pairs identified through protein array analyses, 30 pairs were selected for further characterization and 19 of these were confirmed as binding partners via surface plasmon resonance. Confirmed targets recognized by our *in silico* paired antibodies include seven well known cancer specific antigens (NY-ESO-1, MAGEA3, GAGE2A, DLL3) and immunomodulatory molecules expressed in the tumor microenvironment (ANXA1, TGFBI, C4BPB), as well as several novel potential drug target antigens. The identification of well-known drug targets with this methodology serves as a proof of concept for the potential of this approach using computationally-derived antibody sequences to determine relevant antigens for future drug discovery applications. Some of the work we have done is summarized in a manuscript entitled “The landscape of high-affinity human antibodies against intratumoral antigens” (bioRxiv 2021, doi.org/10.1101/2021.02.06.430058).

As evidence of the efficiency of our computational human antibody discovery technology, during the COVID-19 pandemic we obtained mRNA sequencing data from bronchoalveolar lavage fluid or blood samples of patients infected with the SARS-CoV-2 virus that, over the course of three days, we ran through our pipeline in several batches. We were able to reconstruct more than 400 distinct fully human antibody sequences for further testing. Among those, we identified over 15 antibodies that bind to the SARS-CoV-2 spike protein with high affinity, a number of which show potential to neutralize infection. This work was done in collaboration with Ginkgo Bioworks. We believe sample collection, mRNA extraction, library preparation, and sequencing steps can each be accomplished in one day with standard procedures, and our bioinformatics pipeline analysis of the sequencing data adds an additional approximate day to the timeline. This is a potentially powerful approach to enable rapid response to emerging infectious diseases through efficient identification of antibodies that could be useful for diagnostic and/or therapeutic interventions.

We expect to continue to evaluate patient tissue samples and extract new antibody sequences that we subsequently de-orphan. We may source specimens of interest to a particular partner, or work directly with RNA-seq data supplied by a partner. While to date we have tuned our pipeline for reconstruction of antibody sequences, the methodology is extensible to assembly of other proteins expressed differentially in disease tissues, particularly immune system components that conform to conserved architectures. We expect to reconstruct human T-cell receptor sequences, for example, and de-orphan them taking a similar approach as we develop for antibodies.

Beyond the direct utility of novel antigens we identify as potential drug targets, and of human antibodies we discover as drug candidates, we believe that the expertise we accumulate as we build our collection of antibody-antigen pairs has the potential for much more profound impact. Protein-protein interactions are highly complex and multi-parametric. Deep learning neural networks are ideally suited to tackling this sort of complexity. Through the de-orphaning process we expect to generate large datasets that describe sequence determinants of functional interactions between proteins. Training our Denovium Engine models on these data may enable us to hone our predictions of relevant drug sequence variants to design for a given target, or even allow us to identify novel targets *in silico* from computationally assembled antibody sequences. Eventually we are driving toward a future in which our AI models enable us to identify novel disease-specific targets and design optimized lead drugs and cell lines to manufacture them all at the click of a button. The COVID19 mRNA vaccines have demonstrated the power of using well-understood rules of genetic coding to shortcut discovery timelines. We believe that deep learning models trained on the right data have the potential to develop comprehensive understanding of biologic drug function and target specificity, and thus transform the protein therapeutic discovery process to a similar magnitude. We intend to generate the right data, train the comprehensive models, and realize this industry-transforming potential of *in silico* drug creation. Our goal is to get the best possible medicines to patients more quickly than ever before.

Intellectual Property

We use a variety of intellectual property protection strategies, including patents, trademarks, trade secrets and other methods of protecting proprietary information. Our success depends in part on our ability to obtain and maintain intellectual property protection for the components of our Integrated Drug Creation Platform; to defend and enforce our patents, to preserve the confidentiality of our trade secrets; to operate without infringing valid and enforceable patents and other proprietary rights of third parties and to identify new opportunities for intellectual property protection.

As of June 4, 2021, we own 35 issued or allowed patents and 48 pending patent applications worldwide, which includes four issued U.S. patents and 11 pending U.S. patent applications. We also have issued patents in the EU, Australia, Japan, Brazil, Canada, China, Hong Kong, Israel, Mexico, and Republic of Korea. Our patents and patent applications, if issued, are expected to expire between August 2033 and February 2041, in each case without taking into account any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity, or other governmental fees.

Our patents and patent applications include the following:

Patent Portfolio	General Description of Subject Matter	Issued Patents	Pending Applications	Type of Protection
SoluPro	Host cells, Expression vectors, methods of producing products of interest	4 U.S. patents 31 foreign patents	6 U.S. applications 18 foreign applications	Compositions, methods, kits
SoluPure	Protein purification methods		1 U.S. application 10 foreign applications	Methods
HiPrBind	High-throughput methods of detecting and analyzing analytes		1 pending application (PCT)	Methods
ACE	High-throughput methods of screening for high performing host cells and/or expression constructs		1 pending application (PCT)	Methods
Inteins	Constructs and methods for producing “human” proteins in *E. coli* by self-cleaving peptides		1 pending application (PCT)	Compositions, methods
Totient (Antibodies)	Proteins, nucleic acids, vectors, host cells, kits, and methods of treating diseases, such as cancer and SARS-CoV-2		3 U.S. applications (2 provisional) 1 PCT application 5 foreign applications	Compositions, methods, kits
Totient (Computational Methods)	Computational model for agent identification		1 pending application (provisional)	Methods

The protection provided by a patent varies from country to country, and is dependent on the type of patent granted, the scope of the patent claims, and the legal remedies available in a given country. In addition, the term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest non-provisional filing date, subject to any disclaimers or extensions. The term of a patent in the United States can be adjusted due to any failure of the United States Patent and Trademark Office following certain statutory and regulation deadlines for issuing a patent. In addition, in the United States, the term of a U.S. patent that covers an FDA-approved drug may also be eligible for patent term extension, which, if granted, permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the original expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if we determine to develop our own product candidates and any such product candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those products. While we may seek patent term extensions of our relevant issued patents in any jurisdiction where such extensions are available, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions.

As of June 4, 2021, we owned registered trademarks for Absci, SoluPro, SoluPure and TOTIENT in the United States, as well as eight trademark registrations in other jurisdictions.

In addition to patent and trademark protection, we also utilize other forms of intellectual property protection, including copyright, internal know-how and trade secrets, when such other forms are better suited to protect a particular aspect of our intellectual property position. For example, our trade secrets encompass certain algorithms associated with our deep learning Denovium Engine, our computational antibody and target discovery technology, manufacturing protocols for our *E. coli* SoluPro strains, libraries of protein folding solutions and design of molecular libraries for drug discovery. We believe our proprietary rights are strengthened by our comprehensive approach to intellectual property protection. It is our policy to require our employees, consultants, advisors and other independent contractors to execute confidentiality and invention assignment agreements upon accepting employment, consulting or similar relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. We also take precautions through the use of security measures to prevent the release of our proprietary information to third parties.

Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees, consultants, advisors and other independent contractors, these agreements may be breached and we may not have adequate remedies for any breach. In addition, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets and other proprietary technology. For a discussion of the risks we face relating to intellectual property, see "Risk Factors—Risks Related to our Intellectual Property."

Material Agreements

On December 5, 2019, we entered into a Joint Marketing Agreement (KBI Agreement) with KBI Biopharma, Inc. (KBI) a global biopharmaceutical contract development and manufacturing organization, pursuant to which the two companies agree to jointly market and promote their respective products and services to accelerate and optimize drug development and manufacturing. For four years from the date of the KBI Agreement, we have agreed to use KBI as our sole contract manufacturer to market our products and services worldwide related to the expression of proteins, including without limitation, certain proprietary methods of increasing or improving the quality or quantity of expression or production of proteins, or producing proteins with improved properties, including methods based on our proprietary protein expression and purification technology. The KBI Agreement does not restrict our ability to enter into other agreements with contract manufacturing organizations, so long as the agreement does not cover the marketing of our technology, with certain exceptions. During each of the four contract years, KBI is obligated to use commercially reasonable efforts to market our technology and provide us with certain designated number of qualifying leads in each year. In the event that KBI fails to present a sufficient number of qualifying leads, KBI shall be obligated to make payments to us in the range of $250,000 to $500,000 over the four years, referred to herein as Additional Exclusivity Payments. Under the KBI Agreement, each party also agrees to maintain certain personnel and produce certain marketing materials jointly for the purposes of the marketing efforts under the KBI Agreement. KBI has made a one-time upfront payment of $750,000 to us in consideration for this Agreement. Additionally, KBI paid a milestone payment of $2.25 million and is required to pay an additional $500,000 upon the achievement of certain milestones, including the ability of KBI to enter into services agreements with third parties using our technology. To date, no such contracts have been entered into by KBI. Beginning on the third anniversary of the date of the KBI Agreement and for the following year thereafter during the four-year term of the KBI Agreement, KBI will pay us royalties in the mid-single digits based on the net sales during such year from manufacturing services provided by KBI to third parties using our technology. The KBI Agreement may be terminated by either party following notice of an uncured material breach, including failure to pay under the agreement, or for insolvency of the other party. The KBI Agreement may also be terminated by us upon a change of

control or if KBI fails to provide the sufficient number of qualifying leads and fails to pay the Additional Exclusivity Payments.

Government Regulation

Regulations Related to the Discovery, Development, Approval and Commercialization of Biotherapeutics

Our focus is on the use of our platform to enable our partners to improve the speed and success of their biologic product discovery and development efforts; however, we ourselves are not currently involved in biologic product discovery and development, do not manufacture any product candidates and do not conduct or sponsor any IND-enabling preclinical studies or clinical trials. As such, while we are subject to a number of regulations, such as those governing our laboratory facilities as well as regulations that apply to businesses in the private sector generally, we are not subject to many of the types of regulations that ordinarily apply to companies in the life sciences, biotechnology and pharmaceutical sectors and industries. However, we believe that the long-term success of our business depends, in part, on our partners' ability to successfully develop and sell products identified and created through our platform technology. The regulations that govern our pharmaceutical and biotechnology partners are those we therefore believe have the most significant impact on our business.

Government authorities in the United States, at the federal, state and local level, and in the European Union and other countries and jurisdictions, extensively regulate, among other things, the research, development, testing, manufacturing, quality control approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of pharmaceutical products, including biological products such as those that our partners develop. The processes for obtaining marketing approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources. If we or our partners fail to comply with applicable laws or regulations at any time, we or our partners may become subject to administrative or judicial sanctions or other legal consequences, including among other things, restrictions on marketing or manufacturing, withdrawal of products, product recalls, fines, warning letters, untitled letters, clinical holds on clinical studies, refusal of the FDA to approve pending applications or supplements to approved applications, suspension or revocation of product approvals, product seizure or detention, 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, issuance of safety alerts, Dear Healthcare Provider letters, injunctions or the imposition of civil or criminal penalties.

Our partners must obtain the requisite approvals from the applicable regulatory authority prior to the commencement of clinical studies or marketing of a biological product in those countries. The requirements and process governing the conduct of clinical trials, product licensing, coverage, pricing and reimbursement vary from country to country. 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 applicable good laboratory practices regulations (GLP);
- submission to the FDA of an application for an IND, which must become effective before clinical trials may begin;
- approval of the protocol and related documentation by an independent institutional review board (IRB), or ethics committee at each clinical site before each trial may be initiated;

- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as good clinical practices (GCPs), and any additional requirements for the protection of human research subjects and their health information, to establish the safety and efficacy of the proposed biological product for its intended use;
- preparation of and submission to the FDA of a biologics license application (BLA), for marketing approval that includes sufficient evidence of establishing the safety, purity, and potency of the proposed biological product for its intended indication, including from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with current good manufacturing practices (cGMPs), to assure that the facilities, methods and controls are adequate to preserve the biological product's identity, strength, quality and purity;
- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA;
- review of the product candidate by an FDA advisory committee, where appropriate and if applicable;
- payment of user fees for FDA review of the BLA (unless a fee waiver applies); and
- FDA review and approval of the BLA, resulting in the licensure of the biological product for commercial marketing.

Although we do not currently engage directly in the discovery of our own biologics, we anticipate that in the future, we may selectively create our own biologic product candidates and advance such candidates through preclinical validation and cGMP manufacturing scale-up. Before testing any biologic product in humans, the product candidate must undergo rigorous preclinical testing. Preclinical studies include laboratory evaluations of drug chemistry, formulation and stability, as well as *in vitro* and animal studies to assess safety and in some cases to establish the rationale for therapeutic use. The conduct of preclinical studies is subject to applicable federal/national, supranational, state and local level regulations and requirements, including GLP, requirements for safety/toxicology studies. The results of the preclinical studies, together with manufacturing information and analytical data, must be submitted to the FDA as part of an IND or the appropriate regulatory authority in foreign countries as part of a clinical trial application (CTA). An IND is a request for authorization from the FDA to administer an investigational new drug to humans. In the United States, 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.

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 written trial protocols detailing, among other things, the objectives of the clinical trial, 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 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 recommend halting 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, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval and product labeling.

In some cases, FDA may require, or firms may voluntarily pursue, post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators.

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

Healthcare Laws and Regulations

Biopharmaceutical 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. These laws and regulations may constrain our relationships with our partners. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, and transparency laws and regulations related to drug pricing and payments and other

transfers of value made to physicians and other healthcare providers. If our partners' operations are found to be in violation of any of such laws or any other governmental regulations that apply, by extension, we 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 responsible individuals may be subject to imprisonment.

Additional Regulations

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

Healthcare Reform

Payors, whether domestic or foreign, or governmental or private, are developing increasingly sophisticated methods of controlling healthcare costs and those methods are not always specifically adapted for new technologies. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In particular, in 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (ACA) was enacted, which, among other things, subjected biologic products to potential competition by lower-cost biosimilars; addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected; increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations; subjected manufacturers to new annual fees and taxes for certain branded prescription drugs; created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% (increased to 70% pursuant to the Bipartisan Budget Act of 2018, effective as of January 1, 2019) 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 provided incentives to programs that increase the federal government's comparative effectiveness research.

Anti-Corruption Laws

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended (FCPA) the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities, such as the UK Bribery Act 2010 and the UK Proceeds of Crime Act 2002 (Anti-Corruption Laws). Among other matters, such Anti-Corruption Laws prohibit corporations and individuals from directly or indirectly paying, offering to pay or authorizing the payment of money or anything of value to any foreign government official, government staff member, political party or political candidate, or certain other persons, in order to obtain, retain or direct business, regulatory approvals or some other advantage in an improper manner. We can also be held liable for the acts of our third party agents under the FCPA, the UK Bribery Act 2010 and possibly other Anti-Corruption Laws. In the healthcare sector, anti-corruption risk can also arise in the context of improper interactions with doctors, key opinion leaders and other healthcare professionals who work for state-affiliated hospitals, research institutions or other organizations.

Our Culture

We actively engage in evolving our culture every day, throughout our organization. We invite input, consider best practices, and iterate to create the Absci culture that best reflects and projects the nature of our people.

The values we embody are:

- Believe in the impossible
- Proceed with passion and grit
- Foster collaboration and communication
- Expect integrity and excellence
- Enjoy the adventure

Collectively and individually we are defying conventions and innovating without boundaries. We are disrupting the biopharmaceutical industry with bold ideas and passionate pursuit of new possibilities. We share the mission of changing the world, one protein at a time.

Human Capital Resources

As of June 30, 2021, we have 169 full-time employees of whom 75 have advanced post-graduate degrees. None of our employees is represented by a labor union with respect to his or her employment with us. 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 additional employees. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards.

Facilities

We lease a 14,549 square foot office and laboratory space, located at 101 E 6th Street, Suite 350, Vancouver, Washington 98660. The office lease expires in August 2024. In December 2020, we entered into an additional operating lease, which was subsequently amended in March 2021, for a 77,974 square foot corporate headquarters facility that will include office and laboratory space, located at 18105 SE Mill Plain Blvd, Vancouver, Washington, 98683. The new lease expires in May 2028. We are currently in the process of relocating our operations to the new facility and expect to complete our relocation by the end of 2021. In addition, as a result of the Totient acquisition, we currently maintain offices in Cambridge, Massachusetts and Belgrade, Serbia. We believe that our leased facilities are sufficient to meet our current and near-term needs and that additional alternative space will be available in the future on commercially reasonable terms, if needed.

Legal Proceedings

As of the date of this prospectus, we are not currently a party to any material litigation or other legal proceedings. From time to time, we may, however, in the ordinary course of business face various claims brought by third parties, and we may, from time to time, make claims or take legal actions to assert our rights. Any such claims and associated legal proceedings could, in the opinion of our management, have a material adverse effect on our business, financial condition, results of operations or prospects. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors. In the future, we may become party to legal matters and claims arising in the ordinary course of

business, the resolution of which we do not anticipate would have a material adverse impact on our financial position, results of operations or cash flows.

Management

Executive officers and directors

The following table sets forth certain information about our executive officers and directors as of June 25, 2021.

Name	Age	Position(s)
Executive Officers:		
Sean McClain	31	Chief Executive Officer and Director
Gregory Schiffman	63	Chief Financial Officer
Andreas Pihl	60	Chief Operating Officer and Director
Matthew Weinstock, Ph.D.	35	Chief Technology Officer
Sarah Korman, Ph.D., J.D.	42	General Counsel
Nikhil Goel	41	Chief Business Officer
Other Non-Employee Directors:		
Eli Casdin[(1)(3)]	48	Director
Zachariah Jonasson, Ph.D.[(2)(3)]	49	Director
V. Bryan Lawlis, Ph.D.[(4)]	69	Director
Ivana Magovcevic-Liebisch, Ph.D., J.D.[(2)(3)]	53	Director
Karen McGinnis, C.P.A.[(1)]	54	Director
Amrit Nagpal[(1)]	46	Director

(1) Member of the Audit Committee.
(2) Member of the Compensation Committee.
(3) Member of the Nominating and Corporate Governance Committee.
(4) Dr. Lawlis has announced his intention to resign as a member of our board of directors upon the effectiveness of the registration statement of which this prospectus forms a part.

Executive Officers

Sean McClain. Mr. McClain is our Founder and has served as our Chief Executive Officer since August 2011 and a member of our board of directors since the formation of Absci Corporation in October 2020, and a managing member of its predecessor, AbSci LLC, since inception. Mr. McClain also serves as a board member for the Oregon Bioscience Association, Oregon Bioscience Incubator and Oregon Translational Research and Development Institute (OTRADI), and Life Science Washington. Mr. McClain holds a Bachelor of Science degree in Molecular and Cellular Biology in 2011 from the University of Arizona.

Gregory Schiffman. Mr. Schiffman has served as our Chief Financial Officer since April 2020. Mr. Schiffman also currently serves as a Director of AYRO, Inc., since May 2020, BioEclipse Therapeutics since October 2016, and Nanomix Inc., since November 2005. Mr. Schiffman has also served as a director of DropCar from January 2018 to May 2020, Xenogen Corporation from January 2005 to July 2006, VNUS Medical Technologies Inc. from April 2006 to July 2009 and IMPAC Medical Systems, Inc., from February 2003 to April 2005. Prior to joining Absci, Mr. Schiffman has served as the Chief Financial Officer of Vineti, Inc. from October 2017 to April 2018. He was also Chief Financial Officer and Corporate Secretary of Iovance Biotherapeutics, Inc. from October 2016 to June 2017. Prior to Iovance, Mr. Schiffman served as the Chief Financial Officer and Executive Vice President of Finance of StemCells Inc. from January 2014 until September 2016, the Chief Financial Officer of Dendreon Corporation from December 2006 to August 2013 and Executive Vice President of Dendreon Corporation from December 2006 to November 2013. Mr. Schiffman has also held several roles at Affymetrix Inc., as Chief Financial Officer from August 2001 to December 2006 and as its Executive Vice President from February 2005 to December 2006, and previously as Vice President and

Controller of Applied Biosystems, Inc. (now part of Life Technologies) from October 1998 to March 2001. Before entering the healthcare field, Mr. Schiffman held roles of increasing responsibility within Hewlett Packard, where he served as controller of its European P.C. manufacturing and distribution operations in Grenoble, France and as manufacturing manager and controller of its Netmetrix Division. Mr. Schiffman is a CPA in Illinois, holds a Master's in Business Administration from 1987 from the J.L. Kellogg School of Management, Northwestern University and a Bachelor's of Science degree in Accounting from 1985 from DePaul University.

Andreas Pihl. Mr. Pihl has served as our Chief Operating Officer and a member of our board of directors since August 2020. Prior to joining our company, he served as Vice President of Operations at Park Corporation from July 2004 until July 2020 and as Executive Vice President of Sumco Corporation between 2001 and 2004. Mr. Pihl also served in various capacities at Wacker Corporation from 1987 to 2000 including Senior Vice President of Operations between 1998 and 2000, Manager of Manufacturing Operations between 1992 and 1994, and as a Production Logistics Manager between 1987 to 1992. Between 1984 and 1987, Mr. Pihl was a Manufacturing Management Program Graduate at General Electric Company where he served in the General Electric Lighting Business Group as a Quality Unit Manager between 1986 and 1987 and Manufacturing Engineer and Supervisor between 1984 and 1985. He also served in the General Electric Aerospace Division between 1985 and 1986 as a Production Control Supervisor and Facilities Project Engineer. Mr. Pihl received a Bachelor's of Science degree in Industrial and Manufacturing Engineering from Oregon State University in 1984. We believe Mr. Pihl is qualified to serve on our board of directors due to his extensive experience in manufacturing, operations and management.

Matthew Weinstock, Ph.D. Dr. Weinstock has served as our Chief Technology Officer since September 2020. Prior to his role as CTO, Dr. Weinstock served Absci in a number of capacities, including: Chief of Staff, Group Leader of Molecular Sciences, and Senior Scientist. Between January 2014 and July 2018, Dr. Weinstock worked at Synthetic Genomics, Inc. where he led several efforts to develop next-generation host platforms for the bioproduction of therapeutics. He was the inventor and program lead of the Vmax™ platform, a novel microbial factory for the rapid and high-titer production of plasmid vectors and proteins, which was successfully commercialized. He also served as institutional PI on a multi-site DARPA program aiming to generate a consortium of synthetic organisms that could be introduced into the human gut microbiome to monitor for inflammation and respond by secreting anti-inflammatory compounds. Currently, Dr. Weinstock also serves as an instructor at the University of California, San Diego (Extension). Dr. Weinstock holds a PhD in Biochemistry from the University of Utah School of Medicine from 2014 where his dissertation centered on the use of mirror-image display technologies to discover D-peptide therapeutics against emerging infectious diseases. He obtained a Bachelor of Science degree from the University of Utah in 2007.

Sarah Korman, Ph.D., J.D. Dr. Korman has served as our General Counsel since May 2021. Ms. Korman previously served as the General Counsel and Corporate Secretary of NEUVOGEN, Inc. from September 2019 to June 2021. She served as Sr. Counsel, Intellectual Property & Litigation and Head of Intellectual Property, Final Drug Products at Amgen Inc. from September 2014 to September 2019. Dr. Korman holds a J.D. from DePaul University College of Law, a Ph.D. in materials science and engineering from the Pennsylvania State University and two B.S. degrees from the South Dakota School of Mines and Technology in Chemistry and Metallurgical Engineering, respectively. She is a National Science Foundation Fellow and an inventor on various patents directed to nanoenabled therapeutics.

Nikhil Goel. Mr. Goel has served as our Chief Business Officer since June 2021. He previously served as a Director in the mergers and acquisitions group at Credit Suisse from January 2019 to June 2021, and as a Vice President in the mergers and acquisitions group at Credit Suisse from December 2015 to December 2018. Mr. Goel holds a Master's in Business Administration from the University of Virginia, a Master's of Science in computer science from Georgia Institute of Technology and a Bachelor of Technology in computer science from the Indian Institute of Technology, Varanasi.

Non-Employee Directors

Eli Casdin. Mr. Casdin has served as a member of our board of directors since October 2020. Since January 2021, Mr. Casdin has served as the Chief Executive Officer of CM Life Sciences III Inc. For the last 17 years he has analyzed and invested in disruptive technologies and business models in life sciences and healthcare. Prior to founding Casdin Capital, Mr. Casdin was a vice president at Alliance Bernstein's "thematic" based investment group where he researched and invested in the implications of new technologies for the life sciences and healthcare sectors. The black book, "The Dawn of Molecular Medicine," co-authored by Mr. Casdin, details the early, yet already accelerating, wave of innovations in life sciences, and the next wave of investment opportunities. Mr. Casdin's prior experience includes time at Bear Stearns and Cooper Hill Partners, a healthcare focused investment firm. Mr. Casdin also serves as the Chief Executive Officer of CM Life Sciences, Inc. (Nasdaq: CMLF) and CM Life Sciences II Inc. (Nasdaq: CMII), both blank check companies sponsored by an affiliate of Casdin Capital and Corvex Management, since July 2020 and December 2020, respectively. Mr. Casdin serves on the board of directors for CM Life Sciences, Inc. and CM Life Sciences II Inc., and also serves as a director or observer on the boards of a number of privately held life sciences companies. He has previously served as a director or observer on other, now public, boards, including Exact Sciences Corporation (Nasdaq: EXAS), Invitae Corporation (NYSE: NVTA), Relay Therapeutics, Inc. (Nasdaq: RLAY), and Magenta Therapeutics (Nasdaq: MGTA). Mr. Casdin is currently a member of the New York Genome Center Board and a member of The Columbia University School of General Studies Board of Visitors. Mr. Casdin earned a B.S. from Columbia University in 2003 and an MBA from Columbia Business School in 2003.

Zachariah Jonasson, Ph.D. Dr. Jonasson has served as a member of the Company's board of directors since April 2016. He has over 25 years of experience in venture capital and company operations. Dr. Jonasson is currently a Managing General Partner of Phoenix Venture Partners LLC (PVP), a venture capital firm he co-founded in August 2010. Dr. Jonasson leads PVP's investment strategy in biotechnology and has been involved in raising all of PVP's venture capital and seed funds. In addition to serving on the board of Absci, Dr. Jonasson serves as a director on the boards of PVP portfolio companies Green Theme Technologies, Inc., ReForm Biologics, LLC, Autonomic Materials, Inc. Sentinel Monitoring Systems, Inc., and L7 Informatics, Inc. He also serves on the board of the Oregon Translational Research and Development Institute (OTRADI) and has served on the Commercialization Council of the Oregon Nanoscience and Microtechnologies Institute (ONAMI), the Advisory Board for the Oregon Innovation Cluster (OIC), and the Advisory Board of the Life Sciences Institute at the University of British Columbia Previously, Dr. Jonasson was a co-founder and Chief Executive Officer of ReForm Biologics, LLC and a co-founder and VP of Business Development of Crop Enhancement, LLC Earlier in his career, Dr. Jonasson was a General Partner and Kauffman Fellow at Seaflower Ventures, an early-stage venture capital firm investing in the biotechnology sector, where he led, managed and held board or board observer roles at several of the firm's investments, including Serenex, Inc. and Valeritas, Inc. Dr. Jonasson earned a Bachelor of Science from Georgetown University in 1995, where he was a Rhodes Scholarship Finalist, and an AM and PhD from Harvard University in 2003, where he was a Sackler Scholar. He has co-taught a marketing course at Harvard Business School as well as served as a Teaching Fellow at Harvard University. Prior to graduate school, Dr. Jonasson was a Research Associate at the Board of Governors of the Federal Reserve System. We believe Dr. Jonasson is qualified to serve on our board of directors due to his extensive expertise in venture capital the life sciences industry as well as his experience serving on numerous other boards.

V. Bryan Lawlis, Ph.D. Dr. Lawlis has served on our board of directors since May 2016. From August 2011 to September 2017, he served as the President and Chief Executive Officer of Itero Biopharmaceuticals, LLC, a private holding company that held the assets of ltero Biopharmaceuticals, Inc., a private biotechnology company. Dr. Lawlis co-founded and served as President and Chief Executive Officer of ltero Biopharmaceuticals, Inc. from 2006 until it discontinued operations in August 2011. Dr. Lawlis served as President and Chief Executive Officer of Aradigm Corporation (Aradigm), a pharmaceutical company, from August 2004 to August 2006;

continuing in both capacities until August 2006. Dr. Lawlis previously served as Aradigm's President and Chief Operating Officer from June 2003 to August 2004 and its Chief Operating Officer from June 2003 to August 2004 and its Chief Operating Officer from November 2001 to June 2003. Prior to his time at Aradigm, Dr. Lawlis co-founded Covance Biotechnology Services, a contract biopharmaceutical manufacturing operation, served as its President and Chief Executive Officer from 1996 to 1999, and served as Chairman from 1999 to 2001. It was sold to Diosynth RTP, Inc., a division of Akzo Nobel. NV. From 1981 to 1996, Dr. Lawlis was employed at Genencor, Inc., a biotechnology company and Genentech, Inc. His last position at Genentech, Inc. was Vice President of Process Sciences. Dr. Lawlis has served on the board of BioMarin Pharmaceutical, Inc., a public biotechnology company since June of 2007. He has served on the board of Geron Corporation, a public biopharmaceutical company, since March of 2012 and has served as a member of the board of Coherus BioSciences, Inc., a public biotechnology company (Coherus), since October 2014, and Aeglea Biotherapeutics, a public company since June 2018. He previously served on the board of KaloBios Pharmaceuticals, Inc., a biotechnology company, from August 2013 until September 2014, and he acted as Chairman of the scientific advisory board of Coherus from November 2012 to June 2016. Dr. Lawlis held a board position at Sutro Biopharmaceuticals from January 2004 to June of 2019. Sutro was a private company from its inception until September of 2018, when it became a public company. Dr. Lawlis has held a board position at ReForm Biologics, a private company since February 2014. Since October 2015, Dr. Lawlis has been an advisor to Phoenix Venture Partners, a venture capital firm focusing on manufacturing technologies and material sciences technologies. He also holds a position on Allakos' manufacturing advisory board. Dr. Lawlis holds a B.A. in microbiology from the University of Texas at Austin, and a Ph.D. in Biochemistry from Washington State University. We believe Dr. Lawlis is qualified to serve on our board of directors due to his extensive executive expertise and experience in the biotechnology industry.

Ivana Magovcevic-Liebisch, Ph.D., J.D. Dr. Liebisch has served as a member of our board of directors since August 2020 and its chairperson since January 2021. She also currently serves as a board member of Applied Genetic Technologies Corporation (AGTC), and Aeglea BioTherapeutics in addition to serving as the CEO and President of Vigil Neuroscience. Dr. Liebisch was appointed Executive Vice President, Chief Business Officer of Ipsen in March 2018 and served in this capacity until April 2020. Prior to joining Ipsen, Dr. Liebisch served as the Executive Vice President, Chief Strategy and Corporate Development Officer at Axcella from May 2017 to March 2018 and was Senior Vice President and Head of Global Business Development at Teva Pharmaceutical Industries Ltd from March 2013 to May 2017. She previously worked at Dyax Corp from April 2001 to March 2013 in management roles of increasing scope and responsibility, including Executive Vice President and Chief Operating Officer. Dr. Liebisch began her biopharma career at Transkaryotic Therapies, Inc, where she was Director of Intellectual Property and Patent Counsel from 1998 to 2001. Dr. Liebisch is a Trustee of the Boston Museum of Science, and of the Boston Ballet and overseer of Beth Israel Deaconess Medical Center. Dr. Liebisch holds a Ph.D. in Genetics from Harvard University in 1994 and received her J.D. in High Technology law from Suffolk University Law School in 1999. She graduated from Wheaton College with a B.A. in Biology and Chemistry in 1989. We believe Dr. Liebisch’s over 20 years of senior management experience in biotechnology and pharmaceutical industry make her well qualified to serve on our board of directors.

Karen McGinnis, C.P.A. Ms. McGinnis has served as a member of our board of directors since August 2020. Ms. McGinnis also serves as an Independent Director of Alphatec Holdings, Inc. since June 2019 and of BioSplice Therapeutics, Inc. since March 2021. She was Vice President and Chief Accounting Officer of Illumina, Inc. from November 2017 until her retirement on April 2, 2021. Ms. McGinnis served as the Chief Executive Officer and President of Mad Catz Interactive Inc. from February 2016 to March 2017, the Chief Financial Officer of Mad Catz Interactive Inc. from June 2013 to February 2016 and served as the Chief Accounting Officer, Corporate Controller and Vice President of Cymer, Inc. from November 2009 to June 2013. Previously, Ms. McGinnis served as Chief Accounting Officer for Insight Enterprises, Inc., from September 2006 until March 2009, its Senior Vice President of Finance from 2001 through September 2006 and its Vice President of Finance from

2000 through 2001. From 1997 to 2000, she served as the Chief Financial Officer of Horizon. Prior to Horizon, Ms. McGinnis was employed by KPMG LLP from 1989 to 1997 and served as its Senior Assurance Manager. Ms. McGinnis is a Certified Public Accountant and received a bachelor's degree in Accounting from the University of Oklahoma in 1989. We believe Ms. McGinnis is qualified to serve on our board of directors due to her extensive executive, accounting and financial expertise.

Amrit Nagpal. Mr. Nagpal has served as a member of our board of directors since October 2020. He is currently a Managing Director at Redmile Group, LLC, a healthcare-focused investment firm. Prior to joining Redmile in January 2013, Amrit spent 10 years at Weintraub Capital Management LP, an investment firm based in San Francisco, as both an analyst and portfolio manager. Prior to Weintraub, he was an associate and an analyst at Robertson Stephens, a San Francisco-based investment bank. Mr. Nagpal received a BA in Economics from Columbia University in 1997 and an MBA from The Anderson School at University of California, Los Angeles in 2002. We believe Mr. Nagpal is qualified to serve on our board of directors due to his extensive healthcare investment expertise.

Family Relationships

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

Composition of Our Board of Directors

Our board of directors consists of eight members, each of whom are members pursuant to the board composition provisions of our certificate of incorporation and agreements with our stockholders. These board composition provisions will terminate upon the completion of this offering. Upon the termination of these provisions, there will be no further contractual obligations regarding the election of our directors. Our nominating and corporate governance committee and our board of directors may consider a broad range of factors relating to the qualifications and background of nominees. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is to identify persons who will further the interests of our stockholders through his or her established record of professional accomplishments, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape, and professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until the earlier of their resignation or removal. Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the closing of this offering also provide that our directors may be removed only for cause by the affirmative vote of the holders of at least 75% of the votes that all our stockholders would be entitled to cast in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Director Independence

Upon the completion of this offering, we expect that our common stock will be listed on the Nasdaq Global Market. Applicable rules of Nasdaq require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq rules require that, (1) on the date of the completion of the offering, at least one member of each of a listed company's audit, compensation and nominating and corporate governance committees be independent, (2) within 90 days of the date of the completion of the offering, a majority of the members of such committees be independent and (3) within one year of the date of the completion of the offering, all the members of such committees be independent. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act. 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.

In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries.

Our board of directors has determined that all members of the board of directors, except Messrs. McClain and Pihl, are independent directors, including for purposes of the rules of Nasdaq and the SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. Upon the completion of this offering, we expect that the composition and functioning of our board of directors and each of our committees will comply with all applicable requirements of Nasdaq and the rules and regulations of the SEC. There are no family relationships among any of our directors or executive officers. Messrs. McClain and Pihl are not independent directors under these rules because each is currently employed as our chief executive officer and our chief operating officer, respectively.

Staggered Board

In accordance with the terms of our amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering and our amended and restated bylaws that will become effective on the date on which the registration statement of which this prospectus is part is declared effective by the SEC, our board of directors will be divided into three staggered classes of directors and each will be assigned to one of the three classes. At each annual meeting of the stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the annual meeting of stockholders to be held during the years 2022 for Class I directors, 2023 for Class II directors and 2024 for Class III directors.

- Our Class I directors will be ; ; and .
- Our Class II directors will be ; ; and .
- Our Class III directors will be ; and .

Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the closing of this offering will provide that the number of directors shall be fixed from time to time by a resolution of the majority of our board of directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Board Leadership Structure and Board's Role in Risk Oversight

Dr. Magovcevic-Liebisch is our current chairperson of the board and Sean McClain is our current chief executive officer, hence the roles of chairperson of the board and the chief executive officer and president are separated. We plan to keep these roles separated following the completion of this offering. We believe that separating these positions allows our chief executive officer to focus on setting the overall strategic direction of the company, expanding the organization to deliver on our strategy and overseeing our day-to-day business, while allowing the chairperson of the board to

lead the board of directors in its fundamental role of providing strategic advice. Our board of directors recognizes the time, effort and energy that the chief executive officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our chairperson of the board, particularly as the board of directors' oversight responsibilities continue to grow. While our amended and restated bylaws and corporate governance guidelines do not require that our chairperson of the board and chief executive officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property as more fully discussed in the section entitled "Risk Factors" appearing elsewhere in this prospectus. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees below and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairperson of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which will operate pursuant to a charter adopted by our board of directors and will be effective upon the effectiveness of the registration statement of which this prospectus is a part. Upon the effectiveness of the registration statement of which this prospectus is a part, the composition and functioning of all of our committees will comply with all applicable requirements of the Sarbanes-Oxley Act of 2002, Nasdaq and SEC rules and regulations.

Audit Committee

Effective upon the effectiveness of the registration statement of which this prospectus is a part, Karen McGinnis, Eli Casdin and Amrit Nagpal will serve on the audit committee, which will be chaired by Ms. McGinnis. Our board of directors has determined that each of Ms. McGinnis and Messrs. Casdin and Nagpal are "independent" for audit committee purposes as that term is defined in the rules of the SEC and the applicable Nasdaq rules, and each has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has designated Ms. McGinnis as an "audit committee financial expert," as defined under the applicable rules of the SEC. The audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;

- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the audit committee's review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

Under applicable Nasdaq rules, we are permitted to phase-in our compliance with the independence requirements for our audit committee. The phase-in periods with respect to director independence allow us to have only one independent member on our audit committee upon the listing date of our common stock, a majority of independent members on our audit committee within 90 days of the listing date and a fully independent audit committee within one year of the listing date.

Compensation Committee

Effective upon the effectiveness of the registration statement of which this prospectus is a part, Ivana Magovcevic-Liebisch and Zachariah Jonasson will serve on the compensation committee, which will be chaired by Dr. Magovcevic-Liebisch. Our board of directors has determined that each member of the compensation committee is "independent" as defined in the applicable Nasdaq rules. The compensation committee's responsibilities include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our principal executive officer;
- evaluating the performance of our principal executive officer in light of such corporate goals and objectives and based on such evaluation: (i) determining cash compensation of our principal executive officer; and (ii) reviewing and approving grants and awards to our principal executive officer under equity-based plans;
- reviewing and approving or recommending to the board of directors the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;

- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors;
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention, termination or compensation of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

Nominating and Corporate Governance Committee

Effective upon the effectiveness of the registration statement of which this prospectus is a part, Zachariah Jonasson, Ivana Magovcevic-Liebisch and Eli Casdin will serve on the nominating and corporate governance committee, which will be chaired by Dr. Jonasson. Our board of directors has determined that each member of the nominating and corporate governance committee is "independent" as defined in the applicable Nasdaq rules. The nominating and corporate governance committee's responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- developing and recommending to the board of directors a code of business conduct and ethics and a set of corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

Our board of directors may from time to time establish other committees.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time during the prior three years been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Corporate Governance

We intend to adopt a written code of business conduct and ethics, effective upon the effectiveness of the registration statement of which this prospectus is a part, that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Following the effectiveness of the registration statement of which this prospectus is a part, a current copy of the

code will be posted on the investor relations section of our website, which is located at https://absci.com/. The inclusion of our website address in this prospectus does not incorporate by reference the information on or accessible through our website into this prospectus. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, will contain provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our 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.

Each of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to the completion of this offering, will provide that we are required to indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also obligate us to advance expenses incurred by a director or officer 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 Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by our board of directors. With specified 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 officers. We also maintain 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 and officers 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 our stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage.

Executive Compensation

The following discussion contains forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. The actual amount and form of compensation and the compensation policies and practices that we adopt in the future may differ materially from currently planned programs as summarized in this discussion.

As an emerging growth company, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies," as such term is defined in the rules promulgated under the Securities Act. The compensation provided to our named executive officers for the fiscal year ended December 31, 2020 is detailed in the 2020 Summary Compensation Table and accompanying footnotes and narrative that follow. Our named executive officers are:

- Sean McClain, our Founder and Chief Executive Officer;
- Gregory Schiffman, our Chief Financial Officer; and
- Andreas Pihl, our Chief Operating Officer.

To date, the compensation of our named executive officers has consisted of a combination of base salary, bonuses and long-term incentive compensation. Our named executive officers, like all full-time employees, are eligible to participate in our health and welfare benefit plans. As we transition from a private company to a publicly traded company, we intend to evaluate our compensation values and philosophy and compensation plans and arrangements as circumstances require.

2020 Summary Compensation Table

The following table presents information regarding the compensation awarded to, earned by, and paid to each individual who served as one of our named executive officers for services rendered to us in all capacities during the fiscal year ended December 31, 2020.

Name and Principal Position	Year	Salary($)	Bonus($)[1]	Stock Awards[2]	Option Awards($)[3]	All Other[4]	Total
Sean McClain	2020	260,000	125,000	743,752	26,727	25,405	1,180,884
Founder and Chief Executive Officer							
Gregory Schiffman [5]	2020	184,999	100,000	670,610	209,202	10,667	1,175,478
Chief Financial Officer							
Andreas Pihl [6]	2020	100,750	75,000	909,155	246,945	7,000	1,338,850
Chief Operating Officer							

(1) These amounts represent discretionary annual bonuses paid for company performance in 2020.

(2) The amounts reported represent the aggregate grant-date fair value of incentive unit awards granted to the named executive officers in 2020, calculated in accordance with Financial Accounting Standards Board (FASB), Accounting Standards Codification (ASC), Topic 718. Such grant-date fair value does not take into account any estimated forfeitures related to service-vesting conditions. The assumptions used in calculating the grant-date fair value are set forth in Note 8 of our notes to consolidated financial statements included elsewhere in this prospectus. In October 2020, in connection with a reorganization whereby we converted from a Delaware limited liability company to a Delaware corporation, incentive unit awards were exchanged for an equal number of shares of restricted stock or vested common stock, as applicable, under our 2020 Stock Option and Incentive Plan (2020 Stock Plan). Accordingly, these amounts also include any incremental value associated with such exchange.

(3) The amounts reported represent the aggregate grant date fair value of the stock options awarded to the named executive officers during fiscal year 2020, calculated in accordance with FASB, ASC, Topic 718. Such grant date fair value does not take into account any estimated forfeitures. The assumptions used in calculating the grant-date fair value are set forth in Note 8 of our notes to consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for the stock options and does not correspond to the actual economic value that may be received upon exercise of the stock option or any sale of any of the underlying shares of common stock.

(4) The amounts reported in this column represent matching employer contributions under the Company's 401(k) plan. For Mr. McClain, such amount also includes an aggregate amount equal to $19,538 to compensate Mr. McClain for self-employment taxes prior to our reorganization in October 2020.

(5) Mr. Schiffman joined us in April 2020 as our Chief Financial Officer. Mr. Schiffman's base salary was pro-rated for his partial year of service during fiscal year 2020.
(6) Mr. Pihl joined us in June 2020 as our Chief Operating Officer. Mr. Pihl's base salary was pro-rated for his partial year of service during fiscal year 2020.

Narrative Disclosure to Summary Compensation Table

Base Salaries

Base salaries for our named executive officers are reviewed periodically and adjusted from time to time based on factors including market-competitive compensation levels, job responsibilities, individual performance and experience. For 2020, the base salaries for Mr. McClain, Mr. Schiffman and Mr. Pihl were $260,000, $250,000, and $240,000, respectively.

Annual Cash Bonuses

We do not sponsor or maintain a formal annual bonus plan. However, subject to performance for 2020, the board of directors may approve discretionary bonuses, as they did for 2020 for our named executive officers.

Employment Arrangements with Our Named Executive Officers

For Mr. McClain and Mr. Pihl, we do not have formal employment agreements and each is employed at will. We have entered into an employment offer letter with Mr. Schiffman, which sets forth the terms and conditions of his employment, which is at will. In connection with this offering, we intend to enter into formal employment agreements with our named executive officers that will become effective with the closing of this offering.

Outstanding Equity Awards at 2020 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by our named executive officers as of December 31, 2020.

Option Award[1]						Stock Awards[1]	
Name	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested(#)	Market Value of Shares or Units of Stock That Have Not Vested($)[2]
Sean McClain	4/7/2016	9,196	— [3]	3.63	10/27/2030		
	7/11/2017	964	165	3.63	10/27/2030		
	9/13/2017					2,376	
Gregory Schiffman	4/6/2020	—	76,351	3.63	10/27/2030		
	4/6/2020					168,074	
Andreas Pihl	3/1/2020	5,857	9762 [5]	3.63	10/27/2030		
	8/1/2020	—	75,077	3.63	10/27/2030		
	4/23/2020					34,381	
	8/17/2020					134,348	

(1) Unless otherwise noted below, 1/4th of the shares underlying the award will vest on the first anniversary of the vesting commencement date, and 1/48th of the shares underlying the award will vest in equal monthly installments thereafter such that the award will be fully vested on the date four years after the vesting commencement date, subject to the grantee's continued service relationship with us through each such vesting date
(2) Calculated based on $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus.
(3) This option is fully vested.
(4) This option vests in 48 equal monthly installments following the vesting commencement date, subject to the grantee's continued service relationship with the Company through each such vesting date.
(5) This option vests in 24 equal monthly installments following the vesting commencement date, subject to the grantee's continued service relationship with the Company through each such vesting date.

Employee Benefit and Equity Compensation Plans

2020 Stock Option and Grant Plan

Our 2020 Plan was approved by our board of directors and stockholders in October 2020, and most recently amended in March 2021. Under the 2020 Plan, we have reserved for issuance an aggregate of 3,246,905 shares of our common stock. The number of shares of common stock reserved for issuance is subject to adjustment in the event of any merger, consolidation, sale of all or substantially all of our assets, reorganization, recapitalization, reclassification, stock split, stock dividend, reverse stock split or other similar transaction.

The shares of common stock underlying awards that are forfeited, canceled, reacquired by us prior to vesting, satisfied without the issuance of stock or otherwise terminated (other than by exercise) and shares of common stock that are withheld upon exercise of an option or settlement of an award to cover the exercise price or tax withholding are currently added back to the shares of common stock available for issuance under the 2020 Plan.

Our board of directors has acted as administrator of the 2020 Plan. The administrator has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, and to determine the specific terms and conditions of each award, subject to the provisions of the 2020 Plan. Persons eligible to participate in the 2020 Plan are those employees, officers and directors of, and consultants and advisors to, our company as selected from time to time by the administrator in its discretion.

The 2020 Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended (Code), and (2) options that do not so qualify. The per share exercise price of each option is determined by the administrator but may not be less than 100% of the fair market value of the common stock on the date of grant. The term of each option is fixed by the administrator but may not exceed 10 years from the date of grant. The administrator determines at what time or times each option may be exercised. In addition, the 2020 Plan permits the granting of restricted shares of common stock, unrestricted shares of common stock, and restricted stock units.

The 2020 Plan provides that upon the occurrence of a “sale event,” as defined in the 2020 Plan, all outstanding stock options will terminate at the effective time of such sale event, unless the parties to the sale event agree that such awards will be assumed or continued by the successor entity. In the event of a termination of the 2020 Plan and all options issued thereunder in connection with a sale event, optionees will be provided an opportunity to exercise options that are then exercisable or will become exercisable as of the effective time of the sale event within a specified period of time prior to the consummation of the sale event. In addition, we have the right to provide for cash payment to holders of options, in exchange for the cancellation thereof, in an amount per share equal to the difference between the value of the consideration payable per share of common stock in the sale event and the per share exercise price of such options. In the event of, and subject to the consummation of, a sale event, restricted stock and restricted stock units (other than those becoming vested as a result of the sale event) will be forfeited immediately prior to the effective time of a sale event unless such awards are assumed or continued by the successor entity. In the event that shares of restricted stock are forfeited in connection with a sale event, such shares of restricted stock shall be repurchased at a price per share equal to the original per share purchase price of such shares. We have the right to provide for cash payment to holders of restricted stock or restricted stock units, in exchange for the cancellation thereof, in an amount per share equal to the value of the consideration payable per share of common stock in the sale event.

Additionally, the 2020 Plan provides for certain drag along rights pursuant to which grantees may be obligated to, on the request of the Company or the accepting requisite holder, sell, transfer and deliver, or cause to be sold, transferred and delivered, to a buyer, their shares in the event the Company or the accepting requisite holder determine to enter into a sale event with a buyer.

The board of directors may amend or discontinue the 2020 Plan at any time, subject to stockholder approval where such approval is required by applicable law. The administrator of the 2020 Plan may also amend or cancel any outstanding award, provided that no amendment to an award may adversely affect a participant's rights without his or her consent. The administrator of the 2020 Plan is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options or effect the repricing of such awards through cancellation and re-grants.

The 2020 Plan will automatically terminate upon the earlier of 10 years from the date on which the 2020 Plan was initially adopted by our board of directors or 10 years from the date the 2020 Plan was initially approved by our stockholders. As of , options to purchase shares of common stock were outstanding under the 2020 Plan. Our board of directors has determined not to make any further awards under the 2020 Plan following the closing of this offering.

401(k) Plan

We maintain a tax-qualified retirement plan that provides all regular, eligible U.S. employees with an opportunity to save for retirement on a tax-advantaged basis. Full-time employees become eligible following 30 days of service and part-time employees become eligible after one year of service. Under our 401(k) plan, participants may elect to defer a portion of their compensation on a pre-tax basis or after tax (Roth) basis, subject to applicable annual limits under the Code. Pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employee elective deferrals are 100% vested at all times. As a U.S. tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan and all contributions are deductible by us when made, and earnings on Roth contributions are not taxable when distributed from the 401(k) Plan. We make safe-harbor match contributions of 100% of the first 3% and 50% of the next 2% of each participant's eligible compensation. Employer matching contributions vest under a six-year graded vesting schedule.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during fiscal year 2020.

Other Benefits

Our named executive officers are eligible to participate in our employee benefit plans on the same basis as our other employees, including our health and welfare plans.

Director Compensation

2020 Director Compensation Table

The following table presents the total compensation paid by the Company to members of our board of directors during the fiscal year ended December 31, 2020. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the members of our board of directors in 2020 for their services as members of the board of directors. Sean McClain, our Founder and Chief Executive Officer, and Andreas Pihl, our Chief Operating Officer, do not receive any compensation from the Company for their service on our board of directors. See the section titled “Executive Compensation” for more information on the compensation paid to or earned by Mr. McClain and Mr. Pihl as employees for the year ended December 31, 2020.

Name	Fees Earned or Paid in Cash ($)[1]	Total ($)[2]
Eli Casdin	—	—
Zachariah Jonasson	—	—
V. Bryan Lawlis	30,000	30,000
Ivana Magovcevic-Liebisch	16,667	16,667
Gustavo Mahler[3]	—	—
Karen McGinnis	16,667	16,667
Amrit Nagpal	—	—
Dan Gold[4]	11,667	11,667

(1) Amounts reported reflect annual cash retainers paid to such non-employee directors in 2020, prorated to reflect partial years of service. We have entered into an independent director agreement with each of Dr. Magovcevic-Liebisch and Ms. McGinnis, pursuant to which each is entitled to receive an annual cash retainer,

(2) Each of Dr. Magovcevic-Liebisch and Ms. McGinnis were granted 44,510 phantom units in 2020. There was no accounting expense associated with such phantom units. Such phantom units were exchanged for a combination of cash payment rights and stock options to purchase 44,510 shares in January 2021. As of December 31, 2020, other than the phantom units described above, none of our non-employee directors held outstanding equity awards.

(3) Mr. Mahler resigned from his role as a member of our board of directors in April 2021.

(4) Mr. Gold resigned from his role as a member of our board of directors in July 2020.

Non-Employee Director Compensation Policy

In connection with this offering, we intend to implement a non-employee director compensation program that will become effective upon the date on which the registration statement of which this prospectus is a part is declared effective. The program will be designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors.

Certain Relationships and Related Party Transactions

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements, with our directors and executive officers, including those discussed in the sections titled “Management” and “Executive and Director Compensation,” and the registration rights described in the section titled “Description of Capital Stock—Registration Rights,” the following is a description of each transaction to which we were or will be a party, since January 1, 2018:

- the amounts involved exceeded or will exceed $120,000 or one percent of the Company's total assets at year-end for the last two completed fiscal years; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or any member of the immediate family of the foregoing persons, or any affiliated entities, had or will have a direct or indirect material interest.

Private Placements of Securities

Redeemable convertible preferred unit and preferred stock financings

On May 25, 2018, we sold an aggregate of 1,760,252 Series C Preferred Units in AbSci, LLC at a purchase price of $6.95 per share, that were subsequently converted in October 2020 into the same number of shares of our Series C redeemable convertible preferred stock, for an aggregate purchase price of approximately $12.2 million.

From December 2019 through June 2020, we sold an aggregate of 1,058,224 Series D-1 Preferred Units, 102,146 Series D-2 Preferred Units, 341,161 Series D-3 Preferred Units and 30,645 Series D-4 Preferred Units in AbSci, LLC at a purchase price of $9.79 per share, that were subsequently converted in October 2020 into the same number of shares of our Series D-1, Series D-2, Series D-3 and Series D-4 redeemable convertible preferred stock, for an aggregate purchase price of approximately $15.0 million.

From October 2020 through February 2021, we sold an aggregate of 3,568,405 shares of Series E redeemable convertible preferred stock at a purchase price of $19.6166 per share, for an aggregate purchase price of approximately $70.0 million.

All purchasers of our redeemable convertible preferred stock described above are entitled to specified registration rights. See the section entitled “Description of Capital Stock—Registration Rights” for more information regarding these registration rights.

The following table summarizes the Series C redeemable convertible preferred stock, Series D-1 redeemable convertible preferred stock, Series D-2 redeemable convertible preferred stock, Series D-3 redeemable convertible preferred stock, Series D-4 redeemable convertible preferred stock, and Series E redeemable convertible preferred stock purchased by members of our board of directors or their affiliates and holders of more than 5% of our outstanding capital stock.

Name of stockholder	Shares of redeemable convertible preferred stock		Total purchase price
Casdin Master Fund I, L.P.	1,274,431	$	25,000,003
Redmile Biopharma Investments II, L.P.	1,274,431	$	25,000,003
Phoenix Venture Partners II LP	128,635	$	1,124,682
Total	**2,677,497**	**$**	**51,124,688**

(1) Casdin Master Fund I, L.P. (together with its affiliates, Casdin) purchased 1,274,431 shares of Series E redeemable convertible preferred stock in October 2020 for $19.6166 per share.

(2) Redmile Biopharma Investments II, L.P. (together with its affiliates, Redmile) purchased 1,274,431 shares of Series E redeemable convertible preferred stock in October 2020 for $19.6166 per share.
(3) Phoenix Venture Partners II LP (together with its affiliates, PVP) purchased 82,689 shares of Series C redeemable convertible preferred stock in May 2018 for $6.95, 25,536 shares of Series D-1 redeemable convertible preferred stock in December 2019 for $9.79 per share, 10,215 shares of Series D-2 redeemable convertible preferred stock in January 2020 for $9.79 per share and 10,195 shares of Series E redeemable convertible preferred stock in October 2020 for $19.6166 per share.

Convertible Note Financing

In March 2021, we sold Convertible Notes in an aggregate principal amount of $125.0 million. The following table summarizes the amounts of Convertible Notes purchased by affiliates of members of our board of directors and by holders of more than 5% of our outstanding capital stock.

Name of Investor	Aggregate Principal Amount of Convertible Notes Purchased
Casdin	$25,000,000
Redmile	$25,000,000

Agreements with Stockholders

Investors' rights agreement

On October 19, 2020, we entered into an Investors' Rights Agreement, as amended to date, which we refer to as our investors' rights agreement, with certain holders of our outstanding redeemable convertible preferred stock, including entities with which certain of our directors are affiliated. After the completion of this offering, the holders of shares of our common stock issuable in connection with the conversion of all outstanding shares of our redeemable convertible preferred stock into common stock, are entitled to rights with respect to the registration of their shares following this offering under the Securities Act. See the section titled "Description of Capital Stock—Registration Rights" for more information regarding these registration rights.

Right of first refusal and co-sale agreement

On October 19, 2020, we entered into a Right of First Refusal and Co-Sale Agreement, as amended to date, which we refer to as our right of first refusal and co-sale agreement, which imposes restrictions on the transfer of our capital stock. Upon the completion of this offering, the right of first refusal and co-sale agreement will terminate and the restrictions on the transfer of our capital stock set forth in this agreement will no longer apply.

Voting agreement

On October 19, 2020, we entered into a Voting Agreement, as amended to date, which we refer to as our voting agreement, under which certain holders of our capital stock, including persons who hold more than 5% of our outstanding capital stock and entities with which certain of our directors are affiliated, have agreed to vote their shares on certain matters, including with respect to the election of directors. Upon the completion of this offering, the voting agreement will terminate and none of our stockholders will have any special rights regarding the election or designation of members of our board of directors or the voting of our capital stock of the company.

Executive Officer and Director Compensation

See the sections titled ‘‘Executive Compensation" and "Director Compensation'' for information regarding compensation of our executive officers and directors.

Indemnification Agreements

In connection with this offering, we intend to enter into new agreements to indemnify our directors and executive officers. These agreements and our amended and restated certificate of incorporation and amended and restated bylaws will, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

Policies for Approval of Related Party Transactions

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. Prior to the completion of this offering, we expect to adopt a written related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. The 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 is 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 and in which the amount involved exceeds $120,000 or one percent of our total assets at year-end for the last two completed fiscal years. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is 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, which we intend to adopt in connection with this offering, our employees and directors 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, but not limited to:

- 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 requires 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 above were entered into prior to the adoption of the written policy, but all were approved by our board of directors considering similar factors to those described above.

Principal Stockholders

The following table presents information concerning the beneficial ownership of the shares of our common stock as of June 30, 2021 by:

- each person we know to be the beneficial owner of 5% or more of our outstanding shares of our capital 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 SEC rules. The information does not necessarily indicate beneficial ownership for any other purpose. Under these rules, a person is deemed to be a beneficial owner of our common stock if that person has a right to acquire ownership within 60 days by the exercise of options or the conversion of our redeemable convertible preferred stock. A person is also deemed to be a beneficial owner of our common stock if that person has or shares voting power, which includes the power to vote or direct the voting of our common stock, or investment power, which includes the power to dispose of or to direct the disposition of such capital stock. Except in cases where community property laws apply or as indicated in the footnotes to this table, we believe that each stockholder identified in the table possesses sole voting and investment power over all shares of common stock shown as beneficially owned by the stockholder.

Percentage of beneficial ownership in the table below is based on 20,620,090 shares of common stock deemed to be outstanding as of June 30, 2021, assuming the conversion of all outstanding shares of our redeemable convertible preferred stock into common stock, immediately prior to the completion of this offering. The table below assumes that the underwriters do not exercise their option to purchase additional shares. Shares of common stock subject to options that are currently exercisable or exercisable within 60 days of June 30, 2021 are considered outstanding and beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated below, the address of each individual listed below is c/o Absci Corporation, 18105 SE Mill Plain Blvd, Vancouver, WA 98683.

Name and address of beneficial owner	Common Shares Beneficially Owned		Percentage of Shares Outstanding	
	Before Offering	After Offering	Before Offering	After Offering
5% or Greater Stockholders:				
Phoenix Venture Partners II LP[1]	4,387,640		21.28 %	%
Casdin Partners Master Fund, L.P.[2]	1,274,431		6.18 %	%
Entities affiliated with Redmile Group, LLC[3]	1,274,431		6.18 %	%
Mark Valasek	1,675,800		8.13 %	%
Entities and persons affiliated with Souther Investments[4]	1,241,805		6.02 %	%
Named Executive Officers and Directors:				
Sean McClain[5]	2,636,605		12.79 %	%
Gregory Schiffman[6]	213,883		*	%
Andreas Pihl[7]	198,561		1.04 %	%
Eli Casdin[2]	—		— %	%
Zachariah Jonasson, Ph.D.[1]	—		— %	%
V. Bryan Lawlis, Ph.D.[8]	57,224		*	%
Ivana Magovcevic-Liebisch, Ph.D.[9]	68,615		*	%
Karen McGinnis, CPA[10]	13,222		*	%
Amrit Nagpal[3]	—		— %	%
All executive officers and directors as a group (12 persons)[11]	3,248,923		15.76 %	%

* Represents beneficial ownership of less than one percent.

(1) Consists of (a) 3,381,586 shares of common stock issuable upon the conversion of Series A Preferred Stock, (b) 784,412 shares of common stock issuable upon the conversion of Series B Preferred Stock, (c) 82,689 shares of common stock issuable upon the conversion of Series C Preferred Stock, (d) 35,751 shares of common stock issuable upon the conversion of Series D Preferred Stock, (e) 10,195 shares of common stock issuable upon the conversion of Series E Preferred Stock and (f) 93,007 shares of common stock issuable upon the conversion of redeemable preferred stock issuable upon the exercise of warrants. Phoenix Venture Partners LLC is the investment advisor to Phoenix Venture Partners II LP, and Phoenix General Partner II LLC is the general partner of Phoenix Venture Partners II LP (together, the "PVP Entities"). Zachariah Jonasson, Ph.D. is a principal of Phoenix Venture Partners II LP. As such, each of the PVP Entities and Mr. Jonasson may be deemed to beneficially own the securities held by Phoenix Venture Partners II LP. Each of the PVP Entities and Mr. Jonasson disclaims beneficial ownership of such securities except to the extent of their respective pecuniary interest therein. The address of Phoenix Venture Partners II LP and each of the PVP Entities is 1700 El Camino Real, Suite 355, San Mateo, CA 94202.

(2) Consists of (a) 1,274,431 shares of common stock issuable upon the conversion of Series E Preferred Stock and the number of shares beneficially owned after this offering includes (b) shares of common stock issuable upon the conversion of convertible promissory notes in connection with the completion of this offering, 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 a conversion date of , 2021 (the expected closing date of this offering). Casdin Capital, LLC is the investment adviser to Casdin Partners Master Fund, L.P., and Casdin Partners GP, LLC is the general partner of Casdin Partners Master Fund L.P. Eli Casdin is the managing member of Casdin Capital, LLC and Casdin Partners GP, LLC. As such, each of Casdin Capital, LLC, Casdin Partners GP, LLC and Eli Casdin may be deemed to beneficially own the securities held by Casdin Partners Master Fund, L.P. by virtue of their shared voting and investment control over Casdin Partners Master Fund, L.P. Each of Casdin Capital, LLC, Casdin Partners GP, LLC and Mr. Casdin disclaims beneficial ownership of such securities except to the extent of their respective pecuniary interest therein. The address of each of Casdin Partners Master Fund, L.P., Casdin Capital, LLC and Casdin Partners GP, LLC is 1350 Avenue of the Americas, Suite 2600, New York, NY 10019.

(3) Consists of (a) 1,274,431 shares of common stock issuable upon the conversion of Series E Preferred Stock and the number of shares beneficially owned after this offering includes (b) shares of common stock issuable upon the conversion of convertible promissory notes in connection with the completion of this offering, 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 a conversion date of , 2021 (the expected closing date of this offering), in each case held by Redmile Biopharma Investments II, L.P. Redmile Group, LLC is the investment manager/adviser to Redmile Biopharma Investments II, L.P. (the "Redmile Fund") and, in such capacity, exercises sole voting and investment power over all of the securities held by the Redmile Fund and may be deemed to be the beneficial owner of these securities. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Amrit Nagpal is a Managing Director of Redmile Group, LLC and serves as a director of the Company. Redmile Group, LLC, Mr. Green and Mr. Nagpal each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any. The address of the Redmile Fund is c/o Redmile Group, LLC, One Letterman Drive, Building D, Suite D3-300, San Francisco, California 94129.

(4) Consists of (a) 12,500 shares of common stock, 457,286 shares of common stock issuable upon the conversion of Junior Preferred Stock, 44,252 shares of common stock issuable upon the conversion of Series A Preferred Stock, 120,399 shares of common stock issuable upon the conversion of Series B Preferred Stock and 8,270 shares of common stock issuable upon the conversion of Series C Preferred Stock held by David W. Souther and (b) 452,308 shares of common stock issuable upon the conversion of Junior Preferred Stock, 51,887 shares of common stock issuable upon the conversion of Series A Preferred Stock, 78,363 shares of common stock issuable upon the conversion of Series B Preferred Stock and 16,540 shares of common stock issuable upon the conversion of Series C Preferred Stock held by Souther Investments, LLC (collectively, the "Souther Entities"). David Souther may be deemed to beneficially own all of the securities owned by the Souther Entities. The address of each of the Souther Entities is 404 SW Columbia St., Suite 218, Bend, OR 97702.
(5) Includes 23,547 shares of common stock underlying options exercisable within 60 days of June 30, 2021 and 687,230 shares of common stock that Sean McClain has transferred to Brittany McClain, which shares will be subject to a voting agreement and proxy pursuant which Sean McClain is entitled to vote such shares on all matters presented to our stockholders for approval.
(6) Includes 25,420 shares of common stock underlying options exercisable within 60 days of June 30, 2021.
(7) Includes 29,832 shares of common stock underlying options exercisable within 60 days of June 30, 2021.
(8) Includes 2,866 shares of common stock underlying options exercisable within 60 days of June 30, 2021.
(9) Includes 14,324 shares which are exercisable within 60 days of June 30, 2021.
(10) Consists of 13,222 shares of common stock underlying options exercisable within 60 days of June 30, 2021.
(11) Consists of (i) 3,058,510 shares of common stock and (ii) 175,091 shares of common stock which are exercisable within 60 days of June 30, 2021.

Description of Capital Stock

Upon the completion of this offering, our authorized capital stock will consist of shares of common stock, par value $0.0001 per share, and shares of preferred stock, par value $0.0001 per share, all of which will be undesignated, and there will be shares of common stock outstanding and no shares of preferred stock outstanding. As of March 31, 2021, we had approximately 82 record holders of our capital stock. All of our outstanding shares of redeemable convertible preferred stock will convert into shares of our common stock immediately prior to the completion of this offering. In addition, upon the completion of this offering, options to purchase shares of our common stock will be outstanding and shares of our common stock will be reserved for future grants under our equity incentive plans.

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and bylaws are summaries of material terms and provisions and are qualified by reference to our amended and restated certificate of incorporation and bylaws, copies of which have been filed with the SEC as exhibits to the registration statement of which this prospectus is a part. The descriptions of our common stock and preferred stock reflect amendments to our amended and restated certificate of incorporation and bylaws that will become effective immediately prior to the completion of this offering.

Common stock

Upon the completion of this offering, we will be authorized to issue one class of common stock. Holders of our common stock are entitled to one vote for each share of common stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Except as described under “Anti-takeover Effects of Delaware Law and Provisions of our Amended and Restated Certificate of Incorporation and Bylaws” below, a majority vote of the holders of common stock is generally required to take action under our amended and restated certificate of incorporation and bylaws. Holders of our common stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any preferred stock then outstanding. Upon our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any preferred stock then outstanding. Holders of our common stock have no preemptive, subscription, redemption or conversion rights and no sinking fund provisions are applicable to our common stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Redeemable Convertible Preferred stock

Immediately prior to completion of this offering, all outstanding shares of our redeemable convertible preferred stock will be converted into shares of our common stock. Upon the completion of this offering, our board of directors will be authorized, without action by the stockholders, to designate and issue up to an aggregate of shares of preferred stock in one or more series. Our board of directors can designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. 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 common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of restricting dividends on our common stock, diluting the voting power of our common stock, impairing the liquidation rights of our common stock, or delaying, deferring or preventing a change in control of our company, which might harm the market price of our common stock. See also “—Anti-takeover

effects of Delaware Law and provisions of our amended and restated certificate of incorporation and bylaws—Provisions of our amended and restated certificate of incorporation and bylaws—Undesignated preferred stock" below.

Our board of directors will make any determination to issue such shares based on its judgment as to our company's best interests and the best interests of our stockholders. Upon the completion of this offering, we will have no shares of preferred stock outstanding and we have no current plans to issue any shares of preferred stock following completion of this offering.

Options and Restricted Stock

As of March 31, 2021, we had outstanding options to purchase 1,625,055 shares of our common stock, with a per share weighted-average exercise price of $3.63 under our 2020 Plan and 954,908 shares of our restricted common stock outstanding.

Registration rights

Upon the completion of this offering, the holders of shares of our common stock, including shares issuable upon the conversion of our redeemable convertible preferred stock, or their permitted transferees, which we refer to as our registrable securities, are entitled to rights with respect to the registration of these securities under the Securities Act. These rights are provided under the terms of the investor rights agreement. The investor rights agreement includes demand registration rights, short-form registration rights and piggyback registration rights. All fees, costs and expenses incurred in connection with registrations under the investor rights agreement will be borne by us, and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

Demand registration rights

Beginning 180 days after the effective date of this registration statement, the holders of our registrable securities are entitled to demand registration rights. Under the terms of our investor rights agreement, we will be required, upon the request of holders of at least a majority of our outstanding registrable securities, to file a registration statement and use commercially reasonable efforts to effect the registration of these shares for public resale. We are required to effect up to two registrations pursuant to this provision of the investor rights agreement.

Short form registration rights

Upon the completion of this offering, the holders of our registrable securities are also entitled to short form registration rights. Pursuant to our investor rights agreement, if we are eligible to file a registration statement on Form S-3, upon the request of holders of at least 20% of our outstanding registrable securities to sell registrable securities with an anticipated aggregate offering amount of at least $5.0 million net of certain expenses related to the offering, we will be required to use our commercially reasonable efforts to effect a registration of such shares. We are required to effect up to two registrations in any twelve month period pursuant to this provision of the investor rights agreement.

Piggyback registration rights

The holders of our registrable securities are entitled to piggyback registration rights. If we register any of our securities either for our own account or for the account of other security holders, the holders of our outstanding registrable securities are entitled to include their shares in the registration. Subject to certain exceptions contained in the investor rights agreement, we and the underwriters may limit the number of shares included in the underwritten offering if the underwriters determine that marketing factors require a limitation of the number of shares to be underwritten.

Indemnification

Our investor rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expenses of registration

We will pay the registration expenses, subject to certain limited exceptions contained in the investor rights agreement, of the holders of the shares registered pursuant to the demand, short form and piggyback registration rights described above, including the expenses of one counsel for the selling holders.

Expiration of registration rights

The registration rights granted under the investor rights agreement will terminate upon the earlier of (i) a deemed liquidation event, as defined in our amended and restated certificate of incorporation (as in effect prior to the completion of this offering) or certain other events constituting a sale of the company, (ii) at such time after our initial public offering when all registrable securities could be sold under Rule 144 of the Securities Act or a similar exemption without limitation during a three-month period without registration or (iii) the fifth anniversary of our initial public offering.

Anti-takeover effects of Delaware Law and provisions of our amended and restated certificate of incorporation and bylaws

Certain provisions of the Delaware General Corporation Law and of our amended and restated certificate of incorporation and bylaws that will become effective immediately prior to the completion of this offering could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our board of directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Delaware takeover statute

Upon completion of this offering, we will be subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge, exchange, mortgage or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Provisions of our amended and restated certificate of incorporation and bylaws

Our amended and restated certificate of incorporation and bylaws to be in effect immediately prior to completion of this offering will include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies. In accordance with our amended and restated certificate of incorporation, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of at least 75% of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No written consent of stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholder without holding a meeting of stockholders.

Meetings of stockholders. Our bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements. Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our bylaws.

Amendment to certificate of incorporation and bylaws. As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability and the amendment of our amended and restated certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated preferred stock. Our amended and restated certificate of incorporation provides for authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors' broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Exclusive forum. Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims for: (i) any derivative action or proceeding brought on behalf of our company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to the company or our stockholders, (iii) any action asserting a claim against our company arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, (iv) any action to interpret, apply, enforce, or determine the validity of our certificate of incorporation or bylaws, or (v) any action asserting a claim against our company governed by the internal affairs doctrine. This

exclusive forum provision will not apply to any causes of action arising under the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. In addition, unless we consent in writing to the selection of an alternate forum, the U.S. federal district courts shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Although our amended and restated bylaws contain the choice of forum provision described above, it is possible that a court could rule that such provisions are inapplicable for a particular claim or action or that such provisions are unenforceable.

Transfer agent and registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, MA 02021.

Listing

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

Limitations of liability and indemnification matters

For a discussion of liability and indemnification, see "Management—Limitation on liability and indemnification matters."

Shares Eligible for Future Sale

Prior to this offering, there has been no public market 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.

Sale of restricted shares

Based on the number of shares of common stock outstanding as of March 31, 2021, upon completion of this offering, shares of common stock will be outstanding, assuming no exercise by the underwriters of their option to purchase additional shares and no exercise of options. All of the shares sold in this offering will be freely tradable. The remaining shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements as described below. Following the expiration of the lock-up period, all shares will be eligible for resale in compliance with Rule 144 or Rule 701 under the Securities Act. “Restricted securities” as defined under Rule 144 of the Securities Act were issued and sold by us in reliance on exemptions from the registration requirements of the Securities Act. These shares may be sold in the public market only if registered or qualified for an exemption from registration, such as under Rule 144 or Rule 701 under the Securities Act.

Rule 144

In general, a person who has beneficially owned restricted stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Persons who have beneficially owned restricted shares for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares then outstanding, which will equal approximately shares immediately after this offering assuming no exercise of the underwriters’ option to purchase additional shares, based on the number of shares outstanding as of March 31, 2021; or
- the average weekly trading volume of our common stock on the Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Rule 701 under the Securities Act (Rule 701), 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 under “Underwriting” included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Lock-up agreements

In connection with this offering, we, each of our directors and executive officers, and holders of substantially all of our securities have agreed with the underwriters that for a period of 180 days following the date of this prospectus, subject to certain exceptions, we and they will not offer, sell, assign, transfer, pledge, contract to sell or otherwise dispose of or hedge any shares of our common stock or any securities convertible into or exchangeable for shares of our common stock. The representatives of the underwriters may, in their sole discretion, at any time, release all or any portion of the shares from the restrictions in this agreement.

Rule 10b5-1 trading plans

Following the completion of this offering, certain of our officers, directors and significant stockholders may adopt written plans, known as Rule 10b5-1 trading plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis to diversify their assets and investments. Under these 10b5-1 trading plans, a broker may execute trades pursuant to parameters established by the officer, director or stockholder when entering into the plan, without further direction from such officer, director or stockholder. Such sales would not commence until the expiration of the applicable lock-up agreements entered into by such officer, director or stockholder in connection with this offering.

Registration rights

We are party to an investor rights agreement which provides that holders holding shares of our common stock, including shares issuable upon the conversion of our redeemable convertible preferred stock, have the right to demand that we file a registration statement or request that their shares of our common stock be covered by a registration statement that we are otherwise filing. See “Description of Capital Stock—Registration rights” in this prospectus. Except for shares purchased by affiliates, registration of their shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon effectiveness of the registration, subject to the expiration of the lock-up period described above and under “Underwriting” in this prospectus, and to the extent such shares have been released from any repurchase option that we may hold.

Equity incentive plans

As soon as practicable after the completion of this offering, we intend to file a Form S-8 registration statement under the Securities Act to register shares of our common stock subject to options and other equity awards outstanding or reserved for issuance under our equity incentive plans. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will thereupon be eligible for sale in the public markets, subject to Rule 144 limitations applicable to affiliates and any lock-up agreements. For a more complete discussion of our equity incentive plans, see “Executive and Director Compensation—Employee Benefits and Stock Plans.”

Material U.S. Federal Income Tax Considerations to Non-U.S. Holders

The following discussion is a summary of the material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or any other foreign organization taxable as a corporation for U.S. federal income tax purposes; or
- a foreign estate or trust, the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or an investor in any other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of purchasing, owning and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the Internal Revenue Code of 1986 as amended (the Code), U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances including the alternative minimum tax, or the Medicare tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code and any election to apply Section 1400Z-2 of the Code to gains recognized with respect to shares of our common stock. This discussion also does not address any U.S. state, local or non-U.S. taxes or any other aspect of any U.S. federal tax other than the income tax. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- broker-dealers and traders in securities;
- regulated investment companies;
- pension plans;

- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- “qualified foreign pension funds,” or entities wholly owned by a “qualified foreign pension fund”;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- persons who have elected to mark securities to market;
- persons who have a functional currency other than the U.S. dollar;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- certain U.S. expatriates; and
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the common stock being taken into account in an applicable financial statement under Section 451(b) of the Code.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

Distributions on our common stock

Distributions, if any, on our common stock will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on sale or other taxable disposition of our common stock.” Any such distributions will also be subject to the discussions below under the sections titled “Backup withholding and information reporting” and “Withholding and information reporting requirements—FATCA.”

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence. If we or another withholding agent apply over-withholding or if a non-U.S. holder does not timely provide us with the required certification, the non-U.S. holder may be entitled to a refund or credit of any excess tax withheld by timely filing an appropriate claim with the IRS.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the regular U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain

circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder’s country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing a U.S. tax return with the IRS.

Gain on sale or other taxable disposition of our common stock

Subject to the discussions below under “Backup withholding and information reporting” and “Withholding and information reporting requirements—FATCA,” a non-U.S. holder generally will not be subject to any U.S. federal income tax on any gain realized upon such holder’s sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder’s conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed-base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the regular U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in “Distributions on our common stock” also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale of other taxable disposition (or the non-U.S. holder’s holding period, if shorter) a “United States real property holding corporation,” unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly and indirectly, actually and constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Backup withholding and information reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to

such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in “Distributions on Our Common Stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding and information reporting requirements — FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act (FATCA), generally imposes a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. Under applicable U.S. Treasury regulations, withholding under FATCA currently applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed U.S. Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers (including withholding agents) can currently rely on the proposed U.S. Treasury Regulations. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc., Cowen and Company, LLC and Stifel, Nicolaus & Company, Incorporated are acting as joint book running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

NAME	NUMBER OF SHARES
J.P. Morgan Securities LLC	
Credit Suisse Securities (USA) LLC	
BofA Securities, Inc.	
Cowen and Company, LLC	
Stifel, Nicolaus & Company, Incorporated	
Total	

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares.

The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per share. After the initial offering of the shares to the public, if all of the shares of common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. Sales of any shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and

commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES EXERCISE	WITH FULL OPTION TO PURCHASE ADDITIONAL SHARES EXERCISE
Per Share	$	$
Total	$	$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $. We have also agreed to reimburse the underwriters for certain of their expenses incurred in connection with, among others, the review and clearance by the Financial Industry Regulatory Authority, Inc. in an amount not to exceed $.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) 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, or submit to, or file with, the Securities and Exchange Commission a registration statement under the Securities Act of 1933, or the Securities Act, relating to, any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, loan, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc., Cowen and Company, LLC and Stifel, Nicolaus & Company, Incorporated for a period of 180 days after the date of this prospectus, other than the shares of our common stock to be sold in this offering.

Our directors and executive officers, and certain of our significant stockholders (such persons, the lock-up parties) have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 180 days after the date of this prospectus (such period, the restricted period), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc., Cowen and Company, LLC and Stifel, Nicolaus & Company, Incorporated, (1) 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 our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such lock-up parties in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the lock-up securities)), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in

clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for, or exercise any right with respect to, the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Such persons or entities have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by any person or entity, whether or not a signatory to such agreement) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise. The lock-up party further confirms that it has furnished J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc. Cowen and Company, LLC and Stifel, Nicolaus & Company, Incorporated with the details of any transaction that the lock-up party, or any of its affiliates, is a party to as of the date of this prospectus, which transaction would have been restricted by the lock-up agreement if it had been entered into by the lock-up party during the restricted period.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to certain transactions, including (a) transfers of lock-up securities: (i) as bona fide gifts, or for bona fide estate planning purposes, (ii) by will, other testamentary document or intestacy, (iii) to any trust or other entity for the direct or indirect benefit of the lock-up party or any immediate family member, or if the lock-up party is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) to a corporation, partnership, limited liability company, trust or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests or are under common control with the undersigned, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates (including, for the avoidance of doubt, where the lock-up party is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership) or (B) as part of a distribution to members, partners or equity holders of the lock-up party, (vii) by operation of law, (viii) to us from an employee, independent contractor or other service provider upon death, disability or termination of employment or cessation of services, in each case, of such employee, independent contractor or service provider, (ix) as part of a sale of lock-up securities acquired from the underwriters in this offering or in open market transactions after the date of this prospectus, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of our common stock (including, in each case, by way of “net” or “cashless” exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of our common stock received upon such exercise, vesting or settlement shall be subject to the terms of the lock-up agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the lock-up party pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in this prospectus, or (xi) pursuant to a bona fide third party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all stockholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph; (b) exercise of the options, settlement of RSUs or other equity awards, or the exercise of warrants granted pursuant to plans or arrangements described in

this prospectus, provided that any lock-up securities received upon such exercise, vesting or settlement would be subject to restrictions similar to those in the immediately preceding paragraph; (c) the conversion of outstanding preferred stock, warrants to acquire preferred stock or convertible securities into shares of our common stock or warrants to acquire shares of our common stock, provided that any common stock or warrant received upon such conversion would be subject to restrictions similar to those in the immediately preceding paragraph; and (d) the establishment by lock-up parties of trading plans pursuant to Rule 10b5-1 under the Exchange Act for the transfer of lock-up securities, provided that such plan does not provide for the transfer of lock-up securities during the restricted period and no filing by any person under the Exchange Act or other public announcement shall be required or made voluntarily in connection with the establishment of the trading plan during the restricted period in contravention of the lock-up agreement.

J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc., Cowen and Company, LLC and Stifel, Nicolaus & Company, Incorporated, in their sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We have applied to list our common stock on the Nasdaq Global Market under the symbol “ABSI.”

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ option to purchase additional shares referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. 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 that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the Nasdaq Global Market, in the over the counter market or otherwise.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly-traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our shares of common stock, or that the shares will trade in the public market at or above the initial public offering price.

Other relationships

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling restrictions

General

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Notice to prospective investors in 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 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.

Notice to prospective investors in the European Economic Area

In relation to each Member State of the European Economic Area (each an "EEA State"), no shares have been offered or will be offered pursuant to the offering to the public in that EEA State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that EEA State or, where appropriate, approved in another EEA State and notified to the competent authority in that EEA State, all in accordance with the EU Prospectus Regulation, except that it may make an offer to the public in that EEA State of any shares at any time under the following exemptions under the EU Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the EU Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the EU Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the EU Prospectus Regulation, provided that no such offer of the shares shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the EU Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the EU Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to the shares in any EEA 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 or subscribe for any shares, and the expression "EU Prospectus Regulation" means Regulation (EU) 2017/1129.

Notice to prospective investors in the United Kingdom

In relation to the United Kingdom, no shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority in accordance with the UK Prospectus Regulation, except that it may make an offer to the public in the United Kingdom of any shares at any time under the following exemptions under the UK Prospectus Regulation:

(d) to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;

(e) to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

(f) in any other circumstances falling within Article 1(4) of the UK Prospectus Regulation.

provided that no such offer of the shares shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

In the United Kingdom, the offering is only addressed to, and is directed only at, “qualified investors” within the meaning of Article 2(e) of the UK Prospectus Regulation, who are also (i) persons having professional experience in matters relating to investments who fall within the definition of "investment professionals" in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"); (ii) high net worth bodies corporate, unincorporated associations and partnerships and trustees of high value trusts as described in Article 49(2) of the Order; or (iii) persons to whom it may otherwise lawfully be communicated (all such persons being referred to as “relevant persons”). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

For the purposes of this provision, the expression an “offer to the public” in relation to the shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offering and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “UK Prospectus Regulation” means the UK version of Regulation (EU) No 2017/1129 as amended by The Prospectus (Amendment etc.) (EU Exit) Regulations 2019, which is part of UK law by virtue of the European Union (Withdrawal) Act 2018.

Notice to prospective investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering us the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to prospective investors in Australia

This prospectus:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (Corporations Act);
- has not been, and will not be, lodged with the Australian Securities and Investments Commission (ASIC), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act (Exempt Investors).

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those shares to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, 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 resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to prospective investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (SFO) of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the CO) or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, 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 of 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” as defined in the SFO and any rules made thereunder.

Notice to prospective investors in Singapore

Singapore SFA Product Classification — In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares, we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), 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.

Each underwriter has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each underwriter has represented and

agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

(a) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the "SFA")) pursuant to Section 274 of the SFA;

(b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA and in accordance with the conditions specified in Section 275 of the SFA; or

(c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) 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; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except

(i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 276(4)(i)(B) of the SFA;

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Notice to prospective investors in China

This prospectus will not be circulated or distributed in the PRC and the shares will not be offered or sold, and will not be offered or sold to any person for re-offering or resale directly or indirectly to any residents of the PRC except pursuant to any applicable laws and regulations of the PRC. Neither this prospectus nor any advertisement or other offering material may be distributed or published in the PRC, except under circumstances that will result in compliance with applicable laws and regulations.

Notice to prospective investors in Korea

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder (FSCMA), and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to

the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder (FETL). The shares have not been listed on any of securities exchanges in the world including, without limitation, the Korea Exchange in Korea. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

Notice to prospective investors in Taiwan

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

Notice to prospective investors in Saudi Arabia

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority (CMA) pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended. The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorized financial advisor.

Notice to prospective investors in the Dubai International Financial Centre (DIFC)

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority (DFSA). This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 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 supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

Notice to prospective investors in the United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the DIFC) other than in compliance with the laws of the United Arab Emirates (and the DIFC) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the DIFC) and is not intended to be a public offer. This prospectus has not been approved by or filed

with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the DFSA.

Notice to prospective investors in Bermuda

Shares may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

Notice to prospective investors in the British Virgin Islands

The shares are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of us. The shares may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

Notice to prospective investors in South Africa

Due to restrictions under the securities laws of South Africa, no “offer to the public” (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted) (South African Companies Act)) is being made in connection with the issue of the shares in South Africa. Accordingly, this document does not, nor is it intended to, constitute a “registered prospectus” (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. The shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions stipulated in section 96(1) applies:

Section 96(1)(a)	The offer, transfer, sale renunciation or delivery is to: (i) persons whose ordinary business, or part of whose ordinary business, is to deal in securities, as principal or agent; (ii) the South African Public Investment Corporation; (iii) persons or entities regulated by the Reserve Bank of South Africa; (iv) authorized financial service providers under South African law; (v) financial institutions recognized as such under South African law; (vi) a wholly-owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorized portfolio manager for a pension fund, or as manager for a collective investment scheme (in each case duly registered as such under South African law); or (vii) any combination of the person in (i) to (vi); or
Section 96(1)(b)	the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000 or such higher amount as may be promulgated by notice in the Government Gazette of South Africa pursuant to section 96(2)(a) of the South African Companies Act.

Information made available in this prospectus should not be considered as “advice” as defined in the South African Financial Advisory and Intermediary Services Act, 2002.

Notice to prospective investors in Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, (the Israeli Securities Law), and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of common stock is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum (the Addendum), to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Legal Matters

The validity of the common stock offered hereby will be passed upon for us by Goodwin Procter LLP, San Francisco, California. Legal matters in connection with the offering will be passed upon for the underwriters by Latham & Watkins LLP, Menlo Park, California.

Experts

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2020 and 2019 and for each of the two years in the period ended December 31, 2020, as set forth in their report. We've included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

The consolidated financial statements of Totient, Inc. as of December 31, 2019 and 2020 and for the years then ended included in this prospectus have been so included in reliance on the report of Moss Adams LLP, an independent registered public accounting firm, appearing elsewhere herein, given on the authority of said firm as experts in auditing and accounting.

Changes in Independent Registered Public Accounting Firm

On November 12, 2020, we dismissed Delap LLP, or Delap, as our independent auditor. This dismissal was approved by our board of directors.

Delap audited our financial statements for the fiscal years ended December 31, 2018 and 2019, which were issued under auditing standards generally accepted in the United States. The audit report issued by Delap on March 19, 2020 did not contain an adverse opinion or a disclaimer of opinion and was not qualified or modified as to audit scope or accounting principles. Delap did not provide an audit opinion on our financial statements for any period subsequent to the fiscal year ended December 31, 2019.

During the years ended December 31, 2018 and 2019 and the subsequent interim period through November 12, 2020, (i) there were no "disagreements" between us and Delap (as that term is defined in Item 304(a)(1)(iv) of Regulation S-K) on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Delap, would have caused them to make reference to the subject matter of the disagreements in connection with their report on the financial statements for such period, and (ii) there were no "reportable events" as such term is defined in Item 304(a)(1)(v) of Regulation S-K.

We provided Delap with a copy of the foregoing disclosures and requested Delap to furnish us with a letter addressed to the SEC stating whether or not Delap agrees with the above disclosures. A copy of Delap's letter is filed as an exhibit to the registration statement of which this prospectus is a part.

On March 4, 2021, we engaged Ernst & Young LLP, or E&Y, as our independent registered public accounting firm, which engagement has been approved by our board of directors. During the fiscal years ended December 31, 2018 and 2019 and the subsequent interim period through November 12, 2020, we (or any person on our behalf) did not consult with E&Y regarding any of the matters described in Items 304(a)(2)(i) or 304(a)(2)(ii) of Regulation S-K.

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, which constitutes a part of the registration statement. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. 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 via the SEC's website at www.sec.gov. We also maintain a website at www.absci.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. **However, the information contained in or accessible through our website is not part of this prospectus or the registration statement of which this prospectus forms a part.**

Absci Corporation

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Absci Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Absci Corporation (the Company) as of December 31, 2019 and 2020, the related consolidated statements of operations and comprehensive loss, changes in redeemable convertible preferred stock and units and other stockholders' and members' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2020, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. 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 audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of its internal control 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 audits 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 audits 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 audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2021.

Seattle, Washington

May 6, 2021

ABSCI CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except for share and units, and per share and per units data)	December 31, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 69,867	$ 13,086
Receivables under development arrangements	1,594	222
Prepaid expenses and other current assets	1,773	339
Total current assets	73,234	13,647
Operating lease right-of-use assets	4,476	1,712
Property and equipment, net	8,909	3,298
Restricted cash	1,841	790
Other assets	109	24
TOTAL ASSETS	$ 88,569	$ 19,471
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 2,116	$ 268
Accrued expenses	1,569	532
Loans payable	632	—
Current portion of long-term debt	903	1,200
Current portion of operating lease obligations	770	295
Current portion of financing lease obligations	1,475	391
Deferred revenue	2,630	780
Total current liabilities	10,095	3,466
Long-term debt - net of current portion	4,141	1,746
Operating lease obligations - net of current portion	3,813	1,431
Finance lease obligations - net of current portion	2,766	953
Other long-term liabilities	749	271
TOTAL LIABILITIES	21,564	7,867
Commitments (See Note 6)		
Redeemable convertible preferred units, no par value, zero and 10,531,531 units authorized as of December 31, 2020 and 2019, respectively; zero and 9,964,572 units issued and outstanding as of December 31, 2020 and 2019, respectively; liquidation preference of zero and $32,945 as of December 31, 2020 and 2019, respectively	—	52,763
Redeemable convertible preferred stock, $0.0001 par value; 13,845,050, and zero shares authorized as of December 31, 2020 and 2019, respectively; 13,752,043, and zero shares issued and outstanding as of December 31, 2020 and 2019, respectively; liquidation preference of $202,861 and zero as of December 31, 2020 and 2019, respectively	156,433	—
OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT		
Common units, no par value, zero and 15,851,391 units authorized as of December 31, 2020 and 2019, respectively; zero and 4,606,505 shares units issued and outstanding as of December 31, 2020 and 2019, respectively	—	—
Common stock, $0.0001 par value; 22,000,000 and zero shares authorized as of December 31, 2020 and 2019, respectively; 5,415,414 and zero shares issued and outstanding as of December 31, 2020 and 2019, respectively	—	—
Additional paid-in capital	637	217
Accumulated deficit	(90,065)	(41,376)
TOTAL OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	(89,428)	(41,159)
TOTAL LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	$ 88,569	$ 19,471

The accompanying notes are an integral part of these consolidated financial statements

ABSCI CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except for share and per share data)	For the Years Ended December 31, 2020	2019
Revenues		
Technology development revenue[1]	$ 4,117	$ 2,044
Collaboration revenue	663	16
Total revenues	4,780	2,060
Operating expenses		
Research and development	11,448	4,311
Selling, general and administrative	5,502	3,523
Depreciation and amortization	1,131	491
Total operating expenses	18,081	8,325
Operating loss	(13,301)	(6,265)
Other income (expense)		
Interest expense	(634)	(268)
Other expense, net	(418)	(51)
Total other expense, net	(1,052)	(319)
Net loss and comprehensive loss	(14,353)	(6,584)
Adjustment of redeemable preferred units and stock	(34,336)	(17,286)
Cumulative undeclared preferred stock dividends	(780)	—
Net loss applicable to common stockholders and unitholders	$ (49,469)	$ (23,870)
Net loss per share attributable to common stockholders and unitholders:		
Basic and diluted	$ (10.55)	$ (5.18)
Weighted-average common shares and units outstanding:		
Basic and diluted	4,691,020	4,606,505

(1) See Note 10: Related party transactions, for discussion of related party revenue of $0.2 million and $0.9 million for the years ended December 31, 2020 and 2019, respectively.

The accompanying notes are an integral part of these consolidated financial statements

ABSCI CORPORATION
STATEMENTS OF CHANGES IN REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT

(In thousands, except for share and per share data)	Redeemable Convertible Preferred Units		Redeemable Convertible Preferred Stock		Common Units		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' and Members' Deficit
	Units	Amount	Shares	Amount	Units	Amount	Shares	Amount			
Balances - December 31, 2018	8,906,328	$ 25,151	—	$ —	4,606,505	$ —	—	$ —	$ 175	$ (17,506)	$ (17,331)
Issuance of Class D preferred units, net of issuance costs	1,058,244	10,326	—	—	—	—	—	—	—	—	—
Increase in preferred unit redemption value	—	17,286	—	—	—	—	—	—	—	(17,286)	(17,286)
Stock-based compensation	—	—	—	—	—	—	—	—	42	—	42
Net loss	—	—	—	—	—	—	—	—	—	(6,584)	(6,584)
Balances - December 31, 2019	9,964,572	52,763	—	—	4,606,505	—	—	—	217	(41,376)	(41,159)
Issuance of Class D preferred units, net of issuance costs	473,952	4,625	—	—	—	—	—	—	—	—	—
Increase in preferred unit redemption value	—	34,336	—	—	—	—	—	—	—	(34,336)	(34,336)
Conversion of preferred and common units to shares	(10,438,524)	(91,724)	10,438,524	91,724	(4,606,505)	—	4,606,505	—	—	—	—
Issuance of Class E preferred stock, net of issuance costs	—	—	3,313,519	64,709	—	—	—	—	—	—	—
Issuance of restricted stock	—	—	—	—	—	—	808,909	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	—	—	420	—	420
Net loss	—	—	—	—	—	—	—	—	—	(14,353)	(14,353)
Balances - December 31, 2020	—	$ —	13,752,043	$ 156,433	—	$ —	5,415,414	$ —	$ 637	$ (90,065)	$ (89,428)

The accompanying notes are an integral part of these consolidated financial statements.

ABSCI CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,	
(In thousands)	**2020**	**2019**
Cash Flows From Operating Activities		
Net loss	$ (14,353)	$ (6,584)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	1,131	491
Loss on disposal of assets	363	22
Share-based compensation	420	42
Preferred stock warrant liability expense	461	86
Changes in operating assets and liabilities:		
Receivables under development arrangements	(1,372)	(102)
Prepaid expenses and other current assets	(1,434)	(263)
Operating lease right-of-use assets and liabilities	93	14
Other long-term assets	(85)	(6)
Accounts payable	903	82
Accrued expenses and other liabilities	1,053	166
Deferred revenue	1,850	20
Net cash used in operating activities	(10,970)	(6,032)
Cash Flows From Investing Activities		
Purchases of property and equipment	(2,181)	(1,098)
Proceeds from sales of property and equipment	10	9
Net cash used in investing activities	(2,171)	(1,089)
Cash Flows From Financing Activities		
Proceeds from issuance of redeemable convertible preferred units and stock, net of issuance costs	69,334	10,326
Proceeds from issuance of long-term debt	2,598	2,757
Proceeds from notes payable	632	—
Principal payments on long-term debt	(500)	(100)
Principal payments on finance lease obligations	(1,091)	(277)
Net cash provided by financing activities	70,973	12,706
Net increase in cash, cash equivalents, and restricted cash	57,832	5,585
Cash, cash equivalents and restricted cash - Beginning of year	13,876	8,291
Cash, cash equivalents, and restricted cash - End of period	$ 71,708	$ 13,876
Supplemental Disclosure of Cash Flow Information		
Cash paid during the period for interest	$ 508	$ 202
Supplemental Disclosure of Non-Cash Investing and Financing Activities		
Property and equipment purchased under finance lease	$ 3,988	$ 668
Right -of-use assets obtained in exchange for operating lease obligation	3,114	1,291
Cash paid for amounts included in the measurement of operating lease liabilities	422	274
Property and equipment purchases included in accounts payable	945	2
Increase in redemption value of redeemable convertible preferred stock	34,336	17,286

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization and nature of operations

Absci Corporation (Company) has developed an integrated drug creation platform that enables the creation of biologics by unifying the drug discovery and cell line development processes into one process. The Company was organized in the State of Oregon in August 2011 as a limited liability company and converted to a limited liability company (LLC) in Delaware in April 2016. In October 2020, the Company converted from a Delaware LLC to a Delaware corporation (LLC Conversion). Its operations are located in Vancouver, Washington.

LLC Conversion

In conjunction with the LLC Conversion, (i) all of the Company's outstanding common units converted on a 1-for-1 basis into shares of common stock, par value $0.0001; and (ii) all of the Company's outstanding redeemable preferred units converted on a 1-for-1 basis into shares of redeemable convertible preferred stock, par value $0.0001. Prior to the LLC Conversion, the Company had issued incentive units to certain employees, directors, and consultants. The outstanding vested incentive units converted on a net issuance basis into shares of common stock and the outstanding unvested incentive units converted on a net issuance basis into restricted common stock. All vesting provisions remained the same following the LLC Conversion. See Note 8: *Stock based compensation* for further discussion of the LLC Conversion's impact on the Company's stock-based compensation plans.

2. Summary of significant accounting policies

Basis of presentation

The consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States (GAAP) as defined by the Financial Accounting Standards Board (FASB). The consolidated financial statements include the Company's wholly-owned subsidiaries and entities under its control. The Company has eliminated all intercompany transactions and accounts.

Emerging growth company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the independent registered public accounting firm attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Use of estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates include, but are not limited to, revenue recognition including estimated timing of the satisfaction of performance obligations and the fair value of stock-based compensation awards. The Company bases its estimates on historical experiences, and other relevant factors that it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Segment information

The Company operates as a single operating segment. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for the purposes of allocating resources, making operating decisions and evaluating performance.

Cash, cash equivalents and restricted cash

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

Restricted cash represents amounts pledged as collateral for future property lease payments via standby letters of credit (see Note 6).

Accounts receivable

Accounts receivable consists of amounts due from partners for services performed. The Company reviews accounts receivable for credit impairment and regularly analyzes the status of significant past due receivables to determine if any will potentially be uncollectible to estimate the amount of allowance necessary to reduce accounts receivable to its estimated net realizable value. To date, no allowance has been necessary. See contract asset discussion below regarding unbilled receivables.

Fair value of financial instruments

The Company's financial instruments include cash and cash equivalents, restricted cash, receivables, accounts payable, accrued liabilities, loans payable, preferred stock warrant liability, fee in lieu of warrant liability, and long-term debt. The Company's financial instruments' carrying amounts approximate fair value due to their relatively short maturities or as a result of fair value adjustments that are recorded each period.

The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines the fair value of financial instruments based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

Level 1 - Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2 - Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3 - Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

Concentration risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, restricted cash, and receivables under development arrangements. The Company maintains its cash and cash equivalents and restricted cash in bank accounts, which at times may exceed federally insured limits. The Company has not experienced any losses on these accounts. For the year ended December 31, 2020, two partners represented approximately 39% and 38% of technology development revenue. For the year ended December 31, 2019, three partners each represented approximately 46%, 20%, and 21% of technology development revenue.

As of December 31, 2020, one partner represented approximately 93% of total receivables under technology development arrangements. As of December 31, 2019, one partner represented 95% of the total receivables under technology development arrangements.

The Company purchases from and relies on two vendors for specific equipment and consumables which are critical to its operations. While there are alternative types of equipment that could be used as an alternative, switching vendors would require significant capital investment, long lead times and significant training and validation.

Property and equipment, net

Property and equipment are stated at cost less accumulated depreciation and amortization. Additions and improvements to property and equipment are capitalized. The costs of maintenance and repairs are expensed as incurred. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the underlying assets, which vary from 3 to 7 years. Leasehold improvements are amortized over the shorter of the term of the lease or the estimated useful lives of the assets. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation or amortization are removed from their respective accounts, and the resulting gain or loss is reported as income or expense in the statements of operations and comprehensive loss.

Impairment of long-lived assets

Management reviews long-lived assets for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability is measured by comparison of the carrying amount to the future undiscounted net cash flows expected to result from the use of the asset and its eventual disposition. If these estimated cash flows were less than the carrying amount of the asset, an impairment loss would be recognized in order to write down the asset to its estimated fair value. There have been no such impairments of long-lived assets during the years ended December 31, 2020 and 2019.

Redeemable convertible preferred unit and stock warrant liability

Outstanding warrants that are related to the Company's redeemable convertible preferred units and redeemable convertible preferred stock are classified as liabilities on the balance sheets. As the warrants are exercisable for redeemable convertible preferred units and redeemable convertible preferred stock, the Company has recognized a liability for the fair value of its warrants on the balance sheets upon issuance and subsequently remeasures the liability to fair value at the end of each reporting period until the earlier of the expiration or exercise of the warrants.

Revenue recognition

The Company recognizes revenue when control of its products and services are transferred to its customers in an amount that reflects the consideration expected to be received in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when or as the performance obligations are satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once control of a good or service has been transferred to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. Technology development revenue includes revenue associated to the development and technology readiness phases of technology development agreements. The Company refers to its customers as "partners" when describing their relationship in an agreement.

Technology development revenue

The Company's Technology Development Agreements (TDAs) generally include multiple phases of Cell Line Development (CLD) such as library design, assay development, strain screening, fermentation optimization, purification, and analytics that all represent a single performance obligation. These agreements may include options for additional goods and services such as readying the technology to transfer to the partner and licensing terms. The transaction prices for these arrangements include fixed and variable consideration for the single performance obligation as well as variable consideration for success-based achievements. Any variable consideration is constrained to the extent that it is probable that a significant reversal of cumulative revenue will not occur. Depending on the specific terms of the arrangement, the Company either recognizes revenue over time or at a point in time. While there is no alternative use to the Company for the asset created, the agreement's terms vary as to whether an enforceable right to payment exists for performance completed as of that date. Primarily all of the Company's contracts with its partners include an enforceable right to payment.

The Company measures progress toward the completion of the performance obligations satisfied over time using an input method based on an overall estimation of the effort incurred to date at each reporting period to satisfy a performance obligation. This method provides an appropriate depiction of completed progress toward fulfilling its performance obligations for each respective arrangement. In certain technology development agreements that require a portion of the contract consideration to be received in advance at the commencement of the contract, such advance payment is initially recorded as a contract liability.

KBI BioPharma, Inc. Collaboration agreement

In December 2019, the Company executed a four-year Joint Marketing Agreement (JMA) with KBI BioPharma, Inc. (KBI) to co-promote technologies through joint marketing efforts. The JMA provides for a non-refundable upfront payment of $0.75 million and milestone payments of $2.75 million in the aggregate, of which $2.25 million had been received as of December 31, 2020, upon the achievement of specific milestones. Upfront payments that relate to ongoing collaboration efforts required throughout the contract term such as joint marketing are recognized ratably throughout the contract term. The Company fully constrains revenue associated with the milestone payments until the specified milestones are probable of achievement. Additionally, KBI is obligated to make royalty payments to the Company during the fourth year of the JMA representing a percentage of its sales generated through the arrangement. Any costs incurred to KBI through the duration of the JMA are recognized as a reduction to collaboration revenue in the period in which they are incurred. As of December 31, 2020 and 2019, deferred revenue related to this JMA was $1.8 million and $0.7 million, respectively.

Contract balances

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and the Company records a contract receivable when it has an unconditional right to consideration. As of December 31, 2020 and 2019, contract assets were $0.1 million and $0.2 million, respectively.

Contract liabilities are recorded in deferred revenue when cash payments are received or due in advance of the satisfaction of performance obligations. As of December 31, 2020 and 2019, contract liabilities were $2.6 million and $0.8 million, respectively. During the years ended December 31, 2020 and 2019, the Company recognized $0.2 million and $0.8 million, respectively, as revenue that had been included in deferred revenue at the beginning of each period.

Income taxes

Prior to the LLC Conversion, all income tax effects of the Company's operations were passed through to its members individually. Accordingly, the accompanying financial statements do not

include any income tax effects for the Company prior to the LLC Conversion date, and the Company had no unrecognized income tax benefits, nor any interest or penalties associated with unrecognized income tax benefits, accrued or expensed as of and for the years ended December 31, 2019 and the period from January 1, 2020 through October 5, 2020.

Following the LLC Conversion, the Company accounts for income taxes using the asset and liability method whereby deferred tax asset and liability accounts are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are currently in effect. Valuation allowances are established where necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company files income tax returns in the federal and various state tax jurisdictions.

The Company recognizes interest and penalties related to income tax matters as a component of tax expense. The Company did not record any interest or penalties related to income tax during the years ended December 31, 2020 and 2019.

Leases

At the inception of a contractual arrangement, the Company determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time. If both criteria are met, the Company records the associated lease liability and corresponding right-of-use asset upon commencement of the lease using the implicit rate or a discount rate based on a credit adjusted secured borrowing rate commensurate with the term of the lease.

The Company additionally evaluates leases at their inception to determine if they are to be accounted for as an operating lease or a finance lease. Operating lease assets represent a right to use an underlying asset for the lease term and operating lease liabilities represent an obligation to make lease payments arising from the lease. Operating lease obligations with a term greater than one year and their corresponding right-of-use assets are recognized on the balance sheet at the commencement date of the lease based on the present value of lease payments over the expected lease term. Certain adjustments to the right-of-use asset may be required for items such as initial direct costs paid or incentives received.

As the Company's operating leases do not typically provide an implicit rate, the Company utilizes the appropriate incremental borrowing rate, determined as the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term and in a similar economic environment. The lease cost is recognized on a straight-line basis over the lease term and variable lease payments are recognized as operating expenses in the period in which the obligation for those payments is incurred. Variable lease payments primarily include common area maintenance, utilities, real estate taxes, insurance and other operating costs that are passed on from the lessor in proportion to the space leased by the Company.

The Company accounts for its finance leases by calculating an implied interest rate in the lease contract and recognizing a finance lease right of use asset and lease liability. The right of use asset is recognized in property and equipment, net, in the asset category in which the underlying asset relates. The lease liability is recognized in the consolidated balance sheet as a finance lease obligation.

Research and development expenses

Research and development expenses includes the cost of materials, personnel-related costs (comprised of salaries, benefits and share-based compensation), consulting fees and allocated facility costs associated with both our execution of technology development agreements and collaboration agreements, as well as ongoing development of our Integrated Drug Creation Platform and other technologies. Allocated facility costs include facility occupancy and information

technology costs. The Company derives improvements to its platform from both types of activities. The Company has not historically tracked its research and development expenses on a partner-by-partner basis or on a program-by-program basis.

Stock-based compensation

Stock-based compensation includes compensation expense for incentive units, restricted stock, and stock option grants to employees and is measured on the grant date based on the fair value of the award and recognized on a straight-line basis over the requisite service period. The fair value of options to purchase common stock are measured using the Black-Scholes option-pricing model. The Company accounts for forfeitures as they occur. Prior to the LLC Conversion, the Company also granted phantom units which due to the presence of an exercise condition contingent upon a liquidity event, the Company determined that it was not probable that the phantom units would become exercisable.

Net Loss Per Share Attributable to Common Stockholders and Unitholders

The Company calculates basic and diluted net loss per share attributable to common stockholders and unitholders in conformity with the two-class method required for companies with participating securities. The Company considers its redeemable convertible preferred stock and units to be participating securities. In the event a dividend is declared or paid on common stock and units, holders of redeemable convertible preferred stock and units are entitled to a share of such dividend in proportion to the holders of common stock and units on an as-if converted basis. Under the two-class method, basic net loss per share attributable to common stockholder and unitholder is calculated by dividing the net loss attributable to common stockholder and unitholder by the weighted-average number of shares of common stock and units outstanding for the period. Net loss attributable to common stockholders and unitholders is determined by allocating undistributed earnings between common and preferred stockholders and unitholders. The diluted net loss per share attributable to common stockholders and unitholders is computed by giving effect to all potential dilutive common stock and unit equivalents outstanding for the period determined using the treasury stock method. The net loss attributable to common stockholders and unitholders was not allocated to the redeemable convertible preferred stock and units under the two-class method as the redeemable convertible preferred stock and units do not have a contractual obligation to share in the Company's losses. For purposes of this calculation, redeemable convertible preferred stock and units, redeemable convertible preferred stock and unit warrants, incentive (formerly incentive units) and non-qualified stock options are considered common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders and unitholders as their effect is anti-dilutive.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*, which created FASB Accounting Standards Codification (ASC) Topic 606 (ASC 606). This ASU replaced most existing revenue recognition guidance in GAAP when it became effective and requires the Company to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASC 606 also requires additional disclosures to help users of financial statements better understand the nature, amount, timing and uncertainty of revenue that is recognized. The Company adopted ASC 606 effective January 1, 2019 using the modified retrospective method of application to contracts not completed as of January 1, 2019. Management has determined the cumulative effect of ASC 606 on uncompleted contracts existing as of January 1, 2019 to be immaterial, and, accordingly, there were no adjustments to opening members' equity.

In February 2016, the FASB issued ASU 2016-02, *Leases* (ASC 842). This ASU issues guidance that supersedes existing guidance on accounting for leases and is intended to increase transparency and comparability of accounting for lease transactions. ASC 842 requires most leases to be recognized

on the balance sheet by recording a right-of-use (ROU) asset and a lease liability. The liability is equal to the present value of lease payments while the asset is based on the liability, subject to adjustment for initial direct costs. For income statement purposes, the FASB retained a dual model requiring leases to be classified as either operating or finance. The Company elected to early adopt this ASU effective January 1, 2019 using the optional transition method and applied the standard only to leases that existed at that date. The Company elected the "package of practical expedients" which allowed it to not reassess prior conclusions about lease identification, classification and initial direct costs. Additionally, the Company elected the short-term lease recognition exemption for all leases that qualify, which means it will not recognize ROU assets or lease liabilities for leases with lease terms of less than twelve months. As a result of adoption, the Company recognized operating lease ROU assets and lease liabilities of $0.5 million and $0.6 million, respectively, as of January 1, 2019. Each of the Company's equipment leases previously accounted for as a capital lease are now similarly accounted for as finance leases under ASC 842.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (ASC 326),* which sets forth a "current expected credit loss" model which requires the Company to measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions, and reasonable supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. The Company adopted this standard as of January 1, 2020, and the adoption of this standard did not have a material impact to its consolidated financial statements.

Recently issued accounting pronouncements, not yet adopted

In December 2019, the FASB issued amended guidance on the accounting and reporting of income taxes. The guidance is intended to simplify the accounting for income taxes by removing exceptions related to certain intraperiod tax allocations and deferred tax liabilities; clarifying guidance primarily related to evaluating the step-up tax basis for goodwill in a business combination; and reflecting enacted changes in tax laws or rates in the annual effective tax rate. The amended guidance is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The application of the amendments in the new guidance are to be applied on a retrospective basis, on a modified retrospective basis through a cumulative-effect adjustment to retained earnings or prospectively, depending on the amendment. The Company is currently evaluating the impact of adoption on its consolidated financial statements.

In August 2020, the FASB issued ASU No. 2020-06, Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU No. 2020-06"). The new guidance eliminates two of the three models in ASC 470-20 that require separating embedded conversion features from convertible instruments. As a result, only conversion features accounted for under the substantial premium model in ASC 470-20 and those that require bifurcation in accordance with ASC 815-15 will be accounted for separately. For contracts in an entity's own equity, the new guidance eliminates some of the requirements in ASC 815-40 for equity classification. The guidance also addresses how convertible instruments are accounted for in the diluted earnings per share calculation and requires enhanced disclosures about the terms of convertible instruments and contracts in an entity's own equity. ASU 2020-06 is effective for the Company after December 15, 2023. Early adoption is permitted for fiscal periods beginning after December 15, 2020. The Company is currently evaluating the effect of adopting ASU 2020-06 on its consolidated financial statements.

3. Property and equipment

Property and equipment as of December 31 consists of the following (in thousands):

	2020	2019
Lab Equipment	$ 8,578	$ 3,277
Software	188	283
Furniture, Fixtures and Other	472	260
Leasehold Improvements	2016	742
Total Cost	11,254	4,562
Less accumulated depreciation and amortization	(2,345)	(1,264)
Net Property and Equipment	$ 8,909	$ 3,298

Depreciation expense was $1.1 million and 0.5 million for the year ended December 31, 2020 and 2019, respectively.

4. Long-term debt and other borrowings

In June 2018, the Company signed a Loan and Security Agreement (LSA) with Bridge Bank (Bank), a division of Western Alliance Bank. The purpose of the LSA was to provide long-term financing to the Company through term loans available for borrowing in three tranches up to a maximum of $3.0 million through December 2019 upon the attainment of certain milestones as delineated in the LSA. The first tranche of $0.3 million was borrowed in June 2018. The Company was obligated to make interest-only payments until the amortization date of June 28, 2019 and after that date to make principal and interest payments. Interest on outstanding borrowings under the LSA is charged at a rate of 6% per annum. This loan matures in May 2022, at which time all outstanding principal and accrued and unpaid interest is due and payable. This loan is secured by substantially all tangible assets of the Company; intellectual property is excluded from the secured collateral, but is subject to a negative pledge in favor of the Bank.

In March 2019, the Company entered into a First Amendment to the LSA that increased total borrowings to $3.0 million and to add a financial liquidity covenant. The amendment was accounted for as a debt modification and no gain or loss was recognized in the Company's financial statements.

In May 2020, the Company entered into a Second Amendment to the LSA that increased total borrowings to $5.0 million. The amortization date was extended to May 1, 2021 except, if a certain revenue and new contract bookings milestone is achieved, the amortization date is extended to November 1, 2021. The maturity date of the loan was extended to May 11, 2024. The amendment was accounted for as a debt modification and no gain or loss was recognized in the Company's financial statements.

In August 2020, the Company entered into a Third Amendment to the LSA that waived an event of default due to failure to meet a financial covenant. The Amendment also expanded the definition of permitted indebtedness to include Payroll Protection Plan (PPP) loans, and modified financial and restrictive covenants.

In February 2021, the Company entered into a Fourth Amendment to the LSA – refer to subsequent events note for further details.

The Company may prepay all, but not less than all, of the term loans at any time upon 10 days written notice, with a prepayment premium beginning at 1.0% initially and declining to 0% after May 11, 2022. The Company is also required to pay a final payment equal to 3% of the principal amount funded, which is payable upon the earliest to occur of (i) the maturity date, (ii) acceleration and (iii) the prepayment of the loan. As part of the Second Amendment, the Company paid a one-

time amendment fee and a pro-rated final payment in connection with the amendment. The final payment represents an additional principal payment and is accounted for as a debt discount that will be accreted through the maturity date of the loan based on the effective interest method.

In connection with entering into the LSA Agreement in June 2018, the Company entered into an agreement whereby the Company is required to pay a fee of 3.5% of the aggregate amount of term loans funded by Bridge Bank under the LSA within three business days of a sale or other disposition of substantially all of the Company's assets, a merger or consolidation, a change in control or an initial public offering (Liquidity Event). Concurrent with the Second Amendment, the Company and Bridge Bank entered into an amended agreement which extended the term of the fee to May 11, 2030. This agreement has been accounted for as a freestanding derivative under ASC 815, *Derivatives* and is remeasured to its fair value at the end of each reporting period in Other long-term liabilities in the Consolidated Balance Sheets with changes in fair value recognized in Other expense in the Consolidated Statements of Operations and Comprehensive loss.

Under the LSA (as amended) the Company is subject to a financial covenant. The covenant, as amended, requires that the Company maintain at all times either (a) unrestricted cash and cash equivalents in an amount equal to or greater than the Company's monthly cash burn or (b) trailing 6-month revenue of at least 80% of the Company's revenue projections (over the same 6-month period) determined using the lender's measurement method. As of December 31, 2020, the Company was in compliance with this financial covenant.

As of December 31, 2020, and 2019, the outstanding principal balance under the LSA was $5.0 million and $2.9 million, respectively.

Future maturities of the amounts outstanding under the LSA as of December 31, 2020 are as follows (in thousands):

Years Ending December 31:		
2021	$	903
2022		1,624
2023		1,724
2024 (inclusive of $150 Final Fee)		899
Total Principal, including final fee	$	5,150
Less: amount representing debt discount and issuance costs		106
Total Long-Term Debt	$	5,044

In May 2020, the Company received a PPP loan pursuant to the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) in the amount of $0.6 million. The loan had a two-year term and bore a fixed interest rate of 1%. Under the terms of the CARES Act, the loan was eligible to be forgiven, in part or whole, if the proceeds were used to retain and pay employees and for other qualifying expenditures. In February 2021, the Company received notification from the Small Business Administration that they approved the forgiveness of the full $0.6 million PPP loan.

The carrying amount of the long-term debt and loan payable approximate fair value.

5. Leases

The Company leases its current office and laboratory facilities under multiple operating lease agreements that are scheduled to expire in August 2024. In February 2019, the Company signed another lease agreement for additional office space in its current building. This agreement commenced in September 2019 and is also scheduled to expire in August 2024.

In December 2020, the Company entered into a lease agreement for a new 61,607 square foot facility in Vancouver, Washington. The lease term commenced in December 2020 and ends in April 2026, with the Company's option to renew through April 2031. The lease agreement provides for annual base rent of approximately $1.2 million in the first year of the lease term which increases on an annual basis to approximately $1.5 million in the final year of the initial lease term. The Company entered into an agreement with a construction company for purposes of building out the facility and customizations for a total estimated cost of approximately $14.6 million. As part of the lease agreement, the lessor provided tenant incentives in the amount of $2.5 million.

For each of the Company's facility lease agreements, the Company is responsible for taxes, insurance and maintenance costs.

The Company leases certain laboratory equipment under finance leases. Property and equipment includes approximately $4.3 million and $1.3 million of assets under finance leases as of December 31, 2020 and 2019, respectively. Accumulated depreciation related to assets under finance leases was approximately $0.9 million and $0.4 million as of December 31, 2020 and 2019, respectively.

The components of lease expense were as follows (in thousands):

	2020	2019
Operating lease cost	$ 526	$ 260
Variable lease cost	166	120
Short-term lease cost	18	3
Total	$ 710	$ 383

Future undiscounted lease payments for the Company's lease liabilities as of December 31, 2020 are as follows (in thousands):

	Operating leases	Finance leases
2021	$ 1,318	$ 1,784
2022	1,802	1,648
2023	1,856	958
2024	1,753	409
2025	1,480	86
Thereafter	501	—
Total future lease payments	8,710	4,885
Less: Imputed interest	(1,663)	(644)
Less: Lease incentive	(2,464)	—
Present value of lease liabilities	$ 4,583	$ 4,241

Additional information related to the Company's leases as of December 31, 2020 and 2019 are as follows:

	2020	2019
Weighted average remaining lease term (in years)		
Operating leases	4.9	4.7
Finance leases	3.0	3.8
Weighted average discount rate		
Operating leases	8 %	8 %
Finance leases	7 %	9 %

6. Commitments and contingencies

As of December 31, 2020 and 2019, future lease payments are secured by irrevocable standby letters of credit totaling $1.8 million and $0.8 million, respectively. The irrevocable standby letters of credit are expected to be pledged for the full lease terms which extend through 2024 and 2026 for each of the Company's facility leases.

In the ordinary course of business, the Company is a party to claims and legal proceedings. The Company records a provision for contingent losses when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Based on currently available information, management does not believe that the ultimate outcome of these unresolved matters is probable or estimable and not likely, individually and in the aggregate, to have a material adverse effect on our financial position, results of operations or cash flows. However, litigation is subject to inherent uncertainties and management's view of these matters may change in the future. Were an unfavorable outcome to occur, there exists the possibility of a material adverse impact on the Company's financial position, results of operations or cash flows for the period in which the unfavorable outcome occurs, and potentially in future periods.

7. Redeemable convertible preferred stock and redeemable convertible preferred units

Redeemable Convertible Preferred Stock

The following table summarizes the authorized, issued, and outstanding redeemable convertible preferred stock of the Company as of December 31, 2020 (in thousands, except share and per share data):

	December 31, 2020				
	Shares Authorized	Shares Issued and Outstanding	Issuance Price per Share	Net Proceeds	Liquidation preference
Convertible Preferred Stock:					
Junior	1,573,547	1,573,547	$ 1.00	$ 1,462	$ 1,989
Class A-1	2,793,007	2,700,000	1.00	2,700	3,453
Class A-2	1,500,000	1,500,000	1.00	1,500	1,885
Class B	1,372,549	1,372,549	1.53	2,065	2,526
Class C	1,760,252	1,760,252	6.95	11,979	13,876
Class D	1,532,176	1,532,176	9.79	14,951	15,852
Class E	3,313,519	3,313,519	19.62	64,709	163,280
Total convertible preferred stock	13,845,050	13,752,043		$ 99,366	$ 202,861

The Company issued 3,313,519 shares of Class E redeemable preferred stock in October 2020 at an issuance price of $19.62 per share.

The Company recorded its redeemable convertible preferred stock at the issuance price on the dates of issuance, net of issuance costs. Mandatory conversion of preferred stock to common stock is triggered by either (a) a closing of a public offering with net proceeds of at least $50 million at a price of at least $19.62 per share (Qualified Public Offering) or (b) the vote or written consent of the holders of a preferred majority electing conversion of all preferred stock and junior preferred stock. The preferred stock is redeemable at the greater of a) the unpaid liquidation preference or b) fair value, both determined as of the date of redemption request, contingent upon certain deemed liquidation events outside the control of the Company, none of which are considered probable of occurring as of December 31, 2020. As such, the Company classifies the redeemable convertible preferred stock as temporary equity in the Consolidated Balance Sheets.

In the event of any liquidation event, either voluntary or involuntary, holders of Class E Preferred Stock are entitled to receive out of proceeds or assets of the Company, prior and in preference to the distribution of proceeds to holders of Class D Preferred Stock, Class C Preferred Stock, Class B Preferred Stock, Class A Preferred Stock, Junior Preferred Stock, or Common Stock. Holders of Class D Preferred Stock, Class C Preferred Stock, Class B Preferred Stock and Class A Preferred Stock are entitled to receive proceeds prior and in preference to distribution of proceeds to Junior Preferred Stock. The amount of distributions preferred stockholders are entitled to is equal to the original issue price for each series of issuance, plus declared but unpaid dividends on each such share. The holders of Junior, Class A-1, Class A-2, Class B, Class C, and Class D Preferred Stock shall receive $1.00, $1.00, $1.00, $1.53, $6.95, and $9.79 per share, respectively, plus declared but unpaid dividends on such shares. Class E Preferred Stock has, at the option of the holder, an alternative liquidation preference equal to 1.5 times the original issuance price of $19.62 for any redemption within 12 months of the original issuance date of October 2020. After this 12-month period, the Class E liquidation preference is equal to $19.62 plus accrued but unpaid dividends on such shares. Upon completion of the distribution to the preferred stockholders, the remaining proceeds of the

Company shall be distributed among the holders of Common Stock pro rata based on the number of shares held by each. Preferred stockholders have preemptive voting rights for significant capital transactions including liquidation, merger or sale of the Company, amendments to the operating agreement, issuance of additional equity interests, issuance of debt instruments, and pledging of Company assets. The preferred stock accrues dividends at a rate of 6% per annum, cumulative. The Company has not declared or paid dividends to the holders.

Each share of redeemable convertible preferred stock has a number of votes equal to the number of shares of common stock into which it is convertible. The holders of record of the Series A and Series B redeemable convertible preferred stock vote together on an as-converted basis exclusively and as a separate class and are entitled to elect two directors of the Company. The holders of record of the Series C redeemable convertible preferred stock vote exclusively and as a separate class and is entitled to elect one director of the Company. The holders of record of the Series E redeemable convertible preferred stock vote exclusively and as a separate class and is entitled to elect one director of the Company.

Redeemable convertible Preferred Units

The following table summarizes the authorized, issued, and outstanding redeemable convertible preferred units of the Company as of December 31, 2019:

	December 31, 2019				
	Units Authorized	Units Issued and Outstanding	Issuance Price per Unit	Net Proceeds	Liquidation preference
Redeemable Convertible Preferred Units:					
Junior	1,573,547	1,573,547	$ 1.00	$ 1,462	$ 1,901
Class A-1	2,793,007	2,700,000	1.00	2,700	3,291
Class A-2	1,500,000	1,500,000	1.00	1,500	1,795
Class B	1,372,549	1,372,549	1.53	2,065	2,400
Class C	1,760,252	1,760,252	6.95	11,979	13,154
Class D	1,532,176	1,058,224	9.79	10,326	10,404
Total redeemable convertible preferred stock	10,531,531	9,964,572		$ 30,032	$ 32,945

The Company issued 102,146 Class D units in January 2020 at an issuance price of $9.79 per unit, 371,806 Class D units in June 2020 at an issuance price of $9.79 per unit.

The Company recorded its redeemable convertible preferred units at the issuance price on the dates of issuance, net of issuance costs. Mandatory conversion of preferred units to common units is triggered by either (a) a closing of a qualified public offering or (b) the vote or written consent of the holders of a preferred majority holding at least 65% of the outstanding Preferred Units electing conversion of all preferred stock and junior preferred units. The preferred units are redeemable at the option of the holder on or after April 6, 2024 at the greater of (a) the unpaid liquidation preference or (b) fair value, both determined as of the date of redemption request or upon certain deemed liquidation events outside the control of the Company. As such, the Company classified the redeemable convertible preferred units as temporary equity in the Consolidated Balance Sheet at December 31, 2019 at its current redemption value. The adjustment to redeemable convertible preferred units recorded during the years ended December 31, 2020 and 2019 reflects the adjustment from the carrying value to their respective redemption value.

In the event of any liquidation event, either voluntary or involuntary, holders of Class D Preferred Units, Class C Preferred Units, Class B Preferred Units, and Class A Preferred Units are entitled to receive proceeds prior and in preference to distribution of proceeds to Junior Preferred Units. Holders of Junior Preferred Units are entitled to receive proceeds prior and in preference to distribution of proceeds to Common Units. The amount of distributions preferred unit holders are entitled to is equal to the original issue price for each series of issuance, plus declared but unpaid returns on each such share. The holders of Junior, Class A-1, Class A-2, Class B, Class C, and Class D Preferred Units shall receive $1.00, $1.00, $1.00, $1.53, $6.95, and $9.79 per unit, respectively, plus declared but unpaid returns on such units. Preferred unit holders have preemptive rights for significant capital transactions including liquidation, merger or sale of the Company, amendments to the operating agreement, issuance of additional equity interests, issuance of debt instruments, and pledging of Company assets. The Preferred Units accrue returns at a rate of 6% per annum, cumulative. The Company has not declared or paid returns to the holders.

Each share of redeemable convertible preferred unit has a number of votes equal to the number of common units. Certain voting matters require the Preferred Majority, as a single class. The holders of record of the Series A and Series B redeemable convertible preferred units are entitled to elect two directors of the Company. The holders of record of the Series C redeemable convertible preferred units are entitled to elect one director of the Company.

Preferred stock warrants

As part of the Class A-1 funding in 2016, a warrant for the purchase of 93,007 Class A-1 Preferred Units at an exercise price of $1 per unit and exercisable at any time before April 2026 was granted to an investor. This warrant was exchanged for a warrant to purchase Class A-1 preferred stock at equivalent terms in October 2020. Because the underlying shares are redeemable for conditions outside of the Company's control, the warrant is classified within other long-term liabilities on the consolidated balance sheets and recognized at fair value at each reporting period with the change in fair value recorded in other expense on the consolidated statement of operations and comprehensive loss. The balance is included in Other long-term liabilities on the consolidated balance sheet. The fair value of warrants issued was calculated using the Black-Scholes option-pricing model (Level 3) with the following assumptions:

	2020	2019
Risk-free interest rate	0.13 %	1.56 %
Expected dividend yield	0 %	0 %
Expected term (years)	2	3
Volatility	85.00 %	63 %

The following table provides a reconciliation of the beginning and ending balances for the preferred stock warrant derivative liability measured at fair value using significant unobservable inputs (Level 3) (in thousands):

Balance at January 1, 2019	$ 151
Change in fair value	86
Balance at December 31, 2019	237
Change in fair value	461
Balance at December 31, 2020	$ 698

8. Stock-Based compensation

Prior to the LLC Conversion, the Company granted incentive units and phantom units under its 2015 Equity-Based Incentive Plan ("2015 Plan") to employees and non-employee service providers. In October 2020, in conjunction with the LLC Conversion, the Company adopted the 2020 Stock Option and Grant Plan ("2020 Plan") under which it granted stock options, restricted shares, and stock appreciation rights (SARs) as replacements awards for outstanding awards under the 2015 Plan and as new awards to incentivize employee service.

Incentive Units and Restricted Stock

The incentive units had a threshold amount and were economically similar to a common unit with a subordinated liquidation preference. In the event of a distribution upon a liquidation event by the Company, the holder of an incentive unit would receive proceeds only to the extent that common unit holder received proceeds greater than the threshold amount of the award.

Incentive units generally vested 25% after one-year with the remainder vesting monthly over the following three-year period. Certain incentive units had alternative vesting schedules including ratably over two-years and immediate vesting. Upon the occurrence of a liquidation event, 100% of incentive units would vest. Incentive unit holders had voting rights and were entitled to distributions on their vested units.

Activity for the incentive units is shown below:

	Number of Units	Weighted Average Grant Date Fair Value per Unit
Unvested as of December 31, 2018	174,684	0.41
Granted	—	—
Vested	(102,298)	0.42
Cancelled/forfeited	(18,445)	0.37
Unvested as of December 31, 2019	53,941	
Granted	570,989	3.05
Vested	(63,166)	1.03
Cancelled/forfeited	(67,139)	2.56
Unvested as of LLC Conversion	494,625	
Vested as of LLC Conversion	513,430	
Outstanding (vested and unvested) of Exchange date	1,008,055	
Exchange of incentive units for restricted shares or units upon the LLC Conversion	(1,008,055)	
Unvested as of December 31, 2020	—	—

Upon the LLC Conversion, the outstanding 1,008,055 incentive units were exchanged for 808,909 restricted shares granted under the 2020 Plan based on a ratio determined by their threshold amount and the fair value of the restricted stock. The exchange was accounted for as a probable-to-probable modification (Type I modification), and the fair value of the restricted shares did not exceed the fair value of the incentive units on the date of exchange. Accordingly, the restricted shares are measured at the grant date fair value of the incentive units. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Activity for the restricted shares or units is shown below:

	Number of shares
Restricted shares issued in exchange for incentive units at LLC Conversion at October 16, 2020	808,909
Previously vested	(465,240)
Vested	(7,124)
Unvested as of December 31, 2020	336,545

As of December 31, 2020, there was $1.6 million of unrecognized compensation expense related to the restricted shares expected to be recognized over a remaining weighted-average period of 3.0 years.

Phantom Units

Phantom units generally vested at 25% after one-year with the remainder vesting quarterly over the following three-year period. Upon the occurrence of a liquidity event, 100% of phantom units would vest. A liquidity event for purposes of the phantom units meant either of the following events: (i) a person or persons acting as a group (other than a person or group that currently owns more than 50% of the voting power of the Company) acquires ownership of Common Units that, together with the Common Units held by such person or group, constitutes more than 50% of the voting power of all Common Units of the Company or (ii) a person or persons acting as a group acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value of more than 60% of the total gross fair market value of all of the assets of the Company immediately before such acquisition or acquisitions. Upon a liquidity event, the phantom unit holders were entitled to a payment equal to the fair value of common units less a strike price. The payment was to be made in the same form of consideration as received by other unitholders as a result of the liquidity event. Other than this payment upon a liquidity event, Phantom units provided no economic value and they provided no voting rights. Due to the presence of an exercise condition that was contingent upon a liquidity event, the Company determined that it was not probable that the phantom units would become exercisable and no compensation expense has been recognized.

Activity for the phantom units is shown below:

	Number of Units	Weighted Average Strike Price
Unvested as of December 31, 2018	238,346	0.68
Granted	59,230	1.26
Vested	(77,975)	0.66
Cancelled/forfeited	(68,340)	0.45
Unvested as of December 31, 2019	151,261	
Granted	430,246	1.58
Vested	(79,557)	1.01
Cancelled/forfeited	(137,918)	1.38
Unvested as of December 31, 2020	364,032	1.55

Following the LLC Conversion, the holders of phantom units were offered to exchange their awards for a combination of cash payment rights, SARs and/or stock options granted under the 2020 Plan.

The exchange was accounted for as short-term inducement, with no accounting recognition prior to offer expiration in January 2021 as the exchange offer participants were able to modify their election through the expiration date. In January 2021, all participants accepted the offer. The exercisability of cash payment rights and SARs are contingent upon a liquidity event. The stock options vest based on a service condition, generally over a 4-year term.

The aggregate intrinsic value of 660,846 phantom units outstanding as of December 31, 2020 is $2.7 million based on the estimated fair value of common stock of $5.14.

Stock Options

Stock options generally vest 25% after one-year from the date of the grant with the remainder vesting monthly over the following three-year period. Certain options have alternative vesting schedules including ratably over 2-4 years and immediate vesting. The Company recognizes forfeitures as they occur, and uses the straight-line expense recognition method. Activity for stock options is shown below:

	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands $)
Outstanding as of December 31, 2019	—			
Granted	522,258	$ 3.63		
Cancelled/forfeited	(5,671)	3.63		
Outstanding as of December 31, 2020	516,587	3.63	5.9	$780
Exercisable as of December 31, 2020	18,498	3.63	5.9	$28
Vested and expected to vest as of December 31, 2020	516,587	$ 3.63	5.9	$780

The weighted-average grant date fair value of stock options granted during 2020 was $2.73. The fair value of options vested during the year ended December 31, 2020 was $0.1 million. As of December 31, 2020, total unrecognized stock-based compensation related to unvested stock options was $0.7 million, which the Company expects to recognize over a remaining weighted average period of 3.8 years. The aggregate intrinsic value was calculated based on the estimated fair value of common stock of $5.14 per share.

Determination of Fair Value

The estimated grant-date fair value of all the Company's incentive units and stock options was calculated using the Black-Scholes option pricing model, based on the following assumptions:

	2020	2019
Expected term (in years)	2.0-6.0	—%
Volatility	45%-85%	—%
Risk-free interest rate	0.1%-1.6%	—%
Dividend Yield	—%	—%

The fair value of each incentive unit and stock option was determined by the Company using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment and estimation by management.

Expected Term—The expected term represents the period that stock-based awards are expected to be outstanding. The Company's incentive units do not have a contractual term. However, there is a

constructive maturity of the incentive units based on the expected exit or liquidity scenarios for the Company. The Company's historical option exercise data is limited and did not provide a reasonable basis upon which to estimate an expected term. The expected term for options was derived by using the simplified method which uses the midpoint between the average vesting term and the contractual expiration period of the stock-based award.

Expected Volatility—The expected volatility was derived from the historical stock volatilities of comparable peer public companies within the Company's industry. These companies are considered to be comparable to the Company's business over a period equivalent to the expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the profit interest units' and stock options' expected term.

Expected Dividend Rate—The expected dividend is zero as the Company has not paid nor does it anticipate paying any dividends on its common stock underlying its stock options in the foreseeable future.

The Company estimated the fair value of its common stock underlying the stock-based awards when performing fair value calculations using the Black-Scholes option pricing model. Because the Company's common stock is not currently publicly traded, the fair value of its common stock underlying the stock-based awards has been determined on each grant date by management and approved by the Company's board of directors, considering the most recently available third-party valuation of common shares. All options to purchase shares of the Company's common stock are intended to be granted with an exercise price per share no less than the fair value per share of the common stock underlying those options on the date of grant, based on the information known to the Company on the date of grant. In connection with the preparation of the Company's consolidated financial statements for the years ended December 31, 2020 and 2019, the Company reassessed its estimate of fair value of our common stock for financial reporting purposes. Following this reassessment, it was determined that for financial reporting purposes the fair value of its common stock was higher than the fair value determined by the board of directors at the time of grant on October 28, 2020. The fair value for financial reporting purposes was determined to be $5.14 per share, compared to a value of $3.63 per share approved by the board of directors.

The Company's determination of the value of its common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants (AICPA), Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation (AICPA Practice Aid). In addition, the Company's board of directors considered various objective and subjective factors to determine the fair value of the common stock, including:

- valuations of the Company's common stock performed by third-party valuation specialists;
- the anticipated capital structure that will directly impact the value of the currently outstanding securities;
- the Company's results of operations and financial position;
- the composition of, and changes to, the management team and board of directors;
- the lack of liquidity of the Company's common stock as a private company;
- the Company's stage of development and business strategy and the material risks related to its business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;

- U.S. and global economic conditions;
- the likelihood of achieving a liquidity event for the holders of the Company's common stock, such as an IPO or a sale of the company, given prevailing market conditions; and
- the market value and volatility of comparable companies.

The AICPA Practice Aid prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of our future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics.

In accordance with the AICPA Practice Aid, the Company considered the various methods for allocating the enterprise value to determine the fair value of its common stock at the valuation date. Under the option pricing method (OPM), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The value of the common stock is inferred by analyzing these options. The probability weighted expected return method (PWERM) is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

Starting in 2020, the Company used a hybrid method to determine the estimated fair value of its common stock, which included both the OPM and PWERM models.

As of December 31, 2020, the Company had reserved 2,703,997 shares of common stock for issuance under the 2020 Plan, of which, 1,445,460 were available for issuance.

9. Employee benefit plan

The Company sponsors a 401(k) tax-deferred savings plan for all employees who meet certain eligibility requirements. Participants may contribute, on a pre-tax or post-tax basis, a percentage of their annual compensation, not to exceed a maximum contribution amount pursuant to Section 401(k) of the Internal Revenue Code. The Company match is 100% of the employees' first contribution of 3%, plus 50% of the next 2% of eligible compensation contributed by the employee, up to a maximum Company match of 4% of compensation for each employee. The Company contributed $0.2 million and $0.1 million for the years ended December 31, 2020 and 2019, respectively.

10. Related party transactions

The Company entered into a joint development agreement with AGC, Inc., the parent company of the employer of one of the Company's directors. Revenue recognized under the agreement for the years ended December 31, 2020 and 2019 was $0.2 million and $0.9 million, respectively. The Company has the opportunity to earn additional revenues under the agreement in future years if pre-determined milestones are achieved. There were no amounts due or payable as of December 31, 2020 and 2019.

11. Net loss per share attributable to common stockholders and unitholders

The following table sets forth the computation of the Company's basic and diluted net loss per share attributable to common stockholder and unitholders (in thousands, except share and per share amounts):

	2020	2019
Numerator:		
Net loss	$ (14,353)	$ (6,584)
Adjustment of redeemable convertible preferred stock and units	(34,336)	(17,286)
Cumulative undeclared preferred stock dividends	(780)	—
Net loss available to common stockholder and unitholders	$ (49,469)	$ (23,870)
Denominator:		
Weighted-average common shares and units outstanding	4,691,020	4,606,505
Net loss per share, basic and diluted	$ (10.55)	$ (5.18)

Potentially dilutive securities not included in the calculation of diluted net loss per share because to do so would be anti-dilutive are as follows (in common stock equivalent shares):

	2020	2019
Redeemable convertible preferred stock and units outstanding	13,752,043	9,964,572
Redeemable convertible preferred stock and unit warrants	93,007	93,007
Stock options	498,089	—
Unvested restricted stock	336,545	—

Refer to Note 8: *Share-based compensation* and Note 13: *Subsequent Events* for descriptions of transactions occurring subsequent to December 31, 2020 that could impact the number of common shares outstanding had the transaction occurred prior to December 31, 2020.

12. Income taxes

The Company was classified as a partnership, and was therefore a pass-through entity, for U.S. income tax purposes through the LLC Conversion on October 15, 2020. The Company incurred net losses for the year ended December 31, 2020. The Company has not reflected any benefit of such net operating loss carryforwards in the accompanying consolidated financial statements. The

significant components of income tax for the years ended December 31 are as follows (in thousands):

	2020
Current	
Federal	$ —
State	2
Total current	2
Deferred expense/(benefit)	
Federal	—
State	—
Total deferred	—
Total	$ 2

The provision for income taxes results in effective tax rates which are different than the federal income tax statutory rate. The nature of the differences for the year ended December 31, 2020 were as follows:

	2020
Expected federal income tax	21.00 %
State income taxes after credits	4.24
Tax-effect of change in entity status	(3.69)
Change in valuation allowance	(3.32)
Research and development credits	0.05
Stock-based compensation	(0.35)
Revaluation of warrant liability	(0.22)
Loss allocable to pre-incorporation period	(17.72)
Other	—
Effective tax rate	— %

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of the assets and liabilities for financial reporting purposes and amounts used for income

tax purposes. Significant components of the Company's deferred income tax assets and liabilities are as follows at December 31, 2020 (in thousands):

	2020
Deferred tax assets:	
Net operating losses	$ 941
Research and development credits	7
Stock-based compensation	19
Lease liability	1,157
Accrued expenses	3
Gross deferred tax assets	2,127
Less valuation allowance	(477)
Total deferred tax assets	1,650
Deferred tax liabilities:	
Depreciation	(520)
Right-of-Use Lease	(1,130)
Gross deferred tax liabilities	(1,650)
Deferred tax liabilities, net	$ —

As of December 31, 2020, the Company has remaining federal net operating losses of $3.7 million and has state net operating loss carryforwards of approximately $3.0 million to offset against future taxable income for state tax purposes. Under the Tax Cuts and Jobs Act of 2017 (TCJA), federal net operating losses can now be carried forward indefinitely. State net operating losses can be carried forward for 5 to 20 years depending on the jurisdiction and will begin to expire in years 2025 to 2040. The company also had an immaterial amount of Federal research credit carryforwards that will begin to expire in 2040.

In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred assets will be realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Evaluating the need for a valuation allowance for deferred tax assets often requires judgment and analysis of all the positive and negative evidence available, including cumulative losses in recent years and projected future taxable income, to determine whether all or some portion of the deferred tax assets will not be realized. As of December 31, 2020, the Company has recorded a full valuation allowance to offset the net deferred tax assets as the Company believes it is not more likely than not that the net deferred tax assets will be fully realizable. The valuation allowance increased $0.5 million during the year ended December 31, 2020.

Under the provisions of the Internal Revenue Code, certain substantial changes in the company's ownership may result in a limitation on the amount of net operating loss carryforwards and research and development credit carryforwards which could be utilized annually to offset future taxable income and taxes payable. A formal Section 382 study was not performed through December 31, 2020.

13. Subsequent events

Management has evaluated, for potential recognition or disclosure in the financial statements, subsequent events that have occurred through May 6, 2021, which is the date that the financial statements were available to be issued.

Denovium acquisition

In January 2021, the Company completed its acquisition of the common stock of Denovium, Inc., an artificial intelligence deep learning company in exchange for a combination of cash and equity consideration. The cash consideration totaled $5.2 million and the equity consideration included the issuance of 305,864 shares of its common stock. The cash and equity consideration include certain continued employment and service requirements that are earned and vest over a period of four years.

Long-term debt and other borrowings

In February 2021, the Company entered into a Fourth Amendment to the LSA. This amendment gave effect to the Company's conversion to a corporation and its purchase of Denovium, including permitting certain cash and equity consideration linked to continued employment and service requirements.

Merck strategic investment

In February 2021, Merck Global Health Innovation Fund purchased 254,886 shares of the Company's Series E Preferred Stock for an aggregate price of $5.0 million. The price per share of $19.62 was consistent with the closing of the Series E Preferred round that closed in October 2020.

Lease amendment

In March 2021, the Company entered into an amendment to its lease agreement with respect to its new facility currently under construction. The amendment makes certain changes to the original lease, including (i) the addition of 16,367 square feet of office and laboratory space at the same site (Expansion Premises) and (ii) an extension of the expiration date of the original lease by 24 months following the rent commencement date of April 1, 2021.

The amendment provides for annual base rent for the Expansion Premises of approximately $0.3 million in the first year of the lease term, which increases on an annual basis to approximately $0.4 million in the final year of the lease term. The amendment also provides for additional tenant incentives in the amount of $0.7 million. Additionally, with the execution of this amendment, the Company maintains a one-time option to terminate the lease for the Original premise and Expansion premise after five years. All other terms of the lease amendment for the Expansion Premises are consistent with the existing new facility lease agreement. Under the amendment, the Company retains its original option to renew the lease for an additional five-year term, at then-current market rates.

Convertible notes

In March 2021, the Company issued $125.0 million aggregate principal amount of Convertible Notes to certain existing and new investors. The Convertible Notes are convertible into the Company's preferred shares or common shares under certain circumstances or qualified financings. The Convertible Notes will convert at a price per share equal to the lower of (a) 82% of the initial public offering price or (b) a price determined based on the pre-money valuation of the Company at $1.5 billion divided by the total outstanding shares of the common stock immediately prior to this offering, as calculated on an as converted and fully diluted basis as set forth in the Convertible Notes.

Stock options

Subsequent to December 31, 2020 the Company granted 1,250,753 stock options, with a weighted average exercise price of $4.43 and of which 531,942 were as a result of the phantom unit exchange discussed in Note 8: Stock-based compensation.

ABSCI CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands, except for share and per share data)	December 31, 2020	March 31, 2021 (unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 69,867	$ 180,756
Receivables under development arrangements	1,594	1,040
Prepaid expenses and other current assets	1,773	3,548
Total current assets	73,234	185,344
Operating lease right-of-use assets	4,476	7,610
Property and equipment, net	8,909	21,623
Intangibles, net	—	2,410
Goodwill	—	1,055
Restricted cash	1,841	4,367
Other assets	109	424
TOTAL ASSETS	$ 88,569	$ 222,833
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 2,116	$ 8,449
Accrued expenses	1,569	2,432
Loans payable	632	—
Current portion of long-term debt	903	917
Current portion of operating lease obligations	770	1,121
Current portion of financing lease obligations	1,475	2,069
Deferred revenue	2,630	2,403
Total current liabilities	10,095	17,391
Convertible promissory notes	—	125,000
Long-term debt - net of current portion	4,141	4,138
Operating lease obligations - net of current portion	3,813	9,192
Finance lease obligations - net of current portion	2,766	2,537
Other long-term liabilities	749	1,701
TOTAL LIABILITIES	21,564	159,959
Commitments (See Note 7)		
Redeemable convertible preferred stock, $0.0001 par value; 14,099,936 and 13,845,050 shares authorized as of March 31, 2021 and December 31, 2020, respectively; 14,006,929 and 13,752,043 issued and outstanding as of March 31, 2021 and December 31, 2020 respectively; liquidation preference of $217,023 and $203,095 as of March 31, 2021 and December 31, 2020, respectively	156,433	161,377
OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT		
Common units, no par value, zero and zero units authorized as of March 31, 2021 and December 31, 2020, respectively; zero and zero units issued and outstanding as of March 31, 2021 and December 31, 2020, respectively	—	—
Common stock, $0.0001 par value; zero and 22,000,000 shares authorized as of March 31, 2021 and December 31, 2020, respectively; 5,934,236 and 5,415,414 shares issued and outstanding as of March 31, 2021 and December 31, 2020, respectively	—	—
Additional paid-in capital	637	2,524
Accumulated deficit	(90,065)	(101,027)
TOTAL OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	(89,428)	(98,503)
TOTAL LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT	$ 88,569	$ 222,833

The accompanying notes are an integral part of these condensed consolidated financial statements.

ABSCI CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS (UNAUDITED)

	For the Three Months Ended March 31,	
(In thousands, except for share and per share data)	**2020**	**2021**
Revenues		
Technology development revenue	$ 525	$ 940
Collaboration revenue	47	123
Total revenues	572	1,063
Operating expenses		
Research and development	1,907	7,050
Selling, general and administrative	971	4,685
Depreciation and amortization	184	476
Total operating expenses	3,062	12,211
Operating loss	(2,490)	(11,148)
Other income (expense)		
Interest expense	(98)	(455)
Other income (expense), net	(70)	164
Total other expense, net	(168)	(291)
Loss before income taxes	(2,658)	(11,439)
Income tax benefit	—	477
Net loss and comprehensive loss	(2,658)	(10,962)
Adjustment of redeemable preferred units and stock	(11,154)	—
Cumulative undeclared preferred stock dividends	—	(995)
Net loss applicable to common stockholders and unitholders	$ (13,812)	$ (11,957)
Net loss per share attributable to common stockholders and unitholders: Basic and diluted	$ (3.00)	$ (2.33)
Weighted-average common shares and units outstanding: Basic and diluted	4,606,505	5,140,648

The accompanying notes are an integral part of these condensed consolidated financial statements.

ABSCI CORPORATION
STATEMENTS OF CHANGES IN REDEEMABLE CONVERTIBLE PREFERRED STOCK AND UNITS AND OTHER STOCKHOLDERS' AND MEMBERS' DEFICIT (UNAUDITED)

(In thousands, except for unit and per unit data)	Redeemable Convertible Preferred Units		Common Units		Additional Paid-In Capital	Accumulated Deficit	Condensed Total Members' Deficit
	Units	Amount	Units	Amount			
Balances - December 31, 2019	9,964,572	$ 52,763	4,606,505	$ —	$ 217	$ (41,376)	$ (41,159)
Issuance of Class D preferred units, net of issuance costs	102,146	994	—	—	—	—	—
Increase in preferred unit redemption value	—	11,154	—	—	—	(11,154)	(11,154)
Stock-based compensation	—	—	—	—	8	—	8
Net loss	—	—	—	—	—	(2,658)	(2,658)
Balances - March 31, 2020	10,066,718	$ 64,911	4,606,505	$ —	$ 225	$ (55,188)	$ (54,963)

(In thousands, except for share and per share data)	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Condensed Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balances - December 31, 2020	13,752,043	$ 156,433	5,415,414	$ —	$ 637	$ (90,065)	$ (89,428)
Issuance of Class E preferred stock, net of issuance costs	254,886	4,944	—	—	—	—	—
Issuance of restricted stock	—	—	212,958	—	—	—	—
Stock-based compensation	—	—	—	—	1,519	—	1,519
Issuance of shares in acquisition of Denovium	—	—	305,864	—	368	—	368
Net loss	—	—	—	—	—	(10,962)	(10,962)
Balances - March 31, 2021	14,006,929	$ 161,377	5,934,236	$ —	$ 2,524	$ (101,027)	$ (98,503)

The accompanying notes are an integral part of these condensed consolidated financial statements.

ABSCI CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(In thousands)	Three Months Ended March 31, 2020	2021
Cash Flows From Operating Activities		
Net loss	$ (2,658)	$ (10,962)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	184	476
Deferred income taxes	—	(477)
Share-based compensation	8	2,152
Gain on extinguishment of loan payable	—	(636)
Preferred stock warrant liability expense	112	475
Changes in operating assets and liabilities:		
Receivables under development arrangements	(63)	615
Prepaid expenses and other current assets	45	(690)
Operating lease right-of-use assets and liabilities	6	255
Other long-term assets	(74)	32
Accounts payable	170	1,258
Accrued expenses and other liabilities	(125)	444
Deferred revenue	(34)	(227)
Net cash used in operating activities	(2,429)	(7,285)
Cash Flows From Investing Activities		
Purchases of property and equipment	(189)	(6,364)
Acquisition, net of cash acquired - Denovium, Inc.	—	(2,512)
Net cash used in investing activities	(189)	(8,876)
Cash Flows From Financing Activities		
Proceeds from issuance of redeemable convertible preferred units and stock, net of issuance costs	994	4,944
Proceeds from issuance of convertible promissory notes	—	125,000
Principal payments on long-term debt	(300)	—
Principal payments on finance lease obligations	(128)	(368)
Net cash provided by financing activities	566	129,576
Net increase (decrease) in cash, cash equivalents, and restricted cash	(2,052)	113,415
Cash, cash equivalents and restricted cash - Beginning of year	13,876	71,708
Cash, cash equivalents, and restricted cash - End of period	$ 11,824	$ 185,123
Supplemental Disclosure of Cash Flow Information		
Cash paid during the period for interest	$ 77	$ 154
Supplemental Disclosure of Non-Cash Investing and Financing Activities		
Property and equipment purchased under finance lease	$ 1,887	$ 733
Right -of-use assets obtained in exchange for operating lease obligation	—	3,330
Cash paid for amounts included in the measurement of operating lease liabilities	105	109
Property and equipment purchases included in accounts payable	29	5,685
Deferred offering costs included in accounts payable	—	337
Increase in redemption value of convertible preferred stock	11,154	—
Issuance of common stock relating to Denovium acquisition	—	—

The accompanying notes are an integral part of these condensed consolidated financial statements.

1. Organization and nature of operations

Absci Corporation (Company) has developed an integrated drug creation platform that enables the creation of biologics by unifying the drug discovery and cell line development processes into one process. The Company was organized in the State of Oregon in August 2011 as a limited liability company and converted to a limited liability company (LLC) in Delaware in April 2016. In October 2020, the Company converted from a Delaware LLC to a Delaware corporation (LLC Conversion). Its operations are located in Vancouver, Washington.

LLC Conversion

In conjunction with the LLC Conversion, (i) all of the Company's outstanding common units converted on a 1-for-1 basis into shares of common stock, par value $0.0001; and (ii) all of the Company's outstanding redeemable preferred units converted on a 1-for-1 basis into shares of redeemable convertible preferred stock, par value $0.0001. Prior to the LLC Conversion, the Company had issued incentive units to certain employees, directors, and consultants. The outstanding vested incentive units converted on a net issuance basis into shares of common stock and the outstanding unvested incentive units converted on a net issuance basis into restricted common stock. All vesting provisions remained the same following the LLC Conversion. See Note 8: *Stock based compensation* for further discussion of the LLC Conversion's impact on the Company's stock-based compensation plans.

Unaudited Interim Financial Information

The accompanying interim condensed consolidated balance sheet as of March 31, 2021, the condensed consolidated statements of operations and comprehensive loss, condensed consolidated changes in redeemable convertible preferred stock and units and other stockholders' and members' deficit, and condensed consolidated statements of cash flows for the three months ended March 31, 2020 and 2021 and the related footnote disclosures are unaudited. In management's opinion, the unaudited interim financial statements have been prepared on the same basis as the audited financial statements and include all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the Company's financial position as of March 31, 2021 and its results of operations and cash flows for the three months ended March 31, 2020 and 2021 in accordance with accounting principles generally accepted in the United States (US GAAP). The results for the three months ended March 31, 2021 are not necessarily indicative of the results expected for the full fiscal year or any other interim period. The condensed consolidated balance sheet at December 31, 2020 has been derived from the audited financial statements at that date but does not include all disclosures required by US GAAP for complete financial statements. Because all of the disclosures required by US GAAP for complete financial statements are not included herein, these unaudited condensed consolidated financial statements and the notes accompanying them should be read in conjunction with the Company's audited financial statements for the year ended December 31, 2020.

2. Summary of significant accounting policies

Basis of presentation

The condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States (GAAP) as defined by the Financial Accounting Standards Board (FASB). The condensed consolidated financial statements include the Company's wholly-owned subsidiaries and entities under its control. The Company has eliminated all intercompany transactions and accounts.

Emerging growth company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take

advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the independent registered public accounting firm attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Business combinations

The Company utilizes the acquisition method of accounting for business combinations and allocates the purchase price of an acquisition to the various tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. The Company primarily establishes fair value using the replacement cost approach or the income approach based upon a discounted cash flow model. The replacement cost approach measures the value of an asset by the cost to reconstruct or replace it with another of like utility. The income approach requires the use of many assumptions and estimates including future revenues and expenses, as well as discount factors and income tax rates. Other estimates include:

- The use of carrying value as a proxy for fair values of fixed assets and liabilities assumed from the target; and
- Fair values of intangible assets and contingent consideration.

While the Company uses best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business acquisition date, these estimates and assumptions are inherently uncertain and subject to refinement. As a result, during the purchase price measurement period, which is no more than one year from the business acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Business combinations also require the Company to estimate the useful life of certain intangible assets acquired and this estimate requires significant judgment.

Use of estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates include, but are not limited to, revenue recognition including estimated timing of the satisfaction of performance obligations, purchase price allocations in conjunction with business combinations, and the fair value of stock-based compensation awards. The Company bases its estimates on historical experiences, and other relevant factors that it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Segment information

The Company operates as a single operating segment. The Company’s chief operating decision maker, its Chief Executive Officer, manages the Company’s operations on a consolidated basis for the purposes of allocating resources, making operating decisions and evaluating performance.

Cash, cash equivalents and restricted cash

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

Restricted cash represents amounts pledged as collateral for future property lease payments via standby letters of credit (see Note 6) and amounts held in escrow related to an acquisition (see Note 3).

Accounts receivable

Accounts receivable consists of amounts due from partners for services performed. The Company reviews accounts receivable for credit impairment and regularly analyzes the status of significant past due receivables to determine if any will potentially be uncollectible to estimate the amount of allowance necessary to reduce accounts receivable to its estimated net realizable value. To date, no allowance has been necessary. See contract asset discussion below regarding unbilled receivables.

Fair value of financial instruments

Certain assets and liabilities are carried at fair value under GAAP and consist principally of a fee in-lieu of warrant issuance, a warrant to purchase convertible preferred stock and convertible promissory notes. The carrying amounts of cash equivalents, accounts payable, and accrued liabilities approximate their related fair values due to the short-term nature of these instruments. None of the Company's non-financial assets or liabilities are recorded at fair value on a recurring basis.

As permitted under Accounting Standards Codification ("ASC") 825, Financial Instruments, ("ASC 825"), the Company has elected the fair value option to account for its convertible promissory notes issued during the three months ended March 31, 2021. In accordance with ASC 825, the Company records these convertible promissory notes at fair value on its balance sheet. Changes in fair value of the warrant to purchase convertible preferred stock and the convertible promissory notes are recorded in the statements of operations and comprehensive loss. As a result of applying the fair value option, direct costs and fees related to the convertible promissory notes were recognized as incurred and not deferred.

There are significant judgments and estimates inherent in the determination of the fair value of these liabilities. If the Company had made different assumptions including, among others, those related to the timing and probability of various corporate scenarios, discount rates, volatilities and exit valuations, the carrying values of the fee in lieu of warrant, warrant liability, and net loss and net loss per common share could have been significantly different.

The Company classifies the interest that has been accrued on the convertible promissory notes in the change in fair value of convertible promissory notes on the statement of operations.

Concentration risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, restricted cash, and receivables under development arrangements. The Company maintains its cash and cash equivalents and restricted cash in bank accounts, which at times may exceed federally insured limits. The Company has not experienced any losses on these accounts. For the three months ended March 31, 2021, one partner represented approximately 90% of technology development revenue. For the three months ended March, 31, 2020, one partner represented 100% of technology development revenue.

As of March 31, 2021, three partners represented approximately 93% of total receivables under technology development arrangements. As of December 31, 2020, one partner represented approximately 93% of total receivables under technology development arrangements.

The Company purchases from and relies on two vendors for specific equipment and consumables which are critical to its operations. While there are alternative types of equipment that could be used as an alternative, switching vendors would require significant capital investment, long lead times and significant training and validation.

Property and equipment, net

Property and equipment are stated at cost less accumulated depreciation and amortization. Additions and betterments to property and equipment are capitalized. The costs of maintenance and repairs are expensed as incurred. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the underlying assets, which vary from 3 to 7 years. Leasehold improvements are amortized over the shorter of the term of the lease or the estimated useful lives of the assets. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation or amortization are removed from their respective accounts, and the resulting gain or loss is reported as income or expense in the statements of operations and comprehensive loss.

Deferred Offering Costs

The Company has deferred offering costs consisting of legal and accounting fees directly attributable to its planned initial public offering. The deferred offering costs will be offset against the proceeds received upon the completion of this offering. In the event this offering is terminated, all of the deferred offering costs will be expensed within the Company's statements of operations. As of March 31, 2021, $0.3 million of deferred offering costs were recorded within other long-term assets on the balance sheet.

Impairment of long-lived assets

Management reviews long-lived assets for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability is measured by comparison of the carrying amount to the future undiscounted net cash flows expected to result from the use of the asset and its eventual disposition. If these estimated cash flows were less than the carrying amount of the asset, an impairment loss would be recognized in order to write down the asset to its estimated fair value. There have been no such impairments of long-lived assets during the three months ended March 31, 2021.

Redeemable convertible preferred unit and stock warrant liability

Outstanding warrants that are related to the Company's redeemable convertible preferred units and redeemable convertible preferred stock are classified as liabilities on the balance sheets. As the warrants are exercisable for redeemable convertible preferred units and redeemable convertible preferred stock, the Company has recognized a liability for the fair value of its warrants on the balance sheets upon issuance and subsequently remeasures the liability to fair value at the end of each reporting period until the earlier of the expiration or exercise of the warrants.

Revenue recognition

The Company recognizes revenue when control of its products and services are transferred to its customers in an amount that reflects the consideration expected to be received in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when or as the performance obligations are satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once control of a good or service has been transferred to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. Technology development revenue includes revenue associated to the development and technology readiness phases of technology development agreements. The Company refers to its customers as "partners" when describing their relationship in an agreement.

Technology development revenue

The Company's Technology Development Agreements (TDAs) generally include multiple phases of Cell Line Development (CLD) such as library design, assay development, strain screening, fermentation optimization, purification, and analytics that all represent a single performance obligation. These agreements may include options for additional goods and services such as readying the technology to transfer to the partner and licensing terms. The transaction prices for these arrangements include fixed and variable consideration for the single performance obligation as well as variable consideration for success-based achievements. Any variable consideration is constrained to the extent that it is probable that a significant reversal of cumulative revenue will not occur. Depending on the specific terms of the arrangement, the Company either recognizes revenue over time or at a point in time. While there is no alternative use to the Company for the asset created, the agreement's terms vary as to whether an enforceable right to payment exists for performance completed as of that date. Primarily all of the Company's contracts with its partners include an enforceable right to payment.

The Company measures progress toward the completion of the performance obligations satisfied over time using an input method based on an overall estimation of the effort incurred to date at each reporting period to satisfy a performance obligation. This method provides an appropriate depiction of completed progress toward fulfilling its performance obligations for each respective arrangement. In certain technology development agreements that require a portion of the contract consideration to be received in advance at the commencement of the contract, such advance payment is initially recorded as a contract liability.

KBI BioPharma, Inc. Collaboration agreement

In December 2019, the Company executed a four-year Joint Marketing Agreement (JMA) with KBI BioPharma, Inc. (KBI) to co-promote technologies through joint marketing efforts. The JMA provides for a non-refundable upfront payment of $0.8 million and milestone payments of $2.8 million in the aggregate, of which $2.3 million had been received as of March 31, 2021, upon the achievement of specific milestones. Upfront payments that relate to ongoing collaboration efforts required throughout the contract term such as joint marketing are recognized ratably throughout the contract term. The Company fully constrains revenue associated with the milestone payments until the specified milestones are probable of achievement. Additionally, KBI is obligated to make royalty payments to the Company during the fourth year of the JMA representing a percentage of its sales generated through the arrangement. Any costs incurred to KBI through the duration of the JMA are recognized as a reduction to collaboration revenue in the period in which they are incurred. As of March 31, 2021 and December 31, 2020, deferred revenue related to this JMA was $1.6 million and $1.8 million, respectively.

Contract balances

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and the Company records a contract receivable when it has an unconditional right to consideration. As of March 31, 2021 and December 31, 2020, contract assets were $0.0 million and $0.1 million, respectively.

Contract liabilities are recorded in deferred revenue when cash payments are received or due in advance of the satisfaction of performance obligations. As of March 31, 2021 and December 31, 2020, contract liabilities were $2.4 million and $2.6 million, respectively. During the three months ended March 31, 2021, the Company recognized $1.0 million, as revenue that had been included in deferred revenue at the beginning of the period. During the three months ended March 31, 2020, the Company recognized $0.1 million, as revenue that had been included in deferred revenue at the beginning of the period.

Income taxes

Prior to the LLC Conversion, all income tax effects of the Company's operations were passed through to its members individually. Accordingly, the accompanying financial statements do not include any income tax effects for the Company prior to the LLC Conversion date, and the Company had no unrecognized income tax benefits, nor any interest or penalties associated with unrecognized income tax benefits, accrued or expensed as of and for the years ended December 31, 2019 and the period from January 1, 2020 through October 5, 2020.

Following the LLC Conversion, the Company accounts for income taxes using the asset and liability method whereby deferred tax asset and liability accounts are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are currently in effect. Valuation allowances are established where necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company files income tax returns in the federal and various state tax jurisdictions.

The Company recognizes interest and penalties related to income tax matters as a component of tax expense. The Company did not record any interest or penalties related to income tax during the three months ended March 31, 2021.

Leases

At the inception of a contractual arrangement, the Company determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time. If both criteria are met, the Company records the associated lease liability and corresponding right-of-use asset upon commencement of the lease using the implicit rate or a discount rate based on a credit adjusted secured borrowing rate commensurate with the term of the lease.

The Company additionally evaluates leases at their inception to determine if they are to be accounted for as an operating lease or a finance lease. Operating lease assets represent a right to use an underlying asset for the lease term and operating lease liabilities represent an obligation to make lease payments arising from the lease. Operating lease obligations with a term greater than one year and their corresponding right-of-use assets are recognized on the balance sheet at the commencement date of the lease based on the present value of lease payments over the expected lease term. Certain adjustments to the right-of-use asset may be required for items such as initial direct costs paid or incentives received.

As the Company’s operating leases do not typically provide an implicit rate, the Company utilizes the appropriate incremental borrowing rate, determined as the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term and in a similar economic environment. The lease cost is recognized on a straight-line basis over the lease term and variable lease payments are recognized as operating expenses in the period in which the obligation for those payments is incurred. Variable lease payments primarily include common area maintenance, utilities, real estate taxes, insurance and other operating costs that are passed on from the lessor in proportion to the space leased by the Company.

The Company accounts for its finance leases by calculating an implied interest rate in the lease contract and recognizing a finance lease right of use asset and lease liability. The right of use asset is recognized in property and equipment, net, in the asset category in which the underlying asset relates. The lease liability is recognized in the condensed consolidated balance sheet as a finance lease obligation.

Research and development expenses

Research and development expenses includes the cost of materials, personnel-related costs (comprised of salaries, benefits and share-based compensation), consulting fees and allocated facility costs associated with both our execution of technology development agreements and collaboration agreements, as well as ongoing development of our Integrated Drug Creation Platform and other technologies. Allocated facility costs include facility occupancy and information technology costs. The Company derives improvements to its platform from both types of activities. The Company has not historically tracked its research and development expenses on a partner-by-partner basis or on a program-by-program basis.

Stock-based compensation

Stock-based compensation includes compensation expense for incentive units, restricted stock, and stock option grants to employees and is measured on the grant date based on the fair value of the award and recognized on a straight-line basis over the requisite service period. The fair value of options to purchase common stock are measured using the Black-Scholes option-pricing model. The Company accounts for forfeitures as they occur. Prior to the LLC Conversion, the Company also granted phantom units which due to the presence of an exercise condition contingent upon a liquidity event, the Company determined that it was not probable that the phantom units would become exercisable.

Net Loss Per Share Attributable to Common Stockholders and Unitholders

The Company calculates basic and diluted net loss per share attributable to common stockholders and unitholders in conformity with the two-class method required for companies with participating securities. The Company considers its redeemable convertible preferred stock and units to be participating securities. In the event a dividend is declared or paid on common stock and units, holders of redeemable convertible preferred stock and units are entitled to a share of such dividend in proportion to the holders of common stock and units on an as-if converted basis. Under the two-class method, basic net loss per share attributable to common stockholder and unitholder is calculated by dividing the net loss attributable to common stockholder and unitholder by the weighted-average number of shares of common stock and units outstanding for the period. Net loss attributable to common stockholders and unitholders is determined by allocating undistributed earnings between common and preferred stockholders and unitholders. The diluted net loss per share attributable to common stockholders and unitholders is computed by giving effect to all potential dilutive common stock and unit equivalents outstanding for the period determined using the treasury stock method. The net loss attributable to common stockholders and unitholders was not allocated to the redeemable convertible preferred stock and units under the two-class method as the redeemable convertible preferred stock and units do not have a contractual obligation to share in the Company's losses. For purposes of this calculation, redeemable convertible preferred stock and units, redeemable convertible preferred stock and unit warrants, incentive (formerly incentive units) and non-qualified stock options are considered common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders and unitholders as their effect is anti-dilutive.

Recently Adopted Accounting Pronouncements

In August 2020, the FASB issued ASU No. 2020-06, Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU No. 2020-06"). The new guidance eliminates two of the three models in ASC 470-20 that require separating embedded conversion features from convertible instruments. As a result, only conversion features accounted for under the substantial premium model in ASC 470-20 and those that require bifurcation in accordance with ASC 815-15 will be accounted for separately. For contracts in an entity's own equity, the new guidance eliminates some of the requirements in ASC 815-40 for equity classification. The guidance also addresses how convertible instruments are

accounted for in the diluted earnings per share calculation and requires enhanced disclosures about the terms of convertible instruments and contracts in an entity's own equity. ASU 2020-06 is effective for the Company after December 15, 2023. Early adoption is permitted for fiscal periods beginning after December 15, 2020. The Company adopted this standard as of January 1, 2021, and the adoption of this standard did not impact its condensed consolidated financial statements.

Recently issued accounting pronouncements, not yet adopted

In December 2019, the FASB issued amended guidance on the accounting and reporting of income taxes. The guidance is intended to simplify the accounting for income taxes by removing exceptions related to certain intraperiod tax allocations and deferred tax liabilities; clarifying guidance primarily related to evaluating the step-up tax basis for goodwill in a business combination; and reflecting enacted changes in tax laws or rates in the annual effective tax rate. The amended guidance is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The application of the amendments in the new guidance are to be applied on a retrospective basis, on a modified retrospective basis through a cumulative-effect adjustment to retained earnings or prospectively, depending on the amendment. The Company is currently evaluating the impact of adoption on its condensed consolidated financial statements.

3. Acquisitions

Acquisition of Denovium

In January 2021, the Company completed its acquisition of the common stock of Denovium, Inc (Denovium), an artificial intelligence deep learning company focused on protein discovery and design. The Company intends to integrate Denovium's technology into its Integrated Drug Creation Platform. The acquisition has been accounted for as a business combination.

Pursuant to the terms of the agreement, the Company acquired all outstanding equity of Denovium for estimated total consideration of $3.0 million, which consists of (in thousands):

Cash consideration	$	2,670
Equity consideration		368
Total purchase consideration	$	3,038

Cash consideration includes a $2.5 million up-front payment and a payment for working capital adjustments.

In addition to the $2.5 million paid up-front, $2.5 million was placed into escrow subject to the continued service and/or employment of Denovium's co-founders over a one-year period. This amount is not included in the total consideration and is accounted for as compensation expense over the one-year service period.

The Company issued 305,864 shares of its common stock to the Denovium co-founders, of which 80% or 244,691 shares is subject to a Stock Restriction Agreement and vests monthly over a four-year term subject to a service condition. The fair value of these shares of $1.5 million will be recognized as compensation cost over the four-year service period. The remaining 20%, or 61,173 shares, vested immediately and is included in the total consideration.

The following table summarizes the allocation of the purchase consideration to the fair value of the assets acquired and liabilities assumed (in thousands):

Cash and cash equivalents	$ 158
Accounts receivable	59
Other current assets	1
Intangible assets	2,507
Goodwill	1,055
Total assets acquired	3,780
Accounts payable and accrued expenses	109
Deferred tax liability	633
Total liabilities assumed	742
Net assets acquired	$ 3,038

Goodwill arising from the acquisition of $1.1 million was attributable to the assembled workforce and expected synergies between Absci's Integrated Drug Creation Platform and the Denovium Engine. The goodwill is not deductible for tax purposes. As of March 31, 2021, the Company had not yet fully completed the analysis to assign fair values to all assets acquired and liabilities assumed, and therefore the purchase price allocation is preliminary. The remaining items include the finalization of working capital adjustments, income taxes, and the resulting impact to goodwill. The preliminary purchase price allocation will be subject to further refinement as the Company continues to refine its estimates and assumptions based on information available at the acquisition date. These refinements may result in material changes to the estimated fair value of assets acquired and liabilities assumed. The purchase price allocation adjustments can be made throughout the end of the Company's measurement period, which is not to exceed one year from the acquisition date.

The following table reflects the estimated fair values of the identified intangible assets of Denovium and their respective weighted-average estimated amortization periods.

	Estimated Fair Value (in thousands)	Estimated Amortization Period (years)
Denovium Engine	$ 2,507	5
	$ 2,507	

4. Property and equipment, net

Property and equipment as of December 31, 2020 and March 31, 2021 consists of the following (in thousands):

	December 31, 2020	March 31, 2021
Construction in progress	$ —	$ 2,283
Lab Equipment	8,578	11,483
Software	188	221
Furniture, Fixtures and Other	472	686
Leasehold Improvements	2,016	9,674
Total Cost	11,254	24,347
Less accumulated depreciation and amortization	(2,345)	(2,724)
Property and Equipment, net	$ 8,909	$ 21,623

Depreciation expense was $0.5 million and $1.1 million for the year ended December 31, 2019 and 2020, respectively. Depreciation expense was $0.4 million for the three months ended March 31, 2021.

5. Long-term debt and other borrowings

In June 2018, the Company signed a Loan and Security Agreement (LSA) with Bridge Bank (Bank), a division of Western Alliance Bank. The purpose of the LSA was to provide long-term financing to the Company through term loans available for borrowing in three tranches up to a maximum of $3.0 million through December 2019 upon the attainment of certain milestones as delineated in the LSA. The first tranche of $0.3 million was borrowed in June 2018. The Company was obligated to make interest-only payments until the amortization date of June 28, 2019 and after that date to make principal and interest payments. Interest on outstanding borrowings under the LSA is charged at a rate of 6% per annum. This loan matures in May 2022, at which time all outstanding principal and accrued and unpaid interest is due and payable. This loan is secured by substantially all tangible assets of the Company; intellectual property is excluded from the secured collateral, but is subject to a negative pledge in favor of the Bank.

In March 2019, the Company entered into a First Amendment to the LSA that increased total borrowings to $3.0 million and to add a financial liquidity covenant. The amendment was accounted for as a debt modification and no gain or loss was recognized in the Company's financial statements.

In May 2020, the Company entered into a Second Amendment to the LSA that increased total borrowings to $5.0 million. The amortization date was extended to May 1, 2021 except, if a certain revenue and new contract bookings milestone is achieved, the amortization date is extended to November 1, 2021. The maturity date of the loan was extended to May 11, 2024. The amendment was accounted for as a debt modification and no gain or loss was recognized in the Company's financial statements.

In August 2020, the Company entered into a Third Amendment to the LSA that waived an event of default due to failure to meet a financial covenant. The Amendment also expanded the definition of permitted indebtedness to include Payroll Protection Plan (PPP) loans, and modified financial and restrictive covenants.

In February 2021, the Company entered into a Fourth Amendment to the LSA. This amendment gave effect to the Company's conversion to a corporation and its purchase of Denovium, including permitting certain cash and equity consideration linked to continued employment and service requirements, and adding Denovium as co-borrower to the LSA.

The Company may prepay all, but not less than all, of the term loans at any time upon 10 days written notice, with a prepayment premium beginning at 1.0% initially and declining to 0% after May 11, 2022. The Company is also required to pay a final payment equal to 3% of the principal amount funded, which is payable upon the earliest to occur of (i) the maturity date, (ii) acceleration and (iii) the prepayment of the loan. As part of the Second Amendment, the Company paid a one-time amendment fee and a pro-rated final payment in connection with the amendment. The final payment represents an additional principal payment and is accounted for as a debt discount that will be accreted through the maturity date of the loan based on the effective interest method.

In connection with entering into the LSA Agreement in June 2018, the Company entered into an agreement whereby the Company is required to pay a fee of 3.5% of the aggregate amount of term loans funded by Bridge Bank under the LSA within three business days of a sale or other disposition of substantially all of the Company's assets, a merger or consolidation, a change in control or an initial public offering (Liquidity Event). Concurrent with the Second Amendment, the Company and Bridge Bank entered into an amended agreement which extended the term of the fee to May 11, 2030.

Under the LSA (as amended) the Company is subject to a financial covenant. The covenant, as amended, requires that the Company maintain at all times either (a) unrestricted cash and cash equivalents in an amount equal to or greater than the Company's monthly cash burn or (b) trailing 6-month revenue of at least 80% of the Company's revenue projections (over the same 6-month period) determined using the lender's measurement method. As of March 31, 2021, the Company was in compliance with this financial covenant.

As of March 31, 2021, the outstanding principal balance under the LSA was $5.0 million.

The carrying amount of the long-term debt approximates fair value.

In May 2020, the Company received a PPP loan pursuant to the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) in the amount of $0.6 million. The loan had a two-year term and bore a fixed interest rate of 1%. Under the terms of the CARES Act, the loan was eligible to be forgiven, in part or whole, if the proceeds were used to retain and pay employees and for other qualifying expenditures. In February 2021, the Company received notification from the Small Business Administration that they approved the forgiveness of the full $0.6 million PPP loan and a gain on extinguishment in this amount was recorded as Other income in the Condensed Consolidated Statement of Operations.

In March 2021, the Company entered into a Note Purchase Agreement (the "2021 Notes") to issue and sell $125.0 million convertible promissory notes with investors. The 2021 Notes bear interest at 6% per annum and have a maturity date in September 2023, or earlier upon certain events of default. The Company cannot prepay the 2021 Notes without the consent of the holders of a majority in interest of the outstanding Notes (the "Majority Noteholders"). The 2021 Notes shall automatically convert, upon the first of the following transactions to occur, into: (i) shares of the Company's common stock upon a qualified initial public offering ("IPO") or a qualified merger with a Special Purpose Acquisition Company ("SPAC"); or (ii) shares of the Company's preferred stock in the event of a qualified equity financing in which the Company raises gross proceeds of $30 million or more through sale of preferred stock. The 2021 Notes are also convertible into shares of the Company's capital stock issued in a non-qualifying financing transaction upon the election of the Noteholders. The 2021 Notes are convertible at a conversion price equal to the lower of (i) a per share price equal to 82% of the per share price paid by the new investors in such qualified financing, IPO or SPAC transaction or (ii) the price per share calculated on the basis of a pre-money valuation of the Company of $1.5 billion divided by the aggregate number of shares of Common Stock of the Company deemed outstanding on an as-converted, fully diluted basis including a) all shares reserved under the Company's stock option plan and b) 50% of additional shares reserved in connection with any expansion of the option pool as a result of the transaction, as of immediately prior to such qualified financing, public offering, or conversion event ("Cap Price"). In the event of a non-qualified financing, the 2021 Notes are convertible at the Cap Price. In the event of a Deemed Liquidation Event, the outstanding balance shall either (a) be repaid in cash in an amount equal to the sum of the outstanding balance plus 50% of the original principal amount of the Note or (b) be converted into that number of shares of a new series of Preferred stock of the Company at the Cap Price. On or after the Maturity Date, at the option of the Noteholder, the outstanding balance shall either (a) be repaid in cash in an amount equal to the outstanding balance or (b) be converted into that number of shares of a New Preferred Stock of the Company at the Cap Price.

Due to certain embedded features within the 2021 Notes, the Company elected to account for these notes, including all of their embedded features, under the fair value option. The Company has elected to recognize interest expense based on the 6% per annum coupon rate of the Notes.

6. Leases

The Company leases its current office and laboratory facilities under multiple operating lease agreements that are scheduled to expire in August 2024. In February 2019, the Company signed

another lease agreement for additional office space in its current building. This agreement commenced in September 2019 and is also scheduled to expire in August 2024.

In December 2020, the Company entered into a lease agreement for a new 61,607 square foot facility in Vancouver, Washington. The lease term commenced in December 2020 and ends in April 2026, with the Company's option to renew through April 2031. The lease agreement provides for annual base rent of approximately $1.2 million in the first year of the lease term which increases on an annual basis to approximately $1.5 million in the final year of the initial lease term. The Company entered into an agreement with a construction company for purposes of building out the facility and customizations for a total estimated cost of approximately $14.6 million. As part of the lease agreement, the lessor provided tenant incentives in the amount of $2.5 million.

In March 2021, the Company entered into an amendment to its lease agreement with respect to its new facility currently under construction. The amendment makes certain changes to the original lease, including (i) the addition of 16,367 square feet of office and laboratory space at the same site (Expansion Premises) and (ii) an extension of the expiration date of the original lease by 24 months following the rent commencement date of April 1, 2021. The amendment provides for annual base rent for the Expansion Premises of approximately $0.3 million in the first year of the lease term, which increases on an annual basis to approximately $0.4 million in the final year of the lease term. The amendment also provides for additional tenant incentives in the amount of $0.7 million. Additionally, with the execution of this amendment, the Company obtained a one-time option to terminate the lease for the Original premise and Expansion premise after five years. All other terms of the lease amendment for the Expansion Premises are consistent with the existing new facility lease agreement. Under the amendment, the Company retains its original option to renew the lease for an additional five-year term, at then-current market rates.

For each of the Company's facility lease agreements, the Company is responsible for taxes, insurance and maintenance costs.

The Company leases certain laboratory equipment under finance leases. Property and equipment includes approximately $6.5 million and $4.3 million of assets under finance leases as of March 31, 2021 and December 31, 2020, respectively. Accumulated depreciation related to assets under finance leases was approximately $1.1 million and $0.9 million as of March 31, 2021 and December 31, 2020, respectively.

Future undiscounted lease payments for the Company's lease liabilities as of March 31, 2021 are as follows (in thousands):

	Operating leases	Finance leases
2021 (nine months remaining)	$ 1,444	$ 1,478
2022	2,159	1,888
2023	2,226	1,222
2024	2,135	499
2025	1,873	86
Thereafter	4,751	—
Total future lease payments	14,588	5,173
Less: Imputed interest	(3,471)	(567)
Less: Lease incentive	(804)	—
Present value of lease liabilities	$ 10,313	$ 4,606

Additional information related to the Company's leases as of December 31, 2020 and March 31, 2021 are as follows:

	December 31, 2020	March 31, 2021
Weighted average remaining lease term (in years)		
Operating leases	4.9	6.8
Finance leases	3.0	2.8
Weighted average discount rate		
Operating leases	8 %	8 %
Finance leases	7 %	7 %

7. Commitments and contingencies

As of March 31, 2021, future lease payments are secured by irrevocable standby letters of credit totaling $1.8 million. The irrevocable standby letters of credit are expected to be pledged for the full lease terms which extend through 2024 and 2028 for each of the Company's facility leases.

In the ordinary course of business, the Company is a party to claims and legal proceedings. The Company records a provision for contingent losses when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Based on currently available information, management does not believe that the ultimate outcome of these unresolved matters is probable or estimable and not likely, individually and in the aggregate, to have a material adverse effect on our financial position, results of operations or cash flows. However, litigation is subject to inherent uncertainties and management's view of these matters may change in the future. Were an unfavorable outcome to occur, there exists the possibility of a material adverse impact on the Company's financial position, results of operations or cash flows for the period in which the unfavorable outcome occurs, and potentially in future periods.

8. Redeemable convertible preferred stock

Redeemable Convertible Preferred Stock

The following table summarizes the authorized, issued, and outstanding redeemable convertible preferred stock of the Company as of March 31, 2021 (in thousands, except share and per share data):

	March 31, 2021				
	Shares Authorized	Shares Issued and Outstanding	Issuance Price per Share	Net Proceeds	Liquidation preference
Convertible Preferred Stock:					
Junior	1,573,547	1,573,547	$ 1.00	$ 1,462	$ 1,990
Class A-1	2,793,007	2,700,000	1.00	2,700	3,455
Class A-2	1,500,000	1,500,000	1.00	1,500	1,886
Class B	1,372,549	1,372,549	1.53	2,065	2,557
Class C	1,760,252	1,760,252	6.95	11,979	14,287
Class D	1,532,176	1,532,176	9.79	14,966	16,074
Class E	3,568,405	3,568,405	19.62	69,653	176,774
Total convertible preferred stocks	14,099,936	14,006,929		$ 104,325	$ 217,023

The following table summarizes the authorized, issued, and outstanding redeemable convertible preferred stock of the Company as of December 31, 2020 (in thousands, except share and per share data):

	December 31, 2020				
	Shares Authorized	Shares Issued and Outstanding	Issuance Price per Share	Net Proceeds	Liquidation preference
Convertible Preferred Stock:					
Junior	1,573,547	1,573,547	$ 1.00	$ 1,462	$ 1,989
Class A-1	2,793,007	2,700,000	1.00	2,700	3,453
Class A-2	1,500,000	1,500,000	1.00	1,500	1,885
Class B	1,372,549	1,372,549	1.53	2,065	2,526
Class C	1,760,252	1,760,252	6.95	11,979	13,876
Class D	1,532,176	1,532,176	9.79	14,951	15,852
Class E	3,313,519	3,313,519	19.62	64,709	163,280
Total convertible preferred stock	13,845,050	13,752,043		$ 99,366	$ 202,861

The Company issued 254,886 shares of Class E redeemable preferred stock in February 2021 at an issuance price of $19.62 per share.

The Company recorded its redeemable convertible preferred stock at the issuance price on the dates of issuance, net of issuance costs. Mandatory conversion of preferred stock to common stock is triggered by either (a) a closing of a public offering with net proceeds of at least $50 million at a price of at least $19.62 per share (Qualified Public Offering) or (b) the vote or written consent of the holders of a preferred majority electing conversion of all preferred stock and junior preferred stock. The preferred stock is redeemable at the greater of a) the unpaid liquidation preference or b) fair

value, both determined as of the date of redemption request, contingent upon certain deemed liquidation events outside the control of the Company, none of which are considered probable of occurring as of March 31, 2021. As such, the Company classifies the redeemable convertible preferred stock as temporary equity in the Condensed Consolidated Balance Sheets.

In the event of any liquidation event, either voluntary or involuntary, holders of Class E Preferred Stock are entitled to receive out of proceeds or assets of the Company, prior and in preference to the distribution of proceeds to holders of Class D Preferred Stock, Class C Preferred Stock, Class B Preferred Stock, Class A Preferred Stock, Junior Preferred Stock, or Common Stock. Holders of Class D Preferred Stock, Class C Preferred Stock, Class B Preferred Stock and Class A Preferred Stock are entitled to receive proceeds prior and in preference to distribution of proceeds to Junior Preferred Stock. The amount of distributions preferred stockholders are entitled to is equal to the original issue price for each series of issuance, plus declared but unpaid dividends on each such share. The holders of Junior, Class A-1, Class A-2, Class B, Class C, and Class D Preferred Stock shall receive $1.00, $1.00, $1.00, $1.53, $6.95, and $9.79 per share, respectively, plus declared but unpaid dividends on such shares. Class E Preferred Stock has, at the option of the holder, an alternative liquidation preference equal to 1.5 times the original issuance price of $19.62 for any redemption within 12 months of the original issuance date of October 2020. After this 12-month period, the Class E liquidation preference is equal to $19.62 plus accrued but unpaid dividends on such shares. Upon completion of the distribution to the preferred stockholders, the remaining proceeds of the Company shall be distributed among the holders of Common Stock pro rata based on the number of shares held by each. Preferred stockholders have preemptive voting rights for significant capital transactions including liquidation, merger or sale of the Company, amendments to the operating agreement, issuance of additional equity interests, issuance of debt instruments, and pledging of Company assets. The preferred stock accrues dividends at a rate of 6% per annum, cumulative. The Company has not declared or paid dividends to the holders.

Each share of redeemable convertible preferred stock has a number of votes equal to the number of shares of common stock into which it is convertible. The holders of record of the Series A and Series B redeemable convertible preferred stock vote together on an as-converted basis exclusively and as a separate class and are entitled to elect two directors of the Company. The holders of record of the Series C redeemable convertible preferred stock vote exclusively and as a separate class and is entitled to elect one director of the Company. The holders of record of the Series E redeemable convertible preferred stock vote exclusively and as a separate class and is entitled to elect one director of the Company.

Preferred stock warrants

As part of the Class A-1 funding in 2016, a warrant for the purchase of 93,007 Class A-1 Preferred Units at an exercise price of $1 per unit and exercisable at any time before April 2026 was granted to an investor. This warrant was exchanged for a warrant to purchase Class A-1 preferred stock at equivalent terms in October 2020. Because the underlying shares are redeemable for conditions outside of the Company's control, the warrant is classified within other long-term liabilities on the condensed consolidated balance sheets and recognized at fair value at each reporting period with the change in fair value recorded in other expense on the condensed consolidated statement of operations and comprehensive loss. The balance is included in Other long-term liabilities on the condensed consolidated balance sheet.

9. Stock-Based compensation

Prior to the LLC Conversion, the Company granted incentive units and phantom units under its 2015 Equity-Based Incentive Plan ("2015 Plan") to employees and non-employee service providers. In October 2020, in conjunction with the LLC Conversion, the Company adopted the 2020 Stock Option and Grant Plan ("2020 Plan") under which it granted stock options, restricted shares, and stock

appreciation rights (SARs) as replacements awards for outstanding awards under the 2015 Plan and as new awards to incentivize employee service.

Restricted Stock

Upon the LLC Conversion, the outstanding 1,008,055 incentive units were exchanged for 808,909 restricted shares granted under the 2020 Plan based on a ratio determined by their threshold amount and the fair value of the restricted stock. The exchange was accounted for as a probable-to-probable modification (Type I modification), and the fair value of the restricted shares did not exceed the fair value of the incentive units on the date of exchange. Accordingly, the restricted shares are measured at the grant date fair value of the incentive units. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Activity for the restricted shares is shown below:

	Number of shares
Unvested as of December 31, 2020	336,545
Granted	457,649
Vested	(17,046)
Unvested as of March 31, 2021	777,148

As of March 31, 2021, there was $4.8 million of unrecognized compensation expense related to the restricted shares expected to be recognized over a remaining weighted-average period of 3.8 years.

Phantom Units

Phantom units generally vested at 25% after one-year with the remainder vesting quarterly over the following three-year period. Upon the occurrence of a liquidity event, 100% of phantom units would vest. A liquidity event for purposes of the phantom units meant either of the following events: (i) a person or persons acting as a group (other than a person or group that currently owns more than 50% of the voting power of the Company) acquires ownership of Common Units that, together with the Common Units held by such person or group, constitutes more than 50% of the voting power of all Common Units of the Company or (ii) a person or persons acting as a group acquires (or has acquired during the 12-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value of more than 60% of the total gross fair market value of all of the assets of the Company immediately before such acquisition or acquisitions. Upon a liquidity event, the phantom unit holders were entitled to a payment equal to the fair value of common units less a strike price. The payment was to be made in the same form of consideration as received by other unit holders as a result of the liquidity event. Other than this payment upon a liquidity event, Phantom units provided no economic value and they provided no voting rights. Due to the presence of an exercise condition that was contingent upon a liquidity event, the Company determined that it was not probable that the phantom units would become exercisable and no compensation expense has been recognized.

Activity for the phantom units is shown below:

	Number of Units	Weighted Average Strike Price
Unvested as of December 31, 2020	364,032	$ 1.55
Granted	—	—
Vested	—	—
Exchange of Phantom Units for Cash Payment Rights, SARs, and/or Stock Options	(364,032)	1.55
Unvested as of March 31, 2021	—	$ —

Following the LLC Conversion, the holders of phantom units were offered to exchange their awards for a combination of cash payment rights, SARs and/or stock options granted under the 2020 Plan. The exchange was accounted for as short-term inducement, with no accounting recognition prior to offer expiration in January 2021 as the exchange offer participants were able to modify their election through the expiration date. In January 2021, all participants accepted the offer. The exercisability of the SARs is contingent upon a liquidity event that is not probable of occurrence; accordingly, no compensation expense has been recognized for these awards. The stock options vest based on a service condition, generally over a 4-year term beginning with the vesting commencement date of the exchanged phantom units.

The aggregate intrinsic value of 121,303 SARs outstanding as of March 31, 2021 is $1.5 million based on the estimated fair value of common stock of $12.31.

Stock Options

Stock options generally vest 25% after one-year from the date of the grant with the remainder vesting monthly over the following three-year period. Certain options have alternative vesting schedules including ratably over 2-4 years and immediate vesting. The Company recognizes forfeitures as they occur, and uses the straight-line expense recognition method. Activity for stock options is shown below:

	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands $)
Outstanding at December 31, 2020	516,587	$ 3.63	9.8	$ 780
Granted	1,191,179	3.63		—
Canceled/ Forfeited	(82,711)	3.63		—
Outstanding at March 31, 2021	1,625,055	3.63	9.3	14,105
Exercisable at March 31, 2021	241,298	$ 3.63	9.7	$ 2,094
Vested and expected to vest as of March 31, 2021	1,625,055		9.3	$ 14,105

The weighted-average grant date fair value of stock options granted during the first quarter of 2021 was $5.90. The fair value of options vested during the three months ended March 31, 2021 was $1.2 million. As of March 31, 2021, total unrecognized stock-based compensation related to unvested stock options was $6.7 million, which the Company expects to recognize over a remaining weighted average period of 3.8 years. The aggregate intrinsic value was calculated based on the estimated fair value of common stock of $12.31 per share.

Determination of Fair Value

The estimated grant-date fair value of all the Company's stock options was calculated using the Black-Scholes option pricing model, based on the following assumptions:

	March 31, 2021
Expected term (in years)	3.52-6.08
Volatility	45%-47%
Risk-free interest rate	0.3%-1.3%
Dividend Yield	—%

The fair value of each stock option was determined by the Company using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment and estimation by management.

Expected Term—The expected term represents the period that stock-based awards are expected to be outstanding. The Company's stock options do not have a contractual term. However, there is a constructive maturity of each stock option based on the expected exit or liquidity scenarios for the Company. The Company's historical option exercise data is limited and did not provide a reasonable basis upon which to estimate an expected term. The expected term for options was derived by using the simplified method which uses the midpoint between the average vesting term and the contractual expiration period of the stock-based award.

Expected Volatility—The expected volatility was derived from the historical stock volatilities of comparable peer public companies within the Company's industry. These companies are considered to be comparable to the Company's business over a period equivalent to the expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the stock options' expected term.

Expected Dividend Rate—The expected dividend is zero as the Company has not paid nor does it anticipate paying any dividends on its common stock underlying its stock options in the foreseeable future.

The Company estimated the fair value of its common stock underlying the stock-based awards when performing fair value calculations using the Black-Scholes option pricing model. Because the Company's common stock is not currently publicly traded, the fair value of its common stock underlying the stock-based awards has been determined on each grant date by management and approved by the Company's board of directors, considering the most recently available third-party valuation of common shares. All options to purchase shares of the Company's common stock are intended to be granted with an exercise price per share no less than the fair value per share of the common stock underlying those options on the date of grant, based on the information known to the Company on the date of grant. In connection with the preparation of the Company's condensed consolidated financial statements for the three months ended March 31, 2021, the Company reassessed its estimate of fair value of common stock for financial reporting purposes. Following this reassessment, it was determined that for financial reporting purposes the fair value of its common stock was higher than the fair value determined by the board of directors at the time of grant throughout the three months ended March 31, 2021.

The Company's determination of the value of its common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants (AICPA), Audit and Accounting Practice Aid Series: Valuation of Privately Held

Company Equity Securities Issued as Compensation (AICPA Practice Aid). In addition, the Company's board of directors considered various objective and subjective factors to determine the fair value of the common stock, including:

- valuations of the Company's common stock performed by third-party valuation specialists;
- the anticipated capital structure that will directly impact the value of the currently outstanding securities;
- the Company's results of operations and financial position;
- the composition of, and changes to, the management team and board of directors;
- the lack of liquidity of the Company's common stock as a private company;
- the Company's stage of development and business strategy and the material risks related to its business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;
- U.S. and global economic conditions;
- the likelihood of achieving a liquidity event for the holders of the Company's common stock, such as an IPO or a sale of the company, given prevailing market conditions; and
- the market value and volatility of comparable companies.

The AICPA Practice Aid prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of our future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics.

In accordance with the AICPA Practice Aid, the Company considered the various methods for allocating the enterprise value to determine the fair value of its common stock at the valuation date. Under the option pricing method (OPM), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The value of the common stock is inferred by analyzing these options. The probability weighted expected return method (PWERM) is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

Starting in 2020, the Company used a hybrid method to determine the estimated fair value of its common stock, which included both the OPM and PWERM models.

As of March 31, 2021, the Company had reserved 3,246,905 shares of common stock for issuance under the 2020 Plan, of which 545,639 were available for issuance.

10. Fair Value Measurements

GAAP defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market

participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

When quoted market prices are available in active markets, the fair value of assets and liabilities is estimated within Level 1 of the valuation hierarchy.

If quoted prices are not available, then fair values are estimated by using pricing models, quoted prices of assets and liabilities with similar characteristics, or discounted cash flows, within Level 2 of the valuation hierarchy, In cases where Level 1 or Level 2 inputs are not available, the fair values are estimated by using inputs within Level 3 of the hierarchy.

As part of the Class A-1 funding in 2016, a warrant for the purchase of 93,007 Class A-1 Preferred Units at an exercise price of $1 per unit and exercisable at any time before April 2026 was granted to an investor. This warrant was exchanged for a warrant to purchase Class A-1 preferred stock at equivalent terms in October 2020 (Note 8). Because the underlying shares are redeemable for conditions outside of the Company's control, the warrant is classified within other long-term liabilities on the consolidated balance sheets and recognized at fair value at each reporting period with the change in fair value recorded in other expense on the consolidated statement of operations and comprehensive loss. The balance is included in Other long-term liabilities on the consolidated balance sheet. The value for the warrant is based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy.

During 2018, the Company entered into an agreement whereby the Company is required to pay a fee of 3.5% of the aggregate amount of term loans funded by Bridge Bank under the LSA within three business days of a sale or other disposition of substantially all of the Company's assets, a merger or consolidation, a change in control or an initial public offering (Liquidity Event) (Note 5). This agreement has been accounted for as a freestanding derivative under ASC 815, *Derivatives* and is remeasured to its fair value at the end of each reporting period. The value for the fee ("Fee in lieu of warrant") is based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. Except for short-term investments, the 2021

Notes and the warrant, none of the Company's assets or liabilities are recorded at fair value on a recurring basis.

The following table summarizes the Company's assets and liabilities measured at fair value on a recurring basis as of March 31, 2021 (in thousands):

	March 31, 2021			
	Level 1	Level 2	Level 3	Total
Liabilities:				
Fee in-lieu of warrant	$ —	$ —	$ 55	$ 55
Convertible promissory notes	—	—	125,000	125,000
Preferred stock warrant liability	—	—	1,173	1,173
Total liabilities	$ —	$ —	$ 126,228	$ 126,228

The following table provides reconciliation for all liabilities measured at fair value using significant unobservable inputs (Level 3) for the three-months ended March 31, 2021 (in thousands):

Balance at December 31, 2020	$ 720
Change in fair value of fee in lieu of warrant during three months of 2021	33
Change in fair value of preferred stock warrant during three months of 2021	475
Fair value of 2021 Notes at issuance	125,000
Balance at March 31, 2021	$ 126,228

Below are the assumptions used for the Black-Scholes option pricing valuation model for the fair value of the preferred stock warrant liability as of March 31, 2021:

	March 31, 2021
Risk-free interest rate	0.16 %
Expected dividend yield	— %
Expected term (years)	2
Volatility	85.00 %

The expected volatility is based on historical volatilities from guideline companies, since there is no active market for the Company's common stock. The Company based the expected term assumption on the actual remaining contractual term of the warrant as of the date of measurement. The Company has not paid, and does not expect to pay, any cash dividends in the foreseeable future. The risk-free interest rate used is the rate for a U.S. Treasury zero coupon issue with a term consistent with the remaining contractual term of the warrant on the date of measurement.

The fee-in-lieu of warrant liability is measured based on Management's estimate of the probability of a Liquidity Event, the estimated timing thereof, and a discount rate.

The Company measured the fair value of the 2021 Notes at issuance using the transaction price and there were no changes in the probabilities of an initial public offering or other underlying inputs between issuance and March 31, 2021. Accordingly, changes in fair value were insignificant for the three-months ended March 31, 2021. As of March 31, 2021, the fair value of the 2021 Notes was $125.0 million.

There are significant judgments, assumptions and estimates inherent in the determination of the fair value of each of the instruments described above. These include determination of a valuation method and selection of the possible outcomes available to the Company, including the

determination of timing and expected future investment returns for such scenarios. The Company considered the equity value of an initial public offering using market transactions and have determined the expected value of a stay private scenario using the income approach, which is based on assumptions regarding the Company's future operating performance. The related judgments, assumptions and estimates are highly interrelated and changes in any one assumption could necessitate changes in another. In particular, any changes in the probability of a particular outcome would require a related change to the probability of another outcome. In addition, the fair value of the 2021 Notes is derived using assumptions that are consistent with the assumptions used to value the Company's common stock, the Fee in-lieu of Warrant and the Warrant. In the future, depending on the valuation approaches used and the expected timing and weighting of each, the inputs described above, or other inputs, may have a greater or lesser impact on the Company's estimates of fair value.

11. Related party transactions

The Company entered into a joint development agreement with AGC, Inc., the parent company of the employer of one of the Company's directors. No revenue was recognized under the agreement for the three months ended March 31, 2021 and March 31, 2020. The Company has the opportunity to earn additional revenues under the agreement in future years if pre-determined milestones are achieved. There were no amounts due or payable as of March 31, 2021. The director referenced resigned from the Company's Board of Directors in April 2021.

12. Net loss per share attributable to common stockholders and unitholders

The following table sets forth the computation of the Company's basic and diluted net loss per share attributable to common unitholders and stockholders (in thousands, except share and per share amounts):

	March 31,	
	2020	2021
Numerator:		
Net loss	$ (2,658)	$ (10,962)
Adjustment of redeemable convertible preferred stock and units	(11,154)	—
Cumulative undeclared preferred stock dividends	—	(995)
Net loss available to common stockholder and unitholders	$ (13,812)	$ (11,957)
Denominator:		
Weighted-average common shares and units outstanding	4,606,505	5,140,648
Net loss per share, basic and diluted	$ (3.00)	$ (2.33)

Restricted common stock and units that are contingently returnable are excluded from the weighted-average common shares and units outstanding calculation.

Potentially dilutive securities not included in the calculation of diluted net loss per share because to do so would be anti-dilutive are as follows (in common stock equivalent shares):

	March 31,	
	2020	2021
Redeemable convertible preferred stock and units outstanding	10,066,718	13,865,326
Redeemable convertible preferred stock and unit warrants	93,007	93,007
Unvested incentive units	153,139	—
Stock options	—	1,383,757
Unvested restricted stock	—	777,148

Refer to Note 13: *Subsequent Events* for descriptions of transactions occurring subsequent to March 31, 2021 that could impact the number of common shares outstanding had the transaction occurred prior to March 31, 2021.

13. Subsequent events

Management has evaluated, for potential recognition or disclosure in the financial statements, subsequent events that have occurred through June 30, 2021, which is the date that the financial statements were available to be issued.

Totient acquisition

On June 4, 2021, the Company entered into a merger agreement with Totient, Inc., under which, at the effective time, a wholly owned entity, or Merger Sub, merged with Totient, with Merger Sub surviving as a wholly owned subsidiary of Absci.

Pursuant to the merger agreement, at closing, Totient shareholders will receive $55.0 million in cash, of which $40.0 million in cash was paid at closing, subject to customary purchase price adjustments and escrow restrictions, and $15.0 million in cash shall be paid upon the achievement of expected milestones, and 669,743 shares of Absci Common Stock. All common stock issued is unrestricted, except for those shares granted to certain members of management, of which 25% of the shares issued will vest upon the closing of the Transaction and the remaining 75% will vest over 2.5 years in installments each six months.

Stock options and stock appreciation rights

Subsequent to March 31, 2021 the Company granted 765,881 stock options, with a weighted average exercise price of $14.78, and 31,126 shares of our common stock issuable upon exercise of stock appreciation rights with a weighted-average exercise price of $16.40 per share.

In June 2021, the Company increased the number of shares of common stock reserved for future issuance under the 2020 Stock Option and Grant Plan to 3,626,905.

Increase in authorized shares of common stock

In June 2021, the Company increased the number of authorized shares of common stock to 23,710,000.

Report of Independent Auditors

The Board of Directors
Totient, Inc.

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of Totient, Inc. (and its subsidiaries), which comprise the consolidated balance sheets as of December 31, 2019 and 2020, and the related consolidated statements of operations and comprehensive loss, changes in stockholders' deficit, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Totient, Inc. (and its subsidiaries) as of December 31, 2019 and 2020, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

/s/ Moss Adams LLP

Seattle, Washington
June 14, 2021

TOTIENT, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands U.S. dollars, except share amounts)

	December 31,		March 31,
	2019	**2020**	**2021 (unaudited)**
ASSETS			
Current assets:			
Cash and cash equivalents	$ 1,445	$ 2,448	$ 1,650
Prepaid expenses and other current assets	34	59	54
Total current assets	1,479	2,507	1,704
Operating lease right-of-use assets	750	476	392
Property and equipment and other assets, net	88	120	139
TOTAL ASSETS	$ 2,317	$ 3,103	$ 2,235
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable, accrued expenses and other	$ 605	$ 716	$ 381
Current portion of operating lease obligations	316	257	222
Current portion of long-term debt	—	14,152	34,767
Total current liabilities	921	15,125	35,370
Long-term debt - net	9,196	611	425
SAR liability	260	367	1,820
Operating lease obligations – net of current portion	471	247	196
Other long-term liabilities	—	24	23
TOTAL LIABILITIES	10,848	16,374	37,834
Commitments and contingencies (Note 6)			
STOCKHOLDERS' DEFICIT			
Common stock: Par value $0.00001, 12,903,226 shares authorized as of December 31, 2019 and 2020; 10,000,000 shares issued and outstanding at December 31, 2019 and 2020.	—	—	—
Additional paid in capital	3,848	4,106	4,257
Accumulated deficit	(12,379)	(17,390)	(39,856)
Accumulated other comprehensive income	—	13	—
TOTAL STOCKHOLDERS' DEFICIT	(8,531)	(13,271)	(35,599)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 2,317	$ 3,103	$ 2,235

The accompanying notes are an integral part of these consolidated financial statements.

TOTIENT, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands U.S. dollars)

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020 (unaudited)	2021 (unaudited)
Operating expenses:				
Research and development	$ 4,135	$ 2,430	$ 628	$ 2,190
General and administrative	1,408	1,248	330	549
Depreciation	11	22	4	7
Total operating expenses	5,554	3,700	962	2,746
Operating loss	(5,554)	(3,700)	(962)	(2,746)
Non-operating (expense) income				
Other income	146	265	61	56
Interest and other expense, net	(214)	(183)	(48)	(48)
Change in fair value of convertible notes	(299)	(1,369)	(309)	(19,892)
Gain on debt extinguishment	—	—	—	188
Loss before income tax	(5,921)	(4,987)	(1,258)	(22,442)
Income tax expense	(16)	(24)	(24)	(24)
Net loss	(5,937)	(5,011)	(1,282)	(22,466)
Other comprehensive income/(loss)				
Gain/(loss) on currency translation adjustments	(1)	13	(3)	(13)
Total comprehensive loss	$ (5,938)	$ (4,998)	$ (1,285)	$ (22,479)

The accompanying notes are an integral part of these consolidated financial statements

TOTIENT, INC.
CONSOLIDATED STATEMENTS OF CHANGES STOCKHOLDERS' DEFICIT
(In thousands U.S. dollars, except share amounts)

	For the Three Months Ended March 31, 2020					
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Deficit
	Shares	Amount	Amount	Amount	Amount	Amount
Balances at December 31, 2019	10,000,000	$ —	$ 3,848	$ (12,379)	$ —	$ (8,531)
Stock-based compensation (unaudited)	—	—	74	—	—	74
Currency translation (unaudited)	—	—	—	—	(3)	(3)
Net loss (unaudited)	—	—	—	(1,282)	—	(1,282)
Balances at March 31, 2020 (unaudited)	10,000,000	$ —	$ 3,922	$ (13,661)	$ (3)	$ (9,742)

	For the Three Months Ended March 31, 2021					
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Deficit
	Shares	Amount	Amount	Amount	Amount	Amount
Balances at December 31, 2020	10,000,000	$ —	$ 4,106	$ (17,390)	$ 13	$ (13,271)
Stock-based compensation (unaudited)	—	—	150	—	—	150
Proceeds from exercise of stock options (unaudited)	1,000	—	1			1
Currency translation reserve (unaudited)	—	—		—	(13)	(13)
Net loss (unaudited)	—	—	—	(22,466)	—	(22,466)
Balances at March 31, 2021 (unaudited)	10,001,000	$ —	$ 4,257	$ (39,856)	$ —	$ (35,599)

The accompanying notes are an integral part of these consolidated financial statements.

TOTIENT, INC.
CONSOLIDATED STATEMENTS OF CHANGES STOCKHOLDERS' DEFICIT
(In thousands U.S. dollars, except share amounts)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Deficit
	Shares	Amount	Amount	Amount	Amount	Amount
Balances at December 31, 2018	10,000,000	$ —	$ 2,993	$ (6,442)	$ 1	$ (3,448)
Stock-based compensation	—	—	855	—	—	855
Currency translation reserve	—	—	—	—	(1)	(1)
Net loss	—	—	—	(5,937)	—	(5,937)
Balances at December 31, 2019	10,000,000	—	3,848	(12,379)	—	(8,531)
Stock-based compensation	—	—	258	—	—	258
Currency translation reserve	—	—	—	—	13	13
Net Loss	—	—	—	(5,011)	—	(5,011)
Balances at December 31, 2020	10,000,000	$ —	$ 4,106	$ (17,390)	$ 13	$ (13,271)

The accompanying notes are an integral part of these consolidated financial statements.

TOTIENT, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands U.S. dollars, except share amounts)

	For the Years Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020 (unaudited)	2021 (unaudited)
Cash flows from operating activities				
Net loss	$ (5,937)	$ (5,011)	$ (1,282)	$ (22,466)
Adjustments to reconcile net loss to net cash used in operating activities:				
Stock-based compensation	1,114	366	102	1,602
Depreciation	11	23	4	7
Gain on forgiveness of PPP loan	—		—	(186)
Change in fair value of convertible notes	299	1,369	309	19,892
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets	(18)	(25)	(7)	5
Operating lease right-of-use assets and liabilities	37	(9)	(1)	(1)
Other assets	(23)	21	—	—
Accounts payable, accrued expenses and other current liabilities	365	111	(109)	(336)
Net cash used in operating activities	(4,152)	(3,155)	(984)	(1,483)
Cash flows from investing activities				
Purchases of property and equipment	(14)	(76)	(61)	(29)
Net cash used in investing activities	(14)	(76)	(61)	(29)
Cash flows from financing activities				
Proceeds from issuance of convertible notes	6,600	4,010	—	724
Proceeds from exercise of stock options	—	—	—	1
Borrowings (payments) from PPP Loan	—	188	—	—
Payments on promissory note	(1,174)		—	—
Other long-term liabilities	—	24	—	—
Net cash provided by financing activities	5,426	4,222	—	725
Foreign currency effect on cash and cash equivalents	(1)	12	(2)	(11)
Net increase in cash, cash equivalents, and restricted cash	1,259	1,003	(1,047)	(798)
Cash, cash equivalents and restricted cash - beginning of year	186	1,445	1,445	2,448
Cash, cash equivalents, and restricted cash - end of year	$ 1,445	$ 2,448	$ 398	$ 1,650

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization and nature of operations

Totient, Inc. (the “Company” or “Totient”) is an AI driven, biotechnology company leveraging tertiary lymphoid structures to identify novel tissue-specific antigens and develop matching high-affinity therapeutics. Totient reconstructs antibodies from tissues affected by autoimmunity, infections, and cancer collected from patients experiencing exceptional immune responses. The Company is headquartered in Cambridge, Massachusetts. Totient was acquired by AbSci Corporation on June 4, 2021; refer to Note 11 for further information regarding the acquisition.

2. Summary of significant accounting policies

Basis of presentation

The consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States (GAAP) as defined by the Financial Accounting Standards Board (FASB). The consolidated financial statements include the Company’s wholly-owned subsidiaries and entities under its control. The Company has eliminated all intercompany transactions and accounts.

Unaudited Interim Financial Information

The accompanying interim consolidated balance sheet as of March 31, 2021, the consolidated statements of operations and comprehensive loss, consolidated statements of changes in stockholders’ deficit, and cash flows for the three months ended March 31, 2021 and 2020 and the related footnote disclosures are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, include all adjustments, which include only normal recurring adjustments, necessary for the fair statement of these interim financial statements. The results for the three months ended March 31, 2021 are not necessarily indicative of the results expected for the full fiscal year or any other future annual or interim period.

Use of estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Such estimates include, but are not limited to useful lives of property, plant and equipment, fair value of the Company’s common stock, fair value of the Company’s convertible promissory notes, fair value of stock-based compensation and income taxes. The Company bases its estimates on historical experiences, and other relevant factors that it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Fair value of financial instruments

Certain assets and liabilities are carried at fair value under GAAP and consist principally of cash equivalents, accounts payable, accrued liabilities, and convertible promissory notes. The carrying amounts of cash equivalents, accounts payable, and accrued liabilities approximate their related fair values due to the short-term nature of these instruments. None of the Company’s non-financial assets or liabilities are recorded at fair value on a recurring basis.

As permitted under Accounting Standards Codification (“ASC”) 825, *Financial Instruments*, (“ASC 825”), the Company has elected the fair value option to account for each of its outstanding convertible promissory notes. In accordance with ASC 825, the Company measures the convertible

promissory notes at fair value on its consolidated balance sheets within Long-term debt – net and Current portion of long-term debt. Changes in fair value of the convertible promissory notes are recorded in the consolidated statements of operations and comprehensive loss within Interest and other expense, net. As a result of applying the fair value option, issuance costs related to the convertible promissory notes are expensed as incurred.

There are significant judgments and estimates inherent in the determination of the fair value of these liabilities. If the Company had made different assumptions including, among others, those related to the timing and probability of various corporate scenarios, discount rates, volatilities and exit valuations, the carrying values of the convertible notes could have been significantly different.

Concentration risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents. The Company maintains its cash and cash equivalents in bank accounts, which at times may exceed federally insured limits. The Company has not experienced any losses on these accounts.

Property and equipment, net

Property and equipment are stated at cost less accumulated depreciation. Additions and improvements to property and equipment are capitalized. The costs of maintenance and repairs are expensed as incurred. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the underlying assets, which vary from 3 to 7 years. Leasehold improvements are amortized over the shorter of the term of the lease or the estimated useful lives of the assets. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation or amortization are removed from their respective accounts, and the resulting gain or loss is reported as income or expense in the statements of operations and comprehensive loss.

Income taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets (“DTAs”) and deferred tax liabilities (“DTLs”) for the expected future tax consequences of events that have been included in the financial statements. Under this method, DTAs and DTLs are determined on the basis of the difference between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on DTAs and DTLs is recognized in income in the period that includes the enactment date.

The Company recognizes DTAs to the extent that these assets are more likely than not to be realized. In making such a determination, all available positive and negative evidence are considered, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If it is determined that the DTAs in the future in excess of their net recorded amount can be realized, an adjustment to the DTA valuation allowance will be made, which would reduce the provision for income taxes.

The Company records uncertain tax positions in accordance with Accounting Standards Codification (“ASC”) 740 on the basis of a two-step process in which (1) the Company determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority is realized.

Leases

At the inception of a contractual arrangement, the Company determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time. If both criteria are met, the Company records the associated lease liability and corresponding right-of-use asset upon commencement of the lease using the implicit rate or a discount rate based on a credit adjusted secured borrowing rate commensurate with the term of the lease.

The Company additionally evaluates leases at their inception to determine if they are to be accounted for as an operating lease or a finance lease. Operating lease assets represent a right to use an underlying asset for the lease term and operating lease liabilities represent an obligation to make lease payments arising from the lease. Operating lease obligations with a term greater than one year and their corresponding right-of-use assets are recognized on the balance sheet at the commencement date of the lease based on the present value of lease payments over the expected lease term. Certain adjustments to the right-of-use asset may be required for items such as initial direct costs paid or incentives received.

As the Company's operating leases do not typically provide an implicit rate, the Company utilizes the appropriate incremental borrowing rate, determined as the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term and in a similar economic environment. The lease cost is recognized on a straight-line basis over the lease term and variable lease payments are recognized as operating expenses in the period in which the obligation for those payments is incurred. Variable lease payments primarily include common area maintenance, utilities, real estate taxes, insurance and other operating costs that are passed on from the lessor in proportion to the space leased by the Company.

Research and development expenses

Research and development expenses includes the cost of materials, personnel-related costs (comprised of salaries, benefits and share-based compensation), consulting fees and allocated facility costs associated with both our execution of technology development agreements and collaboration agreements, as well as our development of AI biotechnologies. Allocated facility costs include facility occupancy and information technology costs. The Company derives improvements to its platform from both types of activities. The Company has not historically tracked its research and development expenses on a partner-by-partner basis or on a program-by-program basis.

Stock-based compensation

Stock-based compensation includes compensation expense for stock appreciation rights (SARs) and stock option grants to employees. Stock options are measured on the grant date based on the fair value of the award and recognized on a straight-line basis over the requisite service period and SARs are accounted for as a liability and re-measured at fair value at each reporting period. The fair value of stock options and SARs are determined using the Black-Scholes option-pricing model. The Company accounts for forfeitures as they occur.

Recently adopted accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases* (ASC 842). This ASU issues guidance that supersedes existing guidance on accounting for leases and is intended to increase transparency and comparability of accounting for lease transactions. ASC 842 requires most leases to be recognized on the balance sheet by recording a right-of-use (ROU) asset and a lease liability. The liability is equal to the present value of lease payments while the asset is based on the liability, subject to adjustment for initial direct costs. For income statement purposes, the FASB retained a dual model

requiring leases to be classified as either operating or finance. The Company elected to early adopt this ASU effective January 1, 2019 using the optional transition method and applied the standard only to leases that existed at that date. The Company elected the "package of practical expedients," which allowed it to not reassess prior conclusions about lease identification, classification and initial direct costs. Additionally, the Company elected the short-term lease recognition exemption for all leases that qualify, which means it will not recognize ROU assets or lease liabilities for leases with lease terms of less than twelve months. As a result of adoption, the Company recognized operating lease ROU assets and lease liabilities of $0.2 million and $0.2 million, respectively, as of January 1, 2019.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (ASC 326),* which sets forth a "current expected credit loss" model which requires the Company to measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions, and reasonable supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. The Company adopted this standard as of January 1, 2020, and the adoption of this standard did not have a material impact to its consolidated financial statements.

In August 2020, the FASB issued ASU No. 2020-06, *Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU No. 2020-06")*. The new guidance eliminates two of the three models in ASC 470-20 that require separating embedded conversion features from convertible instruments. As a result, only conversion features accounted for under the substantial premium model in ASC 470-20 and those that require bifurcation in accordance with ASC 815-15 will be accounted for separately. For contracts in an entity's own equity, the new guidance eliminates some of the requirements in ASC 815-40 for equity classification. The guidance also addresses how convertible instruments are accounted for in the diluted earnings per share calculation and requires enhanced disclosures about the terms of convertible instruments and contracts in an entity's own equity. ASU 2020-06 is effective for the Company after December 15, 2023. Early adoption is permitted for fiscal periods beginning after December 15, 2020. The Company adopted this standard as of January 1, 2021, on a retrospective basis. The Company has updated its fair value footnote (Note 9) with additional and modified disclosures as required by the standard upon adoption. Adoption of this standard did not have a material impact to the Company's consolidated financial statements.

Recently issued accounting pronouncements, not yet adopted

In December 2019, the FASB issued amended guidance on the accounting and reporting of income taxes. The guidance is intended to simplify the accounting for income taxes by removing exceptions related to certain intraperiod tax allocations and deferred tax liabilities; clarifying guidance primarily related to evaluating the step-up tax basis for goodwill in a business combination; and reflecting enacted changes in tax laws or rates in the annual effective tax rate. The amended guidance is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The application of the amendments in the new guidance are to be applied on a retrospective basis, on a modified retrospective basis through a cumulative-effect adjustment to retained earnings or prospectively, depending on the amendment. The Company is currently evaluating the impact of adoption on its consolidated financial statements.

(In thousands U.S. dollars, except share amounts)

3. Property and equipment

Property and equipment consists of the following as of:

	December 31,		March 31,
	2019	2020	2021 (unaudited)
Furniture, fixtures and equipment	$ 82	$ 153	$ 167
Leasehold Improvements	5	5	5
Computers	2	10	21
Total Cost	89	168	193
Less: accumulated depreciation	(47)	(71)	(77)
Net Property and Equipment	$ 42	$ 97	$ 116

Depreciation expense was $11, $22 and $7, for the years ended December 31, 2019 and 2020, and for the three months ended March 31, 2021, respectively.

4. Long-term debt

PPP Loan

In April 2020, the Company received loan proceeds in the amount of $0.2 million under the Paycheck Protection Program (“PPP”) established as part of the Coronavirus Aid, Relief and Economic Security Act (“CARES Act”). The loan had a two-year term and bore interest at a fixed rate of 1%. Under the terms of the CARES Act, the loan was eligible to be forgiven, in part or whole, if the proceeds were used to retain and pay employees and for other qualifying expenditures. In March 2021, the Company received notification from the Small Business Administration of the forgiveness of the $0.2 million PPP loan and the Company recorded a gain on extinguishment in its consolidated statement of operations and comprehensive loss for the period ended March 31, 2021. The balance of the PPP loan was $0.2 million as at December 31, 2020 and Nil as at March 31, 2021.

Promissory note

In December 2018, the Company issued a promissory note of $1.6 million. The promissory note bears interest at a rate of 2.69% and has a maturity date of December 14, 2023. In the 2019 year, a prepayment of $1.2 million was made on the promissory note. A principal balance of $0.4 million is outstanding as at December 31, 2019 and 2020, and March 31, 2021.

Convertible promissory notes

From July 2018 to March 2021, the Company entered into subordinated note purchase agreements with various investors (The "Convertible Notes"), whereby the company borrowed aggregate principal of approximately $13 million. The funds related to $4.0 million, $6.6 million and $0.7 million of Convertible Notes that were received in the years ended December 31, 2020 and 2019, and the three months ending March 31, 2021 respectively. The maturity date of the Convertible Notes is April 30, 2021 and interest accrues at 5% per annum throughout the term of the Convertible Notes. There are no periodic interest or principal payments. The Company cannot prepay the 2021 Notes without the consent of the holders of a majority in interest of the outstanding Notes (the “Investors”). All unpaid principal, together with any accrued interest and other amounts payable under the Convertible Notes, shall be due and payable on the earlier of (i) the demand of the requisite investors at any time after April 30, 2021 (the "Maturity date"), or (ii)

(In thousands U.S. dollars, except share amounts)

when, upon the occurrence and during the continuance of an Event of Default, such amounts are declared due and payable by the Requisite Investors or made automatically due and payable.

The Convertible Notes shall automatically convert into shares of the Company's preferred stock when a transaction or series of transaction where the Company issues and sells shares of its preferred stock for aggregate gross proceeds of at least $10 million with the principal purpose of raising capital ("qualified financing") occurs at any time while the notes remain outstanding. The Convertible Notes shall convert into shares of the Company's convertible preferred stock, at the option of the Investors, when a non-qualified financing occurs at any time while the notes remaining outstanding. In each case, the outstanding principal amount of the Note and all accrued and unpaid interest convert into fully paid and nonassessable share of preferred stock at a price per share equal to the lessor of (i) an amount obtained by dividing (x)$25,000,000 by (y) the fully diluted capitalization of the Company (the Valuation Cap); and (ii) 80-95% of the price per share paid by the other purchasers of the preferred stock sold in a financing.

The Convertible Notes shall convert, under the option of the Investors, into shares of the Company's common stock, upon the first of the following transactions to occur: (i) upon a change of control or an initial public offering ("IPO"); or (ii) no qualified financing occurs on or prior to the Maturity date. In each case, the Investors have the right to convert the outstanding principal amount of the Convertible Note and all accrued and unpaid interest, into fully paid and nonassessable shares of the Company's common stock at a price per share equal the Valuation Cap.

Due to certain embedded features within the Convertible Notes, the Company elected to account for these notes and all their embedded features under the fair value option. The Company recognized change in fair value of the Convertible Notes of $0.3 million, $1.4 million and $19.9 million in the statements of operations and comprehensive loss for the periods ended December 31, 2019 and 2020, and March 31, 2021, respectively. The fair value of the Convertible Notes was $8.8 million, $14.2 million and $34.8 million as of December 31, 2019 and 2020, and March 31, 2021, respectively.

Future maturities of the debt outstanding relating to convertible promissory notes, the promissory note, and the PPP Loan as of December 31, 2020 are as follows:

Years Ending December 31:		
2021	$	14,152
2022		188
2023		423
Total Long-Term Debt	$	14,763

5. Leases

The Company evaluated whether our contractual arrangements contain leases at the inception of such arrangements. Specifically, the Company considers whether it can control the underlying asset and has the right to obtain substantially all of the economic benefits or outputs from the asset. Substantially all of the Company's leases are long-term operating leases with fixed payment terms. The Company's right of use (ROU) operating lease assets represent their right to use an underlying asset for the lease term, and their operating lease liabilities represent the obligation to make lease payments.

Both the ROU operating lease asset and liability are recognized as of the lease commencement date at the present value of the lease payments over the lease term. The Company's leases do not

(In thousands U.S. dollars, except share amounts)

provide an implicit rate that can readily be determined. Therefore, the Company uses a discount rate based on their incremental borrowing rate, which is determined using information available as of the commencement date. ROU operating lease assets include lease payments made at or before the lease commencement date, net of any lease incentives. The Company evaluates ROU assets for impairment consistent with their property, plant and equipment policy (see Note 2 – Significant Accounting Policies).

The Company's operating lease agreements may include options to extend the lease term or terminate it early. The Company includes options to extend or terminate leases in the ROU operating lease asset and liability when it is reasonably certain they will exercise these options. Operating lease expense is recognized on a straight-line basis over the lease term.

The Company generally enters into operating lease agreements for facilities. The Company's ROU operating lease assets and liabilities were as follows:

	December 31,		March 31,
	2019	2020	2021 (unaudited)
ROU operating lease assets	$ 750	$ 476	$ 392
Operating lease Liabilities - non-current	(471)	(247)	(196)
Operating lease Liabilities - current	(316)	(257)	(222)

The weighted average remaining lease term and discount rate for the Company’s operating leases were as follows:

	December 31,		March 31,
	2019	2020	2021 (unaudited)
Weighted average remaining lease term	2.57	1.95	1.81
Weighted average discount rate	9.53 %	9.96 %	9.91 %

The Company recognized operating lease expense of $0.4 million, $0.4 million and $0.1 million in the years ended December 31, 2019 and 2020, and the three months ending March 31, 2021, respectively. In addition, we made cash payments of $0.4 million, $0.4 million and $0.1 million in the years ended December 31, 2019 and 2020, and the three months ending March 31, 2021 respectively, which are included in cash flows from operating activities in the statement of cash flows.

Future minimum lease payments under the Company’s non-cancelable operating leases as of December 31, 2020 are as follows:

Years Ended December 31:	
	Maturity Analysis
2021	$ 287
2022	148
2023	68
Total	$ 503

(In thousands U.S. dollars, except share amounts)

Future minimum lease payments under the Company's non-cancelable operating leases as of March 31, 2021 are as follows:

Years Ended December 31 (unaudited):		
		Maturity analysis
2021 (remaining)	$	201
2022		148
2023		68
Total	$	417

6. Commitments and contingencies

Currently, and from time to time, the Company and its business is involved in litigation incidental to the conduct of its business. The Company is currently neither party to any lawsuit nor proceeding that, in its opinion, is likely to have a material adverse effect on the Company's financial position, results of operations, or cash flows.

7. Stock-based compensation

In 2018, the Company's Board of Directors approved the 2018 Equity Incentive Plan (the "Plan"), under which authorized shares of Common Stock were increased by 2,903,226 to 12,903,226. The purpose of the Plan is to provide incentives to attract and retain employees, directors and consultants and to provide incentive to promote the success of the Company's business. The Plan provides for different forms of benefits including incentive stock options, nonqualified stock options, and stock appreciation rights (SARs). Options granted under the Plan to employees continue to vest until the last day of employment and generally vest over four years and expire 10 years from the date of grant. Employees generally forfeit their rights to exercise vested options following their termination of employment. As of December 31, 2020 out of the shares of 2,903,226 that were able to be issued under the Plan, there were 1,360,433 shares that remained unissued.

Stock appreciation rights (SARs)

SARs, when exercised, are settled through a cash payment determined based on the exercise date fair value of the Company's stock and are accounted for as a liability on the balance sheet re-measured to fair value at each reporting period.

(In thousands U.S. dollars, except share amounts)

Activity for the stock appreciation rights is as follows:

	Number of SARs	Weighted Average Grant Date Fair Value per SAR	Aggregate Intrinsic Value
Unvested as of December 31, 2018	—	$ —	$ —
Granted	427,095	0.84	
Vested	(286,262)	0.84	
Cancelled/forfeited	(13,978)	0.84	
Unvested as of December 31, 2019	126,855	$ 0.84	$ 15
Granted	—	0.84	
Vested	(93,602)	0.84	
Cancelled/forfeited	(16,129)	0.84	
Unvested as of December 31, 2020	17,124	$ 0.84	$ 4
Granted (unaudited)	182,965	1.08	
Vested (unaudited)	(18,427)	0.89	
Cancelled/forfeited (unaudited)	(12,806)	1.06	
Unvested as of March 31, 2021 (unaudited)	168,856	$ 1.08	$ 630

Stock Options

Stock options generally vest 25% after one year from the date of the grant with the remainder vesting monthly over the following three-year period. Certain options have alternative vesting schedules including ratably over 3-4 years and immediate vesting. The Company recognizes forfeitures as they occur and uses the straight-line expense recognition method. Activity for stock options is shown below:

	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands $)
Outstanding as of December 31, 2018	—	$ —	—	$ —
Granted	1,571,613	0.84	10	—
Expired	(51,963)	0.84	—	—
Cancelled/forfeited	(42,231)	0.84	—	—
Outstanding as of December 31, 2019	1,477,419	$ 0.84	9	$ 178
Granted	—		—	—
Expired	(257,527)	0.84	—	—
Cancelled/forfeited	(71,506)	0.84	—	—
Outstanding as of December 31, 2020	1,148,386	$ 0.84	8	$ 275
Granted (unaudited)	267,737	1.08	10	—
Expired (unaudited)	(61,828)	—	—	—
Exercised(unaudited)	(1,000)	(0.84)	—	—
Cancelled/forfeited (unaudited)	(2,688)	—	—	—
Outstanding as of March 31, 2021 (unaudited)	1,350,607	$ 0.89	9	$ 5,301
Exercisable as of December 31, 2020	1,031,961	$ 0.84	8	$ 248
Vested and expected to vest as of December 31,2020	1,455,752			

The weighted-average grant date fair value of stock options granted during the year ended December 31, 2019 was $0.80 per share. During the year ended December 31, 2020 there was no additional options granted to the employees of the Company. The weighted average grant date fair value per share for the three months ended March 31, 2021 was $4.76.

The fair value of options vested during the years ended December 31, 2019 and December 31, 2020 were $0.9 million and $0.3 million, respectively. For the three months ended March 31, 2021 the fair value of options vested was $0.1 million.

As of December 31, 2019 the total unrecognized stock-based compensation related to the unvested stock options was $0.3 million. As of December 31, 2020 the total unrecognized stock-based compensation related to the unvested stock options was $0.1 million. As of March 31, 2021, total unrecognized stock-based compensation related to unvested stock options was $1.2 million, which the Company expects to recognize over a remaining weighted average vesting period of 3.8 years.

(In thousands U.S. dollars, except share amounts)

The aggregate intrinsic value was calculated based on (i) the strike price of $0.84 for options relating to the 2019 grant and $1.08 for options relating to the 2021 grant and (ii) the estimated fair value of common stock of $0.96 per share as of December 31, 2019, $1.08 per share as of December 31, 2020, and $4.81 per share as of March 31, 2021.

Stock-based compensation expense included in the statements of comprehensive loss is as follows:

	December 31,		Three months ended March 31,
	2019	2020	2021 (unaudited)
Research and development	$ 918	$ 294	$ 1,495
General and administrative	196	71	107
Total	1,114	365	1,602

Determination of Fair Value

The estimated grant-date fair value of all the Company's stock options and the mark-to-market fair value of all the Company's stock appreciation rights and was calculated using the Black-Scholes option pricing model, based on the following assumptions:

	2019	2020	2021
Expected term (range) (years)	4.25 - 5.25	3.25	3.00 - 7.00
Expected volatility (range) (%)	173% - 182%	173 %	172 %
Risk-free interest rate (range) (%)	1.66% - 2.51%	0.17 %	0.35% - 1.4%
Dividend yield (%)	0 %	0 %	0 %

The fair value of each stock appreciation right and stock option was determined by the Company using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment and estimation by management.

Expected Term— The expected term represents the period that stock-based awards are expected to be outstanding. The Company's SARs and options have a contractual term of ten years, and vesting is over a four-year period. The expected term for the stock appreciation rights and options was derived by using the simplified method which uses the midpoint between the average vesting term and the contractual expiration period of the stock-based award.

Expected Volatility—The expected volatility was derived from the historical stock volatilities of comparable peer public companies within the Company's industry. These companies are considered to be comparable to the Company's business over a period equivalent to the expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the SARs and stock options' expected term.

Expected Dividend Rate—The expected dividend is zero as the Company has not paid nor does it anticipate paying any dividends on its common stock underlying its stock options in the foreseeable future.

The Company estimated the fair value of its common stock underlying the stock-based awards when performing fair value calculations using the Black-Scholes option pricing model. Because the Company's common stock is not currently publicly traded, the fair value of its common stock underlying the stock-based awards has been determined on each grant date by management and approved by the Company's board of directors, considering the most recently available third-party valuation of common shares. All options to purchase shares of the Company's common stock are intended to be granted with an exercise price per share no less than the fair value per share of the common stock underlying those options on the date of grant, based on the information known to the Company on the date of grant.

The Company's determination of the value of its common stock was performed using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants (AICPA), Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation (AICPA Practice Aid). In addition, the Company's Board of Directors considered various objective and subjective factors to determine the fair value of the common stock, including:

- valuations of the Company's common stock performed by third-party valuation specialists;
- the anticipated capital structure that will directly impact the value of the currently outstanding securities;
- the Company's results of operations and financial position;
- the composition of, and changes to, the management team and Board of Directors;
- the lack of liquidity of the Company's common stock as a private company;
- the Company's stage of development and business strategy and the material risks related to its business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;
- U.S. and global economic conditions;
- convertible note financing;
- the market value and volatility of comparable companies.

The AICPA Practice Aid prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise based on the present value of future cash flows that are reasonably reflective of future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics.

In accordance with the AICPA Practice Aid, the Company considered the various methods for allocating the enterprise value to determine the fair value of its common stock at the valuation date. Under the option pricing method (OPM), shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The value of the common stock is inferred by analyzing these options. Until March 31, 2021, the Company utilized the OPM based on the pricing of its convertible notes to determine its common

stock fair value. At March 31, 2021 the Company primarily relied upon a negotiated enterprise value to determine its common stock fair value.

8. Employee benefit plan

The Company sponsors a 401(k) tax-deferred savings plan for all employees who meet certain eligibility requirements. Participants may contribute, on a pre-tax or post-tax basis, a percentage of their annual compensation, not to exceed a maximum contribution amount pursuant to Section 401(k) of the Internal Revenue Code. The Company match is 100% of the employees' first contribution of 3%, plus 50% of the next 2% of eligible compensation contributed by the employee, up to a maximum Company match of 4% of compensation for each employee. The Company contributed $30, $48, and $8 for the years ended December 31, 2019 and 2020 and the three-month period ended 31 March 2021, respectively.

9. Fair value measurements

GAAP defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

When quoted market prices are available in active markets, the fair value of assets and liabilities is estimated within Level 1 of the valuation hierarchy.

If quoted prices are not available, then fair values are estimated by using pricing models, quoted prices of assets and liabilities with similar characteristics, or discounted cash flows, within Level 2 of the valuation hierarchy. In cases where Level 1 or Level 2 inputs are not available, the fair values are estimated by using inputs within Level 3 of the hierarchy.

The following tables summarize the Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2019, 2020 and March 31, 2021 (in thousands):

				December 31, 2019
Liability:	**Level 1**	**Level 2**	**Level 3**	**Total**
Convertible promissory notes	$ —	$ —	$ 8,773	$ 8,773
Total liabilities	$ —	$ —	$ 8,773	$ 8,773

	December 31, 2020			
Liability:	**Level 1**	**Level 2**	**Level 3**	**Total**
Convertible promissory notes	$ —	$ —	$ 14,152	$ 14,152
Total liabilities	$ —	$ —	$ 14,152	$ 14,152

	March 31, 2021 (unaudited)			
Liability:	**Level 1**	**Level 2**	**Level 3**	**Total**
Convertible promissory notes	$ —	$ —	$ 34,767	$ 34,767
Total liabilities	$ —	$ —	$ 34,767	$ 34,767

The following table provides reconciliation for all liabilities measured at fair value using significant unobservable inputs (Level 3) for years ended December 31, 2019 and 2020 and the three months ended March 31, 2021 (in thousands):

Balance at December 31, 2018	$ 1,874
Convertible notes issued	6,600
Change in fair value of convertible notes	299
Balance at December 31, 2019	8,773
Convertible notes issued	4,009
Change in fair value of convertible notes	1,370
Balance at December 31, 2020	14,152
Convertible notes issued (unaudited)	724
Change in fair value of convertible notes (unaudited)	19,891
Balance at March 31, 2021 (unaudited)	$ 34,767

Between July 2018 and March 2021, the Company sold and issued approximately $13 million in aggregate principal amount of convertible promissory notes (the Convertible Notes), as described in Note 4.

The Company elected to account for the Convertible Notes at fair value, as of the issuance date, and records the interest that has been accrued within the change of fair value of the Convertible Notes in the statement of operations and comprehensive loss. Management believes that the fair value option better reflects the underlying economics of the Convertible Notes, which contain embedded derivatives. Under the fair value election, changes in fair value are reported within interest and other expense, net in the statement of operations and comprehensive loss for each period presented. The Company measured the fair value of the Convertible Notes using the probability weighted “as converted” plus put and Black-Scholes call model based on inputs such as probability of financing, change of control and maturity scenarios, discount yield, risk free rate, equity volatility, expected term, number of converted shares and the expected purchase price for a change of control.

(In thousands U.S. dollars, except share amounts)

Below are the assumptions used for the Black-Scholes call option pricing valuation model for the fair value of the Convertible Notes:

	December 31,		March 31,
Assumption	**2019**	**2020**	**2021**
			(unaudited)
Fair value of common stock	$ 0.97	$ 1.08	$ 4.81
Expected volatility	65.00 %	80.00 %	100.00 %
Expected term (years)	1.0	0.5	0.25
Expected dividend yield	—	—	—
Risk-free interest rate	1.59 %	0.09 %	0.03 %

The put option model for the maturity and change of control scenarios used the same assumptions described above plus a discount rate of 16.1%, 14% and 12.4% as of December 31, 2019, December 31, 2020 and March 31, 2021, respectively. At December 31 2019 and 2020, the estimated fair value of common stock was based on the implied price of common stock derived from recent note issuances. At March 31, 2021, the estimated fair value of common stock also considered the negotiated transaction price for the purchase of the Company. There are significant judgments, assumptions and estimates inherent in the determination of the fair value of each of the Convertible Notes. These include determination of a valuation method and selection of the possible outcomes available to the Company and noteholders, including the determination of timing and expected investment returns for such scenarios. The related judgments, assumptions and estimates are highly interrelated and changes in any one assumption could necessitate changes in another. Specifically, any changes in the probability of a particular outcome would require a related change to the probability of another outcome. In the future, depending on the valuation approaches used and the expected timing and weighting of each, the inputs described above, or other inputs, may have a greater or lesser impact on the Company's estimates of fair value.

10. Income taxes

For financial reporting purposes, Income (Loss) before provision for income taxes includes the following components:

	Year ended December 31,	
	2019	**2020**
Domestic	$ (5,739)	$ (5,003)
Foreign	(182)	16
Income/(Loss) before income taxes	$ (5,921)	$ (4,987)

(In thousands U.S. dollars, except share amounts)

Provision (Benefit) for income taxes

The provision (benefit) for income taxes consists of the following:

	Year ended December 31,	
	2019	**2020**
Current:		
Federal	$ —	$ —
State	1	1
Foreign	15	23
Total current	$ 16	$ 24
Deferred:		
Federal	—	—
State	—	—
Foreign	—	—
Total deferred	—	—
Provision (benefit) for income taxes	$ 16	$ 24

Income tax provision (benefit) related to continuing operations differ from the amounts computed by applying the statutory income tax rate of 21% to pretax loss as follows:

	Year ended December 31,	
US Federal provision (benefit)	**2019**	**2020**
Current:		
At statutory rate	$ (1,243)	$ (1,048)
State taxes	(318)	(290)
State valuation allowance	319	291
Federal valuation allowance	1,031	989
Foreign tax differential	4	1
Tax credits	—	—
Expiring tax attributes	—	—
Foreign valuation allowance	49	18
Stock based compensation	131	38
Meal and entertainment	2	—
R&D addback	42	25
Total	$ 16	$ 24

The Company's estimated annual effective tax rate at March 31, 2021 of 0.10% differs from the prior period effective tax rate of 0.476%. The decrease in the Company's estimated annual effective tax rate for the three months ended March 31, 2021, when compared to the same period in 2020,

(In thousands U.S. dollars, except share amounts)

was primarily due to a significant increase in financial losses recognized on mark-to-market adjustments related to convertible notes as of March 31, 2021.

Deferred tax assets and liabilities

Deferred income taxes reflect the net tax effects of loss and credit carryforwards and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets for federal and state income taxes are as follows:

	Year ended December 31,	
	2019	**2020**
Deferred tax assets		
Federal and state NOL carryforward	$ 2,738	$ 3,666
Stock based compensation	142	195
Convertible note fair value adjustments	158	553
Total gross DTA	$ 3,038	$ 4,414
Less valuation allowance	(3,037)	(4,413)
Total deferred tax assets	$ 1	$ 1
Deferred tax liabilities		
Fixed assets	(1)	(1)
Total gross DTL	$ (1)	$ (1)
Net deferred tax assets	$ 0	$ 0

Realization of our deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Because of our lack of U.S. earnings history, the net U.S. deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $3 million and $1.4 million, during the years ended December 31, 2019 and 2020, respectively. The valuation allowance includes approximately $0.1 million and $0.2 million of benefit at December 31, 2019, and December 31, 2020, respectively related to stock-based compensation and exercises, prior to the implementation of ASC 515 and 718, that will be credited to additional paid in capital when realized.

Undistributed earnings of our foreign subsidiary in the UK and Serbia are considered to be permanently reinvested and accordingly, no deferred U.S. income taxes have been provided thereon. Upon distribution of those earnings in the form of dividends or otherwise, we would be subject to U.S. income tax. At the present time it is not practicable to estimate the amount of U.S. income taxes that might be payable if these earnings were repatriated.

Net operating loss and tax credit carryforwards

As of December 31, 2019, and December 31, 2020, we had a net operating loss carryforward for federal income tax purposes of approximately $9.2 million and $12.3 million respectively of which $1.4 million for both periods will begin to expire in 2037. We had a total state net operating loss carryforward on December 31, 2019 and December 31, 2020 of approximately $9 million and $12.1 million respectively which will begin to expire in 2037. Utilization of some of the federal and state net operating loss and credit carryforwards are subject to annual limitations due to the "change in

ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitations may result in the expiration of net operating losses and credits before utilization.

As of December 31, 2019 and December 31, 2020 we had a net operating loss carryforward for U.K. income tax purposes of approximately $474 and $571, respectively, which have an indefinite life and are not scheduled to expire.

We have federal and state tax credits of approximately $0 as of December 31, 2019 and December 31, 2020. These tax credits are subject to the same limitations discussed above.

Unrecognized tax benefits

We have incurred net operating losses since inception and we do not have any significant unrecognized tax benefits. Our policy is to include interest and penalties related to unrecognized tax benefits, if any, within the provision for taxes in the consolidated statements of operations. If we are eventually able to recognize our uncertain positions, our effective tax rate would be reduced. We currently have a full valuation allowance against out net deferred tax asset which would impact the timing of the effective tax rate benefit should any of these uncertain tax positions be favorably settled in the future. Any adjustments to our uncertain tax positions would result in an adjustment of our net operating loss or tax credit carry forwards rather than resulting in a cash outlay.

We file income tax returns in the U.S., Serbia, and the UK. We are not currently under examination in these jurisdictions. Because of net operating losses, substantially all of our tax years remain open to examination.

11. Subsequent events

Management has evaluated subsequent events through June 14, 2021, which is the date that the financial statements were available to be issued.

Convertible notes

On April 29, 2021 and May 20, 2021 the Company issued $181 and $420, respectively, of Convertible Notes. The notes bear interest at a rate of 5% per annum and are convertible into the Company's preferred or common stock upon the occurrence of certain events including a qualified or non-qualified financing, a change in control, IPO, or optionally after the respective maturity dates of April 30, 2021 and May 31, 2021.

The Convertible Notes shall automatically convert into shares of the Company's preferred stock when a transaction or series of transaction where the Company issues and sells shares of its preferred stock for aggregate gross proceeds of at least $10 million with the principal purpose of raising capital ("qualified financing") occurs at any time while the notes remain outstanding. The Convertible Notes shall convert into shares of the Company's convertible preferred stock, at the option of the Investors, when a non-qualified financing occurs at any time while the notes remaining outstanding. In each case, the outstanding principal amount of the Note and all accrued and unpaid interest convert into fully paid and nonassessable share of preferred stock at a price per share equal to the lessor of (i) an amount obtained by dividing (x)$25,000,000 by (y) the fully diluted capitalization of the Company (the Valuation Cap); and (ii) 85% of the price per share paid by the other purchasers of the preferred stock sold in a financing.

The Convertible Notes shall convert, under the option of the Investors, into shares of the Company's common stock, upon the first of the following transactions to occur: (i) upon a change of control or an IPO; or (ii) no qualified financing occurs on or prior to the Maturity date. In each case, the Investors have the right to convert the outstanding principal amount of the Convertible Note and all accrued and unpaid interest, into fully paid and nonassessable shares of the Company's common stock at a price per share equal the Valuation Cap.

Equity incentive plan

On May 31, 2021 the Company decreased the number of shares of common stock available for sale and issuance under the 2018 Equity Incentive Plan to 1,354,478.

Acquisition

Totient was acquired by AbSci Corporation on June 4, 2021. As a result of the acquisition, all outstanding convertible promissory notes were converted to common stock and all outstanding stock options and SARs were immediately vested.

shares

Common stock

Prospectus

J.P. Morgan	Credit Suisse	BofA Securities	Cowen	Stifel

Until , 2021 (25 days after the date of this prospectus), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Part II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the fees and expenses, other than underwriting discounts and commissions, payable in connection with the registration of the common stock hereunder. All amounts are estimates except the SEC registration fee, the FINRA filing fee and the Nasdaq Global Market listing fee.

		Amount to be Paid
SEC registration fee	$	10,910
FINRA filing fee		*
Nasdaq Global Market listing fee		*
Printing and mailing		*
Legal fees and expenses		*
Accounting fees and expenses		*
Transfer agent and registrar fees and expenses		*
Miscellaneous		*
Total	$	*

* To be completed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (DGCL) authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our amended and restated certificate of incorporation and amended and restated bylaws to be in effect immediately prior to the completion of this offering that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders; any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law; any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws provide that:

- we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We intend to enter into indemnification agreements with each of our directors and executive officers. These agreements will provide that we will indemnify each of our directors, certain of our executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors or officers may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third parties, which indemnification relates to and might apply to the same proceedings arising out of such director's or officer's services as a director referenced herein. Nonetheless, we will agree in the indemnification agreements that our obligations to those same directors or officers are primary and any obligation of such affiliates or other third parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We will maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act of 1933, as amended (Securities Act).

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification of us and our directors and officers by the underwriters against certain liabilities under the Securities Act and the Securities Exchange Act of 1934.

Item 15. Recent Sales of Unregistered Securities.

In the three years preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act. No underwriters were involved in the sales and the certificates representing the securities sold and issued contain legends restricting transfer of the securities without registration under the Securities Act or an applicable exemption from registration.

(a) Issuances of Capital Stock and Convertible Promissory Notes

On May 25, 2018, we sold an aggregate of 1,760,252 Series C redeemable convertible preferred units at a purchase price of $6.95 per unit, for an aggregate purchase price of approximately $12.2 million.

From December 2019 through June 2020, we sold an aggregate of 1,058,224 Series D-1 redeemable convertible preferred units, 102,146 Series D-2 redeemable convertible preferred units, 341,161 Series D-3 redeemable convertible preferred units and 30,645 Series D-4 redeemable convertible preferred units, each at a purchase price of $9.79 per share, for an aggregate purchase price of approximately $15.0 million.

On October 16, 2020, we completed a reorganization whereby we converted from a Delaware limited liability company, under the name AbSci LLC, to a Delaware corporation under the name Absci Corporation (Conversion). In conjunction with the Conversion, (i) all of our outstanding common units converted on a 1-for-1 basis into 4,606,505 shares of common stock and (ii) all of our outstanding preferred units converted on a 1-for-1 basis into 10,438,524 shares of redeemable convertible preferred stock. Prior to the Conversion, we had issued LLC incentive units to employees, directors and consultants. Upon the Conversion, our outstanding 1,008,055 incentive units converted on a net issuance basis into 808,909 shares of restricted common stock.

From October 2020 through February 2021, we sold an aggregate of 3,568,405 shares of Series E redeemable convertible preferred stock at a purchase price of $19.6166 per share, for an aggregate purchase price of approximately $70.0 million.

On March 17, 2021, we sold convertible promissory notes for an aggregate purchase price of $125.0 million.

On June 4, 2021, we issued 669,743 shares of common stock to the former security holders of Totient, Inc. in connection with our acquisition of Totient.

The offers and sales of the securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated thereunder, as transactions by an issuer not involving a public offering. All of the purchasers in these transactions represented to us in connection with their purchase that they were acquiring the securities for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. Such purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

(b) Grants and Exercises of Stock Options, Stock Appreciation Rights, and Issuances of Restricted Stock

Since April 1, 2018, we granted stock options and stock appreciation rights to purchase 2,479,318 and 31,126 shares of our common stock to our employees, directors and consultants at a weighted average exercise price of $7.07 and $16.40 per share, respectively, under the 2020 Plan. Options for 18,956 shares of common stock were exercised at a weighted average exercise price of $3.63 per share.

We sold an aggregate of 212,958 shares of common stock to employees, directors and consultants for cash consideration in the aggregate amount of $21.30 pursuant to the issuance of restricted stock under the 2020 Plan.

The issuances of the securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were the registrant's employees, consultants or directors and received the securities under the registrant's 2020 Stock Plan. The shares of common stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated herein by reference.

(b) Financial statement schedules.

None.

Exhibit Index

Exhibit No.	Description
1.1*	Form of Underwriting Agreement
2.1	Agreement and Plan of Merger by and among the Registrant, Target Discovery Merger Sub I, Inc., Target Discovery Merger Sub II, LLC and Totient, Inc., dated June 4, 2021
3.1+	Amended and Restated Certificate of Incorporation, as amended, of the Registrant, as currently in effect
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect immediately prior to completion of the offering
3.3+	Bylaws of the Registrant, as currently in effect
3.4*	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon completion of the offering
4.1*	Specimen Common Stock Certificate
4.2+	Investors' Rights Agreement by and among the Registrant and certain of its stockholders dated October 19, 2020
5.1*	Opinion of Goodwin Procter LLP
10.1#+	2020 Stock Option and Grant Plan and forms of award agreements thereunder
10.2*#	2021 Stock Option and Incentive Plan and forms of award agreements thereunder
10.3*#	2021 Employee Stock Purchase Plan
10.4*#	Senior Executive Cash Incentive Bonus Plan
10.5*#	Non-Employee Director Compensation Policy
10.6#+	Offer Letter, by and between the Registrant and Gregory Schiffman, dated March 26, 2020
10.7#+	Offer Letter, by and between the Registrant and Matthew Weinstock, dated July 10, 2018
10.8*	Form of Indemnification Agreement by and between the Registrant and each of its directors and officers
10.9+	Office Lease, by and between AbSci, LLC and Broadway Investors II, LLC, dated as of August 11, 2016, as amended by Amendment No. 1 dated as of January 27, 2017, Amendment No. 2 dated as of November 27, 2017, Amendment No. 3 dated as of July 31, 2018, Amendment No. 4 dated as of February 1, 2019 and Amendment No. 5 dated as of July 1, 2019
10.10+	Sublease Agreement, by and between AbSci, LLC and Killian Pacific LLC, dated as of February 1, 2019, as amended by Amendment No. 1 of Sublease dated as of July 1, 2019
10.11+	Lease, by and between the Registrant and Columbia Tech Center, L.L.C., dated as of December 2, 2020, as amended by First Lease Modification Agreement, dated as of March 8, 2021
10.12†+	Joint Marketing Agreement, by and between AbSci, LLC and KBI Biopharma, Inc., dated as of December 5, 2019
16.1+	Letter regarding Change in Independent Registered Public Accounting Firm
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm
23.2	Consent of Moss Adams LLP, Independent Auditors
23.3*	Consent of Goodwin Procter LLP (included in Exhibit 5.1)
24.1+	Power of Attorney (included on signature page)

* To be filed by amendment.
† Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit.
Represents management compensation plan, contract or arrangement.
\+ Previously filed.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 1 to Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Vancouver, Washington, on the 8th day of July, 2021.

ABSCI CORPORATION

By: /s/ Sean McClain
Sean McClain
Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated below.

Signature	Title	Date
/s/ Sean McClain Sean McClain	Chief Executive Officer and Director (Principal Executive Officer)	July 8, 2021
/s/ Gregory Schiffman Gregory Schiffman	Chief Financial Officer (Principal Financial Officer)	July 8, 2021
/s/ Todd Bedrick Todd Bedrick	Vice President, Corporate Controller (Principal Accounting Officer)	July 8, 2021
* Andreas Pihl	Chief Operating Officer and Director	July 8, 2021
* Eli Casdin	Director	July 8, 2021
* Zachariah Jonasson, Ph.D.	Director	July 8, 2021
* V. Bryan Lawlis, Ph.D.	Director	July 8, 2021
* Ivana Magovcevic-Liebisch, Ph.D.	Director	July 8, 2021
* Karen McGinnis, C.P.A.	Director	July 8, 2021
* Amrit Nagpal	Director	July 8, 2021
*By: /s/ Sean McClain Sean McClain, Attorney-in-Fact		July 8, 2021

AGREEMENT AND PLAN OF MERGER

BY AND AMONG

ABSCI CORPORATION,

TARGET DISCOVERY MERGER SUB I, INC.,

TARGET DISCOVERY MERGER SUB II, LLC,

TOTIENT, INC.

AND THE STOCKHOLDERS NAMED THEREIN

Dated as of June 4, 2021

EXHIBIT INDEX

Exhibit A	Form of Stockholder Written Consent
Exhibit B	Certificate of Incorporation of the First-Step Surviving Corporation
Exhibit C	Bylaws of the First-Step Surviving Corporation
Exhibit D	Certificate of Formation of the Surviving Entity
Exhibit E	Limited Liability Company Agreement of the Surviving Entity
Exhibit F	Payout Spreadsheet
Exhibit G	Form of Stock Restriction Agreement
Exhibit H	Form of Offer Letter
Exhibit I	Form of Award Cancellation Agreement
Exhibit J	Form of Note Cancellation Agreement
Exhibit K	Form of Escrow Agreement
Exhibit L	Form of Letter of Transmittal
Exhibit M	Form of Payments Administration Agreement

AGREEMENT AND PLAN OF MERGER

This AGREEMENT AND PLAN OF MERGER (as amended, restated, supplemented or otherwise modified from time to time in accordance with the terms herewith, this "Agreement") is made and entered into as of June 4, 2021, by and among: (i) AbSci Corporation, a Delaware corporation ("Parent"); (ii) Target Discovery Merger Sub I, Inc., a Delaware corporation and a wholly-owned, direct subsidiary of Parent ("First Merger Sub"); (iii) Target Discovery Merger Sub II, LLC, a Delaware limited liability company and a wholly-owned, direct subsidiary of Parent ("Second Merger Sub" and with First Merger Sub, each a "Merger Sub" and together, the "Merger Subs"); (iv) Totient, Inc., a Delaware corporation (the "Company"); (v) solely for the purposes set forth in Section 5.4 and Article VII, the stockholders of the Company as set forth on Schedule A hereto (the "Company Stockholders"); and (vi) the Major Stockholders (as defined herein). Capitalized terms used herein have the meanings ascribed thereto in Article I or elsewhere in this Agreement as identified in Article I.

RECITALS

A. The Company, Parent and First Merger Sub intend to effect a merger of First Merger Sub with and into the Company (the "First Merger") in accordance with this Agreement and the General Corporation Law of the State of Delaware (the "DGCL"), whereupon consummation of the First Merger, First Merger Sub shall cease to exist and the Company shall become a wholly-owned subsidiary of Parent.

B. As part of the same overall transaction, promptly following the First Merger, the Company, Parent and Second Merger Sub intend to effect a merger of the Company with and into Second Merger Sub (the "Second Merger" and, together with the First Merger, the "Mergers") in accordance with this Agreement, the DGCL and the Delaware Limited Liability Company Act (the "DLLCA"), whereupon consummation of the Second Merger, the Company shall cease to exist and Second Merger Sub shall survive the Second Merger as a continuing wholly-owned subsidiary of Parent.

C. For U.S. federal income tax purposes, it is intended that the Mergers contemplated herein shall constitute an integrated transaction that qualifies as a "reorganization" within the meaning of Section 368(a) of the Code, and that this Agreement be, and hereby is, adopted as a "plan of reorganization" for the purposes of Section 368 of the Code and Treasury Regulations Section 1.368-2(g).

D. The board of directors of the Company (the "Company Board"), has: (i) determined that this Agreement and the Transactions are fair to, and in the best interests of, the Company and its stockholders; (ii) approved and declared advisable this Agreement and the Transactions; (iii) resolved to recommend that the stockholders of the Company adopt this Agreement; and (iv) directed that this Agreement be submitted to the stockholders of the Company for adoption.

E. The board of directors of Parent (the "Parent Board"), has: (i) determined that this Agreement and the Transactions are fair to, and in the best interests of, Parent and its

stockholders; (ii) approved and declared advisable this Agreement and the Transactions; (iii) resolved to recommend that the stockholders of Parent adopt this Agreement to the extent required by Parent's organizational documents; and (iv) directed that this Agreement be submitted to the stockholders of Parent for adoption to the extent required by Parent's organizational documents.

F. The respective boards of directors of Parent, First Merger Sub and the Company, and the sole member of Second Merger Sub, have each approved, adopted and declared advisable this Agreement and the Mergers, upon the terms and subject to the conditions of this Agreement and in accordance with the DGCL and the DLLCA.

G. Concurrently with the execution of this Agreement, and as a condition and inducement to Parent's and First Merger Sub's willingness to enter into this Agreement, the Company Stockholders will deliver to Parent and the Company a duly executed irrevocable written consent in the form attached hereto as Exhibit A (each, a "Stockholder Written Consent"), which written consent constitutes the receipt of the Requisite Stockholder Approvals. The Stockholder Written Consent provides that it shall become effective immediately following the signing of this Agreement (the "Written Consent Effective Time").

H. The parties desire to make certain representations, warranties, covenants, and agreements in connection with the Mergers and the other Transactions and also to prescribe certain terms and conditions to the Mergers.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth in this Agreement, and intending to be legally bound hereby, the parties hereto agree as follows:

ARTICLE I DEFINITIONS

1.1 General. Each term defined in the first paragraph of this Agreement and in the Recitals shall have the meaning set forth above whenever used herein, unless otherwise expressly provided or unless the context clearly requires otherwise.

1.2 Definitions. As used herein, the following terms shall have the meanings ascribed to them in this Section 1.2:

"Affiliate" means, with respect to any specified Person, any other Person that directly, or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, means possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person whether through the ownership of voting securities, by contract or otherwise.

"Affordable Care Act" means the Patient Protection and Affordable Care Act of 2010.

"Agreement" has the meaning set forth in the introductory paragraph.

"Aggregate Award Payouts" means the aggregate dollar amount payable to the holders of Company Options or Company SARs, or persons entitled to receive such Company Options or Company SARs, that are outstanding and vested as of immediately prior to the First Effective Time and cancelled pursuant to Section 2.7(a).

"Aggregate Fractional Shares Payouts" means the aggregate Fractional Shares Payout for all outstanding Company Notes immediately prior to the Effective Time.

"Business" means the use of the Company Platform for target discovery or biologic discovery, as currently conducted.

"Business Day" means any day other than a Saturday, Sunday or other day on which banking institutions located in Vancouver, Washington or Boston, Massachusetts are authorized or obligated by law or executive order to close.

"Cancelled Shares" has the meaning set forth in Section 2.6(b).

"CARES Act" means the U.S. Coronavirus Aid, Relief and Economic Security Act (Public Law 116-136) and all rules, any regulations issued by any Governmental Authority with respect thereto, in each case as in effect from time to time.

"CARES Act Deferred Payments" means all employer or employee payroll Taxes, other Taxes, or any other amounts, the payment of which is, in each case, deferred in accordance with the CARES Act.

"Cash Consideration" means Fifty-five Million Dollars ($55,000,000).

"Claim Notice" has the meaning set forth in Section 7.4.

"Closing" has the meaning set forth in Section 2.2.

"Closing Cash" means the fair market value of all cash and cash equivalents held by the Company as of the Closing (before taking into account the consummation of the Transactions), determined in accordance with GAAP (including, for the avoidance of doubt, inbound wire transfers of deposits in transit), excluding, to the extent applicable, (i) outstanding (uncleared) checks, drafts and outbound wire transfers or deposits in transit, (ii) restricted balances, and (iii) amounts held in escrow, and (iv) the proceeds of any casualty loss with respect to any asset held or owned by the Company (to the extent that any such asset has not been repaired or replaced or the liability for the repair or replacement of such asset has not been paid or accrued as a current liability).

"Closing Cash Consideration" means the sum of (i) Forty Million Dollars ($40,000,000.00), minus (ii) the Aggregate Award Payouts, plus (iii) the Net Closing Cash Adjustment Amount, minus (iv) the Company Transaction Expenses, plus (v) Company Audit Expenses, minus (vi) the Aggregate Fractional Shares Payout.

"Closing Date" has the meaning set forth in Section 2.2.

"Closing Net Cash" means (i) the Closing Cash minus (ii) the Company Debt at Closing.

"Code" means the U.S. Internal Revenue Code of 1986, as amended.

"Commercially Reasonable Efforts" means the level of efforts and resources that a company of similar size and financial resources operating in the biopharmaceutical industry would apply to develop and commercialize a product at a similar stage of development and with similar commercial and profitability potential, taking into account relevant factors, such as the competitiveness of the marketplace, the commercial potential for the product, the proprietary position of the product, and other relevant technical, legal, scientific or medical factors. It is understood that the level of efforts required to meet the above standard may change over time if there are changes in the status of or above criteria applicable to Company Technology, Company Products or Enabled Products.

"Company" has the meaning set forth in the introductory paragraph.

"Company Audit Expenses" means an amount equal to $52,500.

"Company Balance Sheet" has the meaning set forth in Section 3.7(a).

"Company Balance Sheet Date" has the meaning set forth in Section 3.7(a).

"Company Board" has the meaning set forth in the Recitals.

"Company Bylaws" means the bylaws of the Company, as amended.

"Company Charter" means the certificate of incorporation of the Company, as amended.

"Company Class A Common Stock" means shares of the Company's Class A common stock, par value $0.00001 per share.

"Company Common Stock" means shares of the Company's common stock, par value $0.00001 per share.

"Company Common Stock Certificate" means a certificate representing shares of Company Class A Common Stock or Company Common Stock that are issued and outstanding as of immediately prior to the First Effective Time, or an electronic book entry on the Company's electronic stock ledger. For the avoidance of doubt, if and to the extent outstanding shares of Company Class A Common Stock or Company Common Stock are represented by certificates held in electronic form, then references herein to "Company Common Stock Certificate" shall refer to such certificate in electronic form.

"Company Contractor" means any current or former consultant, advisory board member and independent contractor of the Company.

"Company Data" means all data collected, generated, or received by the Company in connection with the development, testing, marketing, delivery, or use of any Company Product or the Business, including Personal Information, and within the possession or control of the Company.

"Company Debt" means as at any time with respect to the Company, without duplication: (i) all Liabilities for borrowed money, whether current or funded, secured or unsecured, all obligations evidenced by bonds, debentures, notes or similar instruments, and all Liabilities in respect of mandatorily redeemable or purchasable share capital or securities convertible into share capital; (ii) all Liabilities for the deferred purchase price of property or services, contingent or otherwise, as obligor or otherwise, including any earnout or other deferred purchase price obligations (other than trade payables or accruals incurred in the Ordinary Course); (iii) all Liabilities in respect of any capital lease or financing lease under GAAP and Liabilities arising under conditional sales Contracts or other similar title retention agreements; (iv) all Liabilities for the reimbursement of any obligor on any letter of credit, banker's acceptance or similar credit transaction securing obligations of a type described in clauses (i), (ii) or (iii) above to the extent of the obligation secured; (v) all Liabilities under any interest rate protection agreement, interest rate future agreement, interest rate option agreement, interest rate swap agreement, hedging or other similar agreement designed to protect the Company against fluctuations in interest rates; (vi) all Pre-Closing Taxes (net of any estimated Tax payments, prepaid Taxes, and any other Tax deposits relating to such Taxes to the extent such payments, prepaid Taxes or deposits were not included in the calculation of Closing Cash); (vii) any Liability for deferred revenue (calculated in accordance with GAAP); (viii) any Liability relating to any unpaid contributions or other obligations owed in respect of any Company Employee Plan; (ix) any Liabilities for unpaid accounts payable obligations in excess of 60 days outstanding and (x) other expenses owed with respect to the indebtedness referred to in clauses (i) through (ix) above.

"Company Disclosure Schedule" means a document delivered by the Company to Parent referring to the representations and warranties in Article III.

"Company Employee" means any current or former employee of the Company.

"Company Employee Plan" means (A) an employee benefit plan within the meaning of Section 3(3) of ERISA whether or not subject to ERISA; (B) stock option plans, stock purchase plans, bonus or incentive plans, severance pay plans, programs or arrangements, deferred compensation arrangements or agreements, employment agreements, compensation plans, programs, agreements or arrangements, change in control plans, programs or arrangements, supplemental income arrangements, vacation plans, and all other employee benefit plans, agreements, and arrangements, not described in (A) above; and (C) plans or arrangements providing compensation to employee and non-employee directors, in each case in which the Company or any Subsidiary of the Company sponsors, contributes to, or provides benefits under or through such plan, or has any obligation to contribute to or provide benefits under or through such plan, or if such plan provides benefits to or otherwise covers any current or former employee, officer or director of the Company or any Subsidiary of the Company (or their spouses, dependents, or beneficiaries).

"Company Equity Plan" means the Totient, Inc. 2018 Equity Incentive Plan.

"Company Governing Documents" means, collectively, the Company Charter and the Company Bylaws.

"Company Intellectual Property" means the Company Owned Intellectual Property and the Licensed Intellectual Property.

"Company's Knowledge" (or any similar formulation) means the actual knowledge of Deniz Kural, James Sietstra and Daniele Biasci, after reasonable due inquiry. With respect to Intellectual Property, "Company's Knowledge" does not require the Company to conduct, have conducted, obtain, or have obtained any freedom-to-operate opinions or similar opinions of counsel or any patent, trademark or other Intellectual Property clearance searches.

"Company Material Adverse Effect" means a Material Adverse Effect with respect to the Company.

"Company Note" means an outstanding promissory note issued by the Company in favor of its holder.

"Company Noteholder" means a holder of a Company Note immediately prior to the First Effective Time.

"Company Option" means an option to acquire shares of Company Common Stock granted pursuant to the Company Equity Plan.

"Company Optionholder" means a holder of a Company Option or person entitled to receive a Company Option as set forth on the Payout Spreadsheet, immediately prior to the First Effective Time.

"Company Owned Intellectual Property" means all Intellectual Property that is owned or purported to be owned solely or jointly by the Company.

"Company Platform" means (a) the Company's proprietary engine, which uses machine learning, advanced immunoinformatics, and knowledge of the most recent research into tertiary lymphoid structure, in order to select and assemble the most potent monoclonal antibodies expressed in the tissue affected by autoimmunity, infections, and cancer, and (b) the resulting library of human-derived antibodies to novel and known tissue-specific antigens.

"Company Products" means all products or services developed, manufactured, tested, produced, offered, marketed, licensed, sold, distributed or performed by or on behalf of the Company as of the Closing.

"Company SAR" means a stock appreciation right covering shares of Company Common Stock granted pursuant to the Company Equity Plan.

"Company SAR holder" means a holder of a Company SAR or person entitled to receive a Company SAR as set forth in the Payout Spreadsheet, immediately prior to the First Effective Time.

"Company Software" all computer programs (including any software implementations of algorithms, models and methodologies, whether in source code or object code) that have been authored by or for the Company, embody Company Owned Intellectual Property, and the confidential and proprietary nature of the source code to which is material to the Business as currently conducted.

"Company Source Code" means, collectively, any Software source code or database specifications or designs, or any material proprietary information or algorithm contained in or relating to any Software source code or database specifications or designs, of any Company Software.

"Company Stockholders" has the meaning set forth in the introductory paragraph.

"Company System" has the meaning set forth in Section 3.12(g).

"Company Technology" means the (i) Company Platform, (ii) Company Products, (iii) Enabled Products, (iv) Company Intellectual Property, (v) Company Data, or (vi) Company Source Code.

"Company Transaction Expenses" means an amount equal to (i) the aggregate fees and expenses incurred at or prior to the Closing payable or reimbursable by the Company to third parties, whether or not, billed or accrued prior to the Closing, in connection with the negotiation, entering into and consummation of this Agreement and the Transactions, including the fees and expenses of investment bankers, finders, consultants, attorneys, accountants and other advisors engaged by the Company in connection with the Transactions, plus (ii) (A) any cash bonus, severance or other payment obligation that is created, accelerated, accrues or becomes payable as a result of or in connection with the Transactions, at or before the Closing and not contingent upon the occurrence of any subsequent event (other than execution of a release of claims or similar agreement or other ministerial events), by the Company to any present or former director, stockholder, optionholder, Employee or Consultant, including pursuant to an employment agreement, Company Employee Plan or policy or any other Contract, and (B) without duplication of any other amounts included within this definition, any other payment, expense, fee or Tax that accrues or becomes payable by the Company to any Governmental Authority or other Person under any Law or Contract, including in connection with the making of any filings, the giving of any notices or the obtaining of any consents, authorizations or approvals, in each case of (A) and (B), as a result of the consummation of the Transactions (including the Mergers) or in connection with the execution and delivery of the Agreement or any other Transaction Document, plus (iii) the employer's share of any employment or payroll Taxes that are accrued or payable as of the Closing Date in connection with any amounts described in (ii)(A) or (B) of this definition of Company Transaction Expenses to the extent not included within the Merger Consideration, in each case (i) through (iii) above, to the extent such amount is unpaid as of the Closing. For the avoidance of doubt, "Company Transaction Expenses" shall not include any

Company Audit Expenses, Aggregate Award Payouts, Deferred Cash Consideration, Milestone Consideration, any vesting or acceleration of any Unvested Stock Consideration Shares, or any other cash bonus, severance or other payment obligation that is created, accelerated, accrues or becomes payable to an individual after the Closing and any fees or expenses of the Escrow Agent.

"Confidential Information" means confidential or proprietary information concerning the Company, including such information relating to customers, clients, suppliers, vendors, subscribers, distributors, investors, lenders, Company Employees, Company Contractors, price lists and pricing policies, financial statements and information, budgets and projections, business plans, production costs, market research, marketing, sales and distribution strategies, manufacturing techniques, processes and business methods, technical information, pending projects and proposals, new business plans and initiatives, research and development projects, inventions, discoveries, ideas, technologies, trade secrets, know-how, formulae, designs, patterns, marks, names, improvements, industrial designs, mask works, works of authorship and other Intellectual Property, devices, samples, plans, drawings and specifications, photographs and digital images, computer software and programming, any other confidential information and confidential materials relating to the business or affairs of the Company, and all notes, analyses, compilations, studies, summaries, reports, manuals, documents and other materials prepared by or for the Company containing or based in whole or in part on any of the foregoing, whether in verbal, written, graphic, electronic or any other form and whether or not conceived, developed or prepared in whole or in part by the Company. For the avoidance of doubt, "Confidential Information" shall include the terms of this Agreement and the other Transaction Documents.

"Contract" means any written or oral contract, agreement, instrument, commitment, arrangement or undertaking of any nature (including leases, subleases, licenses, mortgages, notes, guarantees, sublicenses, subcontracts, letters of intent and purchase orders), including all amendments, supplements, exhibits and schedules thereto.

"Copyleft License" means any license that requires, as a condition of use, that any Software or content subject to such license that is distributed or modified (or any other Software or content incorporated into, derived from, used, or distributed with any such Software or content): (i) in the case of Software, be made available to any third party recipient in a form other than binary form (e.g., in source code form), (ii) be made available to any third party recipient for purposes of making derivative works, or (iii) be redistributable at no license fee. For the avoidance of doubt, "Copyleft Licenses" include the GNU General Public License, the GNU Lesser General Public License, the GNU Affero General Public License, the Mozilla Public License, the Common Development and Distribution License, the Eclipse Public License and all Creative Commons "sharealike" licenses.

"COVID-19" means generally the novel coronavirus commonly referred to as COVID-19 (and all derivations or mutations thereof) and any medical conditions arising as a result of exposure thereto.

"COVID-19 Measures" means any quarantine, "shelter in place", "stay at home", social distancing, shut down, closure, sequester or other Laws, Orders, or directives by any

Governmental Authority applicable to the Company in connection with, or in response to, COVID-19.

"Damages" means, with respect to any Person, without duplication, all claims, losses, liabilities, damages, fees, Taxes, interest, costs and expenses, including reasonable and actual costs of investigation and defense and reasonable and actual fees and expenses of counsel, experts and other professionals, directly or indirectly, whether or not due to a Third Party Claim, that are incurred by such Person; provided, however, that "Damages" shall only include any punitive damages to the extent such damages are awarded by an arbitrator or a court of competent jurisdiction to a third party in connection with a Third Party Claim.

"Deferred Cash Consideration" means Eight Million Dollars ($8,000,000.00).

"Deferred Consideration Payment Date" means the first (1st) anniversary of the Closing Date.

"DGCL" has the meaning set forth in the Recitals.

"DLLCA" has the meaning set forth in the Recitals.

"Enabled Product" means any biological target, composition, antibody, antigen, peptide, protein or other amino acid sequence identified, generated or validated in or by Company Technology, or created or reduced to practice through the use of Company Technology, or any product incorporating, comprising or derived from any of the foregoing.

"Enforceability Exceptions" has the meaning set forth in Section 3.2.

"Environmental Laws" has the meaning set forth in Section 3.19.

"Equity Interests" means, with respect to any Person, any share capital of, or other ownership, membership, partnership, joint venture or equity interest in, such Person or any indebtedness, securities, options, warrants, call, subscription or other rights of, or granted by, such Person or any of its Affiliates that are convertible into, or are exercisable or exchangeable for, or giving any Person any right to acquire any such share capital or other ownership, partnership, joint venture or equity interest, in all cases, whether vested or unvested.

"Escrow Account" means the account established with the Escrow Agent for depositing the Deferred Cash Consideration and the Milestone Consideration.

"Escrow Agent" means Western Alliance Bank.

"Escrow Agreement" means an escrow agreement to be entered into by and among the Parent, Paying Agent and Stockholder Representative, in substantially the form attached hereto as Exhibit K.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" means any entity, trade or business that is, or at any applicable time was, a member of a group described in Section 414(b), (c), (m) or (o) of the Code or Section 4001(b)(1) of ERISA that includes the Company.

"FD&C Permits" has the meaning set forth in Section 3.15(e).

"FDA" means the U.S. Food and Drug Administration or any successor agency.

"FDA Laws and Regulations" has the meaning set forth in Section 3.15(a).

"Financial Statements" has the meaning set forth in Section 3.7(a).

"First Certificate of Merger" has the meaning set forth in Section 2.2.

"First Commercial Sale" means, with respect to a product or service, a sale, rental, lease, or transfer of such product or service, in exchange for cash or non-cash consideration.

"First Effective Time" has the meaning set forth in Section 2.2.

"First Merger" has the meaning set forth in the Recitals.

"First Merger Sub" has the meaning set forth in the introductory paragraph.

"First-Step Surviving Corporation" has the meaning set forth in Section 2.1(a).

"Fractional Shares Payout" means for each Company Note, the outstanding principal and accrued interest of such Company Note *minus* the product of (i) the aggregate number of shares of Company Common Stock issuable upon conversion of such Company Note immediately prior to the First Effective Time and (ii) the applicable conversion price for such Company Note.

"Fully Diluted Shares of Company Class A Stock" means the sum, without duplication, of (a) the aggregate number of shares of Company Class A Common Stock that are issued and outstanding immediately prior to the First Effective Time, plus (b) the aggregate number of shares of Company Common Stock issuable upon conversion of all Company Notes that are issued and outstanding immediately prior to the First Effective Time.

"Fundamental Representations" means the representations and warranties set forth in Section 3.1 (Organization and Good Standing), Section 3.2 (Authority Relative to this Agreement), Section 3.3 (Capitalization), Section 3.4 (Non-contravention), Section 3.5 (Brokers' Fees), Section 3.6 (Title to Assets) and Section 3.11 (Tax Matters).

"GAAP" means United States generally accepted accounting principles as in effect on the date hereof.

"General Indemnity Cap" has the meaning set forth in Section 7.5.

"Governmental Authority" means any governmental, regulatory or administrative body, agency, commission or authority, any court, tribunal or judicial authority, any arbitrator or any other public authority, or any department, division, branch or other instrumentality of the foregoing, whether foreign, federal, state or local.

"Hazardous Substance" has the meaning set forth in Section 3.19.

"Health Care Laws" means all Laws and regulations to the extent applicable to the Company's Business as currently conducted and current Company Products, including, but not limited to: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a and 1320a-7b; (iii) the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), 42 U.S.C. §§ 1320d-1329d-8; (iv) all federal and state self-referral prohibitions, state anti-kickback statutes, illegal remuneration and provider conflict of interest Laws; (v) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and (vi) any other applicable Laws and regulations relating to the Company's Business as currently conducted and current Company Products; provided, however, that Health Care Laws exclude Privacy Laws.

"Income Tax" means, with respect to the Company, any Tax that is imposed on or measured by net income or gross income, however determined.

"Indemnified Party" has the meaning set forth in Section 7.4.

"Indemnifying Party" has the meaning set forth in Section 7.4.

"Insurance Policy" has the meaning set forth in Section 3.20.

"Intellectual Property" means (i) patents, patent applications and patent disclosures, together with any reissuances, provisionals, divisionals, substitutions, continuations, continuations-in-part, revisions, extensions and reexaminations thereof; (ii) trademarks, service marks, trade dress, logos, trade names, company names, doing business as names and fictitious names, together with translations, adaptations, derivations and combinations thereof and including goodwill associated therewith, and applications, registrations and renewals in connection therewith; (iii) copyrightable works, copyrights, and applications, registrations and renewals in connection therewith; (iv) mask works and applications, registrations and renewals in connection therewith; and (v) Trade Secrets.

"Intellectual Property License" has the meaning set forth in Section 3.12(b).

"Intended Tax-Free Treatment" has the meaning set forth in Section 2.19(a).

"IRS" means the U.S. Internal Revenue Service.

"IT System" means computer systems, hardware, servers, databases, software, networks, telecommunications systems and related infrastructure, owned or used by the Company that are within its custody, possession or control.

"Law" means any law, code, statute, regulation, rule, ordinance, requirement, or other binding guidance or action, in each case, of a Governmental Authority having force of law.

"Leased Real Property" means all leasehold or subleasehold estates and other rights to use or occupy any land, buildings, structures, improvements, fixtures or other interests in real property that is used in the business of the Company.

"Leases" means all leases, subleases, licenses, concessions and other agreements or written understandings, including all exhibits, amendments, extensions, renewals, guaranties or other agreements with respect thereto, pursuant to which the Company holds any Leased Real Property or to which the Company is a party.

"Legal Proceeding" means any judicial, administrative or arbitral action, claim, litigation, charge, complaint, suit or other proceeding (public or private), whether at law or equity, by or before a Governmental Authority or arbitrator, including any administrative hearing or investigation.

"Letter of Transmittal" has the meaning set forth in Section 2.14(b).

"Liabilities" means all debts, liabilities, commitments and obligations, whether accrued or fixed, absolute or contingent, matured or unmatured, determined or determinable, liquidated or unliquidated, asserted or unasserted, known or unknown, whenever or however arising, including those arising under applicable Law or any Legal Proceeding or Order of a Governmental Authority and those arising under any Contract, regardless of whether such debt, liability, commitment or obligation would be required to be reflected on a balance sheet prepared in accordance with GAAP or disclosed in the notes thereto.

"Licensed Intellectual Property" has the meaning set forth in Section 3.12(b).

"Lien" means any mortgage, pledge, lien, charge, hypothecation, encumbrance, security interest (including any right to acquire, option or right of preemption or conversion), adverse claim, restriction on transfer or other similar encumbrance or item or any agreement to create any of the foregoing.

"Major Stockholders" means each of SBGH, LLC, Deniz Kural, James Sietstra and Daniele Biasci.

"Material Adverse Effect" with respect to any Person means any change, event, violation, inaccuracy, circumstance, condition or effect (each, an "Effect") that, individually or taken together with all other Effects that have occurred prior to the date of determination of the occurrence of a Material Adverse Effect is, or would reasonably be likely to be or become, materially adverse in relation to (a) the financial condition, assets (including intangible assets),

business, or operations of such entity and its Subsidiaries (if any), taken as a whole, or (b) such Person's ability to perform or comply with the material covenants, agreements or obligations of such Person herein or to consummate the Merger in accordance with this Agreement and applicable Law; provided, however, that any Effect to the extent resulting or arising from any of the following shall not be deemed, either alone or in combination, to constitute or be considered in determining a Material Adverse Effect: (i) the execution and delivery of this Agreement (provided that this clause (i) shall not apply to any representation or warranty the purpose of such representation or warranty is to address the consequences resulting from the execution and delivery of this Agreement), (ii) with respect to the Company, any failure by such Person to meet any projections, budgets or estimates of revenue or earnings (it being understood that the facts giving rise to such failure may be taken into account in determining whether there has been a Material Adverse Effect (except to the extent such facts are otherwise excluded from being taken into account by this proviso)); (iii) with respect to the Company, any action or failure to take action which action or failure to act is requested in writing by Parent or expressly permitted by, required by, or expressly prohibited to be taken by, this Agreement; (iv) the public disclosure or pendency of this Agreement and the Transactions or the identity or involvement of the Parent and its Affiliates (including any impact on the customers, suppliers, vendors or employees of Company); (v) any change or development in general economic conditions in the industries or markets in which the applicable Person operates, (vi) any change in financing, banking or securities markets generally, (vii) any act of war, armed hostilities or terrorism, change in political environment or other force majeure events, or the escalation thereof, or any worsening thereof or actions taken in response thereto, (viii) any changes in applicable Law or accounting rules (including GAAP) or the enforcement, implementation or interpretation thereof, and (ix) any natural disaster or acts of God, including the occurrence, continuing or worsening, and government or other response or reaction to of any epidemic or pandemic (including in respect of COVID-19), provided, in the case of subsections (v) – (ix), that such Effects do not, have a materially disproportionate adverse impact on the applicable Person, taken as a whole, relative to other similarly situated Persons in the industries or markets in which such Person operates.

"Material Contract" has the meaning set forth in Section 3.16.

"Merger Consideration" means the aggregate consideration to which the Sellers are entitled pursuant to Article II of this Agreement after consummation of the Mergers.

"Merger Sub" and "Merger Subs" have the respective meanings set forth in the introductory paragraph.

"Mergers" has the meaning set forth in the Recitals.

"Milestone" means the earliest to occur of the following: (i) Parent or its Affiliate's entry into one or more definitive commercialization agreements, or technology partnering or licensing agreements, or collaboration agreements, with third parties using the Company Technology, a target discovered or identified by using Company Technology, or a peptide, protein complex or amino acid sequence assembled using Company Technology, including any Company Product or Enabled Product, pursuant to which (a) Parent is entitled to receive at least Two Million Dollars ($2,000,000) in aggregate upfront cash payments (provided, that the minimum upfront payment

under any individual agreement shall be One Million Dollars ($1,000,000)) and (b) an option for a license or a license or similar right is granted to the third party; or (ii) First Commercial Sale of a Company Product or Enabled Product.

"Milestone Consideration" means Fifteen Million Dollars ($15,000,000).

"Most Recent FYE Financial Statements" means the unaudited consolidated balance sheet of the Company as of December 31, 2020, and the related statements of income, cash flows and stockholders' equity for the 12-month period then ended.

"Multiemployer Plan" has the meaning set forth in ERISA Sections 3(37) and 4001(a)(3).

"Net Closing Cash Adjustment Amount" means the positive or negative amount, if any, equal to (i) the Closing Net Cash minus (ii) $189,376.51.

"Notice Period" has the meaning set forth in Section 7.4.

"Off-the-Shelf Software" means Software and cloud services generally available on standard terms and obtained from a third party in the Ordinary Course.

"OIG" has the meaning set forth in Section 3.14(b).

"Open Source License" means any license meeting the Open Source Definition (as promulgated by the Open Source Initiative) or the Free Software Definition (as promulgated by the Free Software Foundation), or any substantially similar license, including any license approved by the Open Source Initiative, or any Creative Commons License. For the avoidance of doubt, "Open Source Licenses" include Copyleft Licenses.

"Open Source Materials" means any Software or content subject to an Open Source License.

"Order" means any decree, order, judgment, writ, award, injunction, stipulation or consent of or by a Governmental Authority.

"Ordinary Course" means the ordinary course of business of the Company consistent with past custom and practice, including such actions as are required to comply with, or advisable under, any COVID-19 Measures.

"OSS Triggering Manner" means use of any Open Source Materials in a manner that has subjected any Company Software to the terms of a Copyleft License requiring that any (i) source code of the Company Software be disclosed or distributed, (ii) Company Software be licensed for the purpose of making derivative works, or (iii) Company Software be redistributable at no charge.

"Parent" has the meaning set forth in the introductory paragraph.

"Parent Board" has the meaning set forth in the Recitals.

"Parent Common Stock" means shares of Parent's common stock, par value $0.0001 per share.

"Parent Common Stock FMV" means: (i) if the Parent Common Stock is then traded on a national securities exchange, the average of the closing prices of the Parent Common Stock as reported on such exchange over the 20-trading day period ending on the trading date immediately prior to the date of determination; (ii) the Parent Common Stock is actively traded over-the-counter, the average of the closing bid prices over the 20-trading day period ending on the trading date immediately prior to the date of termination; and (iii) if there is no active public market for the Parent Common Stock, the fair market value thereof as determined by the price per share paid by investors for the preferred stock of Parent issued and sold in the most recently completed equity financing of Parent at such time.

"Parent Disclosure Schedule" means a document delivered by Parent to the Company referring to the representations and warranties in Article IV.

"Parent Group" means Parent and its Subsidiaries and Affiliates.

"Parent Indemnified Party" has the meaning set forth in Section 7.2(a).

"Parent's Knowledge" (or any similar formulation) means the actual knowledge of the named executive officers of Parent, after due inquiry.

"Parent Material Adverse Effect" means a Material Adverse Effect with respect to Parent and its Subsidiaries.

"Parent Prepared Return" has the meaning set forth in Section 5.2(a).

"Paying Agent" has the meaning set forth in Section 2.14.

"Payments Administration Agreement" means a payments administration agreement to be entered into by and among the Parent, Paying Agent and Stockholder Representative, in substantially the form attached hereto as Exhibit M.

"Payout Spreadsheet" has the meaning set forth in Section 2.11

"PCBs" has the meaning set forth in Section 3.19.

"Per Share Closing Cash Consideration" means the quotient of (i) the Closing Cash Consideration, divided by (ii) the Fully Diluted Shares of Company Class A Stock.

"Per Share Deferred Cash Consideration" means the quotient of (i) the Deferred Cash Consideration, divided by (ii) the Fully Diluted Shares of Company Class A Stock.

"Per Share Milestone Consideration" means the quotient of (i) the Milestone Consideration, divided by (ii) the Fully Diluted Shares of Company Class A Stock.

"Per Class A Share Stock Consideration" means 0.03637321.

"Per Common Share Stock Consideration" means 0.08159876.

"Permitted Liens" means: (i) Taxes, assessments and other governmental levies, fees or charges that are (a) not due and payable or (b) being contested in good faith by appropriate proceedings and for which there are adequate accruals or reserves on the Most Recent FYE Financial Statements; (ii) mechanics liens and similar liens for labor, materials or supplies incurred in the Ordinary Course for amounts that do not detract from the value of the assets subject thereto or impair the operation of the Business; (iii) with respect to Leased Real Property, easements, covenants, conditions, restrictions and other similar matters affecting title to such Leased Real Property and other title defects which do not materially impair the use or occupancy of such Leased Real Property in the operation of the Business; and (iv) non-exclusive licenses of Intellectual Property granted in the Ordinary Course.

"Person" means any individual, partnership, corporation, limited liability company, association, joint stock company, trust, joint venture, unincorporated organization or other business entity or a Governmental Authority.

"Personal Information" means information (in any form or media) that identifies or can be used to identify an individual (alone or when combined with other associated information), including: (i) individually identifiable Protected Health Information, as defined under Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. §§ 1320d-1329d-9); (ii) individually identifiable government identifiers, such as Social Security or other tax identification numbers, driver's license numbers and other government-issued identification numbers; and (iii) user names, email addresses, passwords or other credentials for accessing accounts; or (iv) personally identifiable information as defined under applicable Privacy Laws.

"Pre-Closing Tax" means (i) Taxes imposed on the Company for any and all Pre-Closing Tax Periods (for the avoidance of doubt, without regard to the due date for payment), (ii) any and all Taxes of any Person imposed on Parent, the Company, the First-Step Surviving Corporation or the Surviving Entity as a transferee or successor, by contract or pursuant to any Law or otherwise, in each case, which Taxes relate to an event or transaction occurring before the Closing, and (iii) any withholding or similar Taxes (but not including, for the avoidance of doubt, any employer-side payroll Taxes) incurred with respect to the Deferred Cash Consideration.

"Pre-Closing Tax Period" means (i) any Taxable period or portion thereof ending on or prior to the Closing Date and (ii) the portion of any Straddle Period ending on the Closing Date, unless otherwise required by a change in applicable Law.

"Prior Entity" has the meaning set forth in Section 3.25.

"Privacy Laws" means, collectively, (i) all applicable Laws relating to data privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification with respect to the collection, handling, use, processing, maintenance, storage, disclosure or transfer

of Personal Information enacted, adopted, promulgated or applied by any Governmental Authority, including the applicable legally binding requirements set forth in applicable regulations and agreements containing consent orders published by regulatory authorities of competent jurisdiction such as, as applicable, the U.S. Federal Trade Commission, U.S. Federal Communications Commission, and state data protection authorities; (ii) the internal privacy policy of the Company and any public statements that the Company has made regarding its privacy policies and practices; (iii) third party privacy policies with which the Company has been or is contractually obligated to comply; and (iv) any applicable rules of any applicable self-regulatory organizations in which the Company is or has been a member and/or with which the Company is or has been contractually obligated to comply relating to data privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification with respect to the collection, handling, use, processing, maintenance, storage, disclosure or transfer of Personal Information.

"Privacy Policy" means any past or current published privacy policy of the Company applicable to collecting, processing, using or disclosing Personal Information.

"Pro Rata Portion" means, with respect to any Seller, a percentage equal to the quotient of (i) the number of shares of Company Common Stock and Fully Diluted Shares of Company Class A Stock held by such Seller as of immediately prior to the Effective Time, *divided* by (ii) the total number of outstanding shares of Company Common Stock and Fully Diluted Shares of Company Class A Stock of all Sellers. For purposes of clarity, the sum of all "Pro Rata Portions" shall at all times equal one (1).

"Public Official" means any (i) employee or officer of a Governmental Authority; (ii) person acting in an official capacity for or on behalf of any such Governmental Authority; (iii) federal, state, regional, county or municipal working person or functionary; (iv) employee or officer of an organization authorized by the local government to perform government functions; (v) personnel of federal, state, regional, county or municipality -owned or -controlled commercial corporations, enterprises, institutions or organizations (whether partially or wholly owned); (vi) outside directors of federal, state, regional, county or municipality-owned entities; (vii) legislators (whether full or part-time); (viii) person holding an honorary or ceremonial government position; (ix) royal family members; (x) political parties, political party officials and candidates for political office; and (xi) officers or employees of public international organizations.

"R&W Survival Date" has the meaning set forth in Section 7.1(b).

"Registered Intellectual Property" has the meaning set forth in Section 3.12.

"Representative" has the meaning set forth in Section 5.2(a).

"Requisite Stockholder Approvals" means the adoption of this Agreement and approval of the Transactions by the affirmative vote of, or the execution and delivery to the Company of a written consent by the Company Stockholders.

"Restricted Stock Agreement" means each Stock Restriction Agreement to be entered into by and between the Parent and a Major Stockholder, in substantially the form attached hereto as Exhibit G.

"Rights Agreements" has the meaning set forth in Section 3.3(c).

"Scheduled Permits" has the meaning set forth in Section 3.14(f).

"Second Certificate of Merger" has the meaning set forth in Section 2.2.

"Second Effective Time" has the meaning set forth in Section 2.2.

"Second Merger" has the meaning set forth in the Recitals.

"Second Merger Sub" has the meaning set forth in the introductory paragraph.

"Securities Act" means the U.S. Securities Act of 1933, as amended.

"Security Breach" has the meaning set forth in Section 3.13(b).

"Sellers" means the Company Stockholders, any holder of a Company Option or person entitled to receive a Company Option who becomes a stockholder of the Company pursuant to the exercise of such Company Option following the Written Consent Effective Time and prior to the First Effective Time, and Company Noteholders immediately prior to the First Effective Time.

"Software" means any computer programs and software code, including any software validations and implementations of algorithms, models and methodologies, whether in source code or object code.

"Stock Consideration Shares" means an aggregate of 669,743 shares of Parent Common Stock.

"Stockholder Representative" means SBGH, LLC, a Delaware limited liability company.

"Stockholder Written Consent" has the meaning set forth in the Recitals.

"Straddle Period" means any taxable period that includes (but does not end on) the Closing Date.

"Subsidiary" means with respect to any Person, means (i) any corporation fifty percent (50%) or more of the stock of any class or classes of which having by the terms thereof ordinary voting power to elect a majority of the directors of such corporation (irrespective of whether or not at the time stock of any class or classes of such corporation shall have or might have voting power by reason of the happening of any contingency) is owned by such Person directly or indirectly through one or more subsidiaries of such Person and (ii) any partnership, association, joint venture, limited liability company or other entity in which such Person directly or indirectly

through one or more subsidiaries of such Person has a fifty percent (50%) or more equity interest. The term "Subsidiary" shall include all Subsidiaries of such Subsidiary.

"Surviving Entity" has the meaning set forth in Section 2.1(b).

"Tax" (and, with correlative meaning, "Taxes" and "Taxable") means (i) any net income, alternative or add-on minimum tax, gross income, estimated, gross receipts, sales, use, ad valorem, value added, transfer, franchise, fringe benefit, share capital, profits, license, registration, withholding, payroll, social security (or equivalent), employment, unemployment, disability, excise, severance, stamp, occupation, premium, property (real, tangible or intangible), environmental or windfall profit tax, custom duty, escheat amounts or other amounts due in respect of unclaimed property or other tax, governmental fee or other like assessment or charge (direct or reverse) of any kind whatsoever in the nature of a tax, together with any interest or any penalty, addition to tax or additional amount in relation to such tax (whether disputed or not) imposed by any Governmental Authority responsible for the imposition of any such tax (domestic or foreign), and (ii) any Liability for the payment of any amounts of the type described in clause (i) of this sentence as a result of being a member of an affiliated, consolidated, combined, unitary, aggregate or group (including any arrangement for group or consortium relief or similar arrangement) for any Taxable period.

"Tax Claim" has the meaning set forth in Section 5.2(d).

"Tax Return" means any return, declaration, statement, report, claim for refund, form (including estimated Tax returns and reports, withholding Tax returns and reports, any schedule or attachment, and information returns and reports) or other similar document, including any amendment thereof, filed or required to be filed with, or required to be supplied in copy to, a Governmental Authority with respect to Taxes.

"Third Party Claim" means any action, lawsuit, proceeding, investigation, audit or other claim against or involving an Indemnified Party by a third party.

"Threshold" has the meaning set forth in Section 7.5(d).

"Trade Secrets" means trade secrets and confidential business information, comprising formulas, patterns, compilations, programs, devices, methods, techniques or processes, that derive independent economic value because they are not generally known or readily ascertainable by others, and which the owner takes reasonable measures to keep secret.

"Transaction Documents" means this Agreement, the Certificates of Merger, the Stockholder Written Consent, the Restricted Stock Agreements, the Award Cancellation Agreements, the Note Cancellation Agreements and the Escrow Agreement.

"Transactions" means any transaction or arrangement contemplated by this Agreement, including (i) the Mergers and the other transactions and arrangements described in the Recitals and (ii) the execution, delivery and performance of the Transaction Documents other than this Agreement.

"Transfer Taxes" has the meaning set forth in Section 5.2(e).

"Treasury Regulations" means regulations promulgated by the IRS under the Code.

"Unvested Stock Consideration Shares" has the meaning set forth in Section 7.2(b)(ii).

"VAT" has the meaning set forth in Section 3.11(r).

"Withholding Agent" has the meaning set forth in Section 2.17.

"Written Consent Effective Time" has the meaning set forth in the Recitals.

1.3 Interpretation. Unless otherwise expressly provided or unless the context requires otherwise: (a) all references in this Agreement to Articles, Sections, Annexes, Schedules and Exhibits shall mean and refer to Articles, Sections, Annexes, Schedules and Exhibits of this Agreement; (b) any reference to any Law shall be deemed also to refer to all amendments and successor provisions thereto and all rules and regulations promulgated thereunder, in each case, at the time such reference is made; (c) words using the singular or plural number also shall include the plural and singular number, respectively; (d) references to "hereof," "herein," "hereby" and similar terms shall refer to this entire Agreement (including the Schedules, Exhibits and Annexes hereto); (e) references to any Person shall be deemed to mean and include the successors and permitted assigns of such Person (or, in the case of a Governmental Authority, Persons succeeding to the relevant functions of such Person); (f) the term "including" or any variation thereof shall be deemed to be followed by "without limitation"; (g) words of any gender include each other gender; (h) all references to days or months shall be deemed references to calendar days or months; (i) whenever this Agreement refers to a number of days, such number shall refer to calendar days, unless such reference is specifically to "Business Days"; (j) any time period set forth in this Agreement that ends on a calendar day that is not a Business Day shall be deemed to mean the next succeeding Business Day; and (k) all references to "$" and "dollars" shall be deemed references to United States dollars. The use of the word "including" or any variation thereof shall not be construed to limit any general statement that it follows to the specific or similar items or matters immediately following it. The use of the words "or," "either," "and/or" and "any" shall not be exclusive. The phrases "provided to," "furnished to," "made available" and phrases of similar import when used herein, unless the context otherwise requires, means an electronic copy of the document or information referred to, which has been provided to the party to whom such information or material is to be provided; provided, however, for all documents or information to be provided to, furnished to or made available to Parent hereunder, such document or information shall be deemed to have been provided to, furnished to or made available to Parent only if placed in the virtual data room made available to Parent and/or its external counsel no less than two (2) days prior to the date hereof, and which shall not have been modified or removed from such virtual data room prior to Closing. The recitals to this Agreement and the exhibits, schedules and annexes identified in this Agreement are incorporated herein by reference and made a part hereof as if set forth in full herein. The parties hereto agree that they have been represented by legal counsel during the negotiation and execution of this Agreement and, therefore, waive the application of any Law, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the

party drafting such agreement or document. Further, prior drafts of this Agreement or any documents executed and delivered in connection herewith or the fact that any clauses have been added, deleted or otherwise modified from any prior drafts of this Agreement or any of the documents executed and delivered in connection herewith shall not be used as a rule of construction or otherwise constitute evidence of the intent of the parties hereto or thereto, and no presumption or burden of proof shall arise favoring or disfavoring any such party by virtue of the authorship of any provision in this Agreement. In interpreting and enforcing this Agreement, each representation and warranty shall be given independent significance of fact and shall not be deemed superseded or modified by any other such representation or warranty.

ARTICLE II THE CONTEMPLATED TRANSACTIONS

2.1 The Mergers.

(a) Upon the terms and subject to the conditions set forth in this Agreement, and in accordance with the applicable provisions of the DGCL, at the First Effective Time, First Merger Sub shall be merged with and into the Company. As a result of the First Merger, the separate corporate existence of First Merger Sub shall cease, and the Company shall continue as the surviving corporation and as a wholly-owned subsidiary of Parent following the First Merger. The Company, as the surviving corporation after the First Merger, is sometimes referred to herein as the "First-Step Surviving Corporation."

(b) As part of a single integrated plan, at the Second Effective Time, upon the terms and subject to the conditions set forth in this Agreement, and in accordance with the applicable provisions of the DGCL and the DLLCA, the First-Step Surviving Corporation shall be merged with and into Second Merger Sub. As a result of the Second Merger, the separate corporate existence of the First-Step Surviving Corporation shall cease, and Second Merger Sub shall continue as the surviving entity and as a wholly-owned subsidiary of Parent following the Second Merger. The surviving entity after the Second Merger is sometimes referred to herein as the "Surviving Entity."

2.2 Closing; Effective Times. Subject to the satisfaction or written waiver (where permissible) of the conditions set forth in Article V, the closing of the Mergers (the "Closing") shall take place on the date hereof, unless another date is agreed to in writing by Parent and the Company. The Closing shall be effected by the electronic exchange of documents and signatures by electronic transmission, or by such other means or at such other place as the parties shall agree. The date on which the Closing actually takes place is referred to in this Agreement as the "Closing Date." Subject to the terms and conditions of this Agreement, on the Closing Date, the Company shall cause the First Merger to be effected by filing a certificate of merger (the "First Certificate of Merger") with the Secretary of State of the State of Delaware, in such form and containing such information as is required by, and executed in accordance with, the relevant provisions of the DGCL. The First Merger shall become effective at the date and time of such filing of the Certificate of Merger, or such later time as may be agreed by each of the parties hereto and specified in the First Certificate of Merger (such time being the "First Effective Time"). As soon as practicable following the First Effective Time and in any case on the same day as the First Effective Time, Parent and Second Merger Sub shall cause the Second Merger to

be effected by filing a certificate of merger (the "Second Certificate of Merger" and, together with the First Certificate of Merger, the "Certificates of Merger") with the Secretary of State of the State of Delaware, in such form and containing such information as is required by, and executed in accordance with, the relevant provisions of the DGCL and the DLLCA. The Second Merger shall become effective at the date and time of such filing of the Second Certificate of Merger, or such later time as may be agreed by each of the parties hereto and specified in the Second Certificate of Merger (such time being the "Second Effective Time").

2.3 Effects of the Mergers.

(a) At the First Effective Time, the effect of the First Merger shall be as provided in this Agreement, the First Certificate of Merger and in the applicable provisions of the DGCL. Without limiting the generality of the foregoing, and subject thereto, at the First Effective Time, all the property, rights, privileges, agreements, powers and franchises, debts, liabilities, duties and obligations of First Merger Sub and the Company shall become the property, rights, privileges, agreements, powers and franchises, debts, liabilities, duties and obligations of the First-Step Surviving Corporation, which shall include the assumption by the First-Step Surviving Corporation of any and all agreements, covenants, duties and obligations of First Merger Sub and the Company set forth in this Agreement to be performed after the First Effective Time.

(b) At the Second Effective Time, the effect of the Second Merger shall be as provided in this Agreement, the Second Certificate of Merger and in the applicable provisions of the DGCL and the DLLCA. Without limiting the generality of the foregoing, and subject thereto, at the Second Effective Time, all the property, rights, privileges, agreements, powers and franchises, debts, liabilities, duties and obligations of Second Merger Sub and the First-Step Surviving Corporation shall become the property, rights, privileges, agreements, powers and franchises, debts, liabilities, duties and obligations of the Surviving Entity, which shall include the assumption by the Surviving Entity of any and all agreements, covenants, duties and obligations of the Surviving Entity and the First-Step Surviving Corporation set forth in this Agreement to be performed after the Second Effective Time.

2.4 Organizational Documents.

(a) First-Step Surviving Corporation Certificate of Incorporation and Bylaws. At the First Effective Time, the certificate of incorporation of the First-Step Surviving Corporation shall be amended and restated in its entirety as set forth in Exhibit B hereto, and, as so amended and restated, shall be the certificate of incorporation of the First-Step Surviving Corporation until thereafter amended in accordance with its terms and as provided by applicable Law. At the First Effective Time, the bylaws of the First-Step Surviving Corporation shall be amended and restated to read in their entirety as set forth in Exhibit C hereto, and, as so amended and restated, shall be the bylaws of the First-Step Surviving Corporation until thereafter amended

in accordance with their terms, the certificate of incorporation of the First-Step Surviving Corporation and as provided by applicable Law.

(b) Surviving Entity Certificate of Formation and Limited Liability Company Agreement. At the Second Effective Time, the certificate of formation and the limited liability company agreement of Second Merger Sub, in each case as in effect immediately prior to the Second Effective Time, shall be amended as set forth in the forms attached hereto as Exhibit D and Exhibit E, respectively.

2.5 Management of the First-Step Surviving Corporation and the Surviving Entity.

(a) Directors and Officers of First-Step Surviving Corporation. Unless otherwise determined by Parent prior to the First Effective Time, the parties shall take all requisite action so that, from and after the First Effective Time: (i) the directors of First Merger Sub immediately prior to the First Effective Time shall be the directors of the First-Step Surviving Corporation, each to hold office in accordance with the certificate of incorporation and bylaws of the First-Step Surviving Corporation and until their respective successors are duly elected and qualified or until such director's earlier death, resignation or removal; and (ii) the officers of First Merger Sub immediately prior to the First Effective Time shall be the officers of the First-Step Surviving Corporation, each until their respective successors are duly elected and qualified or until such officer's earlier death, resignation or removal.

(b) Managers and Officers of Surviving Entity. Unless otherwise determined by Parent prior to the Second Effective Time, the parties shall take all requisite action so that, from and after the Second Effective Time: (i) the managers of Second Merger Sub immediately prior to the Second Effective Time shall be the managers of the Surviving Entity, to hold office in accordance with the provisions of the DLLCA and the certificate of formation and limited liability company agreement of the Surviving Entity until their respective successors are duly elected and qualified or until such manager's earlier death, resignation or removal; and (ii) the officers of Second Merger Sub immediately prior to the Second Effective Time shall be the officers of the Surviving Entity, each until their respective successors are duly elected and qualified or until such officer's earlier death, resignation or removal in accordance with the limited liability company agreement of the Surviving Entity.

2.6 Effect of First Merger on Capital Stock. At the First Effective Time, by virtue of the First Merger and without any action to be taken on the part of the holder of any shares of Company Class A Common Stock or Company Common Stock or any shares of capital stock of First Merger Sub, or on the part of the Company, Parent, First Merger Sub or any other Person, the following shall occur:

(a) Capital Stock of First Merger Sub. Each share of capital stock of First Merger Sub issued and outstanding immediately prior to the First Effective Time shall be converted automatically into and become one validly issued, fully paid and non-assessable share of common stock, par value $0.001 per share, of the First-Step Surviving Corporation and collectively shall constitute the only outstanding shares of capital stock of the First-Step Surviving Corporation immediately following the First Merger and each stock certificate of First

Merger Sub evidencing ownership of any such shares shall evidence ownership of such shares of common stock of the First-Step Surviving Corporation.

(b) Cancellation of Securities Held by the Company and Parent. Any shares of Company Class A Common Stock or Company Common Stock that are owned by the Company (as treasury stock or otherwise), Parent or any direct or indirect wholly-owned subsidiary of Parent or the Company, in each case, immediately prior to the First Effective Time, including the Excluded Shares (collectively, the "Cancelled Shares"), shall be automatically cancelled and shall cease to exist and no consideration shall be delivered in exchange therefor.

(c) Conversion of Company Class A Common Stock. Each share of Company Class A Common Stock that is issued and outstanding immediately prior to the First Effective Time (other than Cancelled Shares) shall, subject to the terms and conditions of this Agreement, be converted into the right to receive (without interest) the following consideration, payable as set forth herein:

(i) a certificate or book entry reflecting, for each share of Company Class A Common Stock, a number of shares of Parent Common Stock equal to the Per Class A Share Stock Consideration;

(ii) an amount of cash equal to, for each share of Company Common Stock, the Per Share Closing Cash Consideration;

(iii) a contingent right to receive, subject to Section 2.13, an amount of cash equal to, for each share of Company Class A Common Stock, the Per Share Deferred Cash Consideration; and

(iv) a contingent right to receive, subject to Section 2.13, an amount of cash equal to, for each share of Company Class A Common Stock, the Per Share Milestone Consideration.

(d) Conversion of Company Common Stock. Each share of Company Common Stock that is issued and outstanding immediately prior to the First Effective Time (other than Cancelled Shares) shall, subject to the terms and conditions of this Agreement, be converted into the right to receive (without interest) the following consideration, payable as set forth herein:

a certificate or book entry reflecting, for each share of Company Common Stock, a number of shares of Parent Common Stock equal to the Per Common Share Stock Consideration.

2.7 Effect of First Merger on Company Options and Company SARs.

(a) At the First Effective Time, each Company Option, Company SAR, or commitment to issue any Company Option or Company SAR, shall be cancelled and exchanged for the portion of the Aggregate Award Payouts consideration set forth on the Payout

Spreadsheet, pursuant and subject to the execution by each holder of each such Company Option or Company SAR, or person entitled to receive such Company Option or Company SAR, of an award cancellation agreement in substantially the form attached hereto as Exhibit I (an "Award Cancellation Agreement").

(b) Prior to the Closing, the Company shall (i) take all reasonably necessary and appropriate actions as may be required to effectuate the provisions of Section 2.7(a), to cause the Company Equity Plan and all Company Options and Company SARs to terminate as of the Closing and be of no further force and effect, in each case, in accordance with the Company Equity Plan (or other applicable agreement), including adopting corporate resolutions, delivering all required notices and procuring required consents, waivers or releases, if any, reasonably satisfactory to Parent; (ii) obtain from each Company Optionholder and Company SAR holder an Award Cancellation Agreement and (iii) ensure that after the First Effective Time, no holder of any options, warrants or rights to acquire any equity interest in the Company, or any beneficiary thereof, nor any other current or former participant in the Company Equity Plan shall have any right thereunder to acquire any securities of the Company or to receive any payment or benefit with respect to any award previously granted under the Company Equity Plan, except to the extent provided in this Article II. Without limiting the generality of the foregoing, from and after the Closing, all Company Options and Company SARs shall no longer be outstanding and automatically shall be cancelled and shall cease to exist, and each holder of Company Options and Company SARs shall cease to have any rights with respect thereto, except, the right to receive a portion of the Aggregate Award Payouts in accordance with Section 2.7(a).

2.8 Effect of First Merger on Company Notes. At the First Effective Time, each Company Note shall be cancelled and exchanged for the consideration set forth on the Payout Spreadsheet, pursuant and subject to the execution by each holder of each such Company Note, or person entitled to receive such Company Note, of a note cancellation agreement in substantially the form attached hereto as Exhibit J (a "Note Cancellation Agreement").

(a) Prior to the Closing, the Company shall (i) take all reasonably necessary and appropriate actions as may be required to effectuate the provisions of Section 2.7(a), to cause the Company Notes to terminate as of the Closing and be of no further force and effect, in each case, in accordance with the applicable Company Note, including adopting corporate resolutions, delivering all required notices and procuring required consents, waivers or releases, if any, reasonably satisfactory to Parent; (ii) obtain from each Company Noteholder a Note Cancellation Agreement and (iii) ensure that after the First Effective Time, no holder of any options, warrants or rights to acquire any equity interest in the Company, nor any beneficiary thereof, shall have any right thereunder to acquire any securities of the Company or to receive any payment or benefit with respect to any Company Note, except to the extent provided in this Article II. Without limiting the generality of the foregoing, from and after the Closing, all Company Notes shall no longer be outstanding and automatically shall be cancelled and shall cease to exist, and each holder of Company Notes shall cease to have any rights with respect thereto, except, the right to receive any Merger Consideration in accordance with Section 2.7(a).

(b) Each Company Note cancelled in accordance with Section 2.8 shall be entitled to receive (if any), with respect to each share of Company Common Stock covered by such Company Note immediately prior to the First Effective Time:

(i) a certificate or book entry reflecting, for each share of Company Common Stock, a number of shares of Parent Common Stock equal to the Per Class A Share Stock Consideration;

(ii) an amount of cash equal to, for each share of Company Common Stock, the Per Share Closing Cash Consideration;

(iii) an amount of cash equal to the Fractional Share Payout for such Company Note;

(iv) a contingent right to receive, subject to Section 2.13, an amount of cash equal to, for each share of Company Common Stock, the Per Share Deferred Cash Consideration; and

(v) a contingent right to receive, subject to Section 2.13, an amount of cash equal to, for each share of Company Common Stock, the Per Share Milestone Consideration.

2.9 Rights Cease to Exist. As of the First Effective Time, all shares of Company Common Stock and Company Class A Common Stock shall no longer be outstanding, shall automatically be cancelled and shall cease to exist and each holder of any shares of Company Common Stock or Company Class A Common Stock shall cease to have any rights with respect thereto, except the rights set forth in this Article II.

2.10 No Fractional Shares. Notwithstanding any provision herein to the contrary, no fractional shares of Parent Common Stock shall be issued pursuant to this Article II (with the intended effect that any shares of Parent Common Stock issuable to a single Seller on a particular date shall be aggregated and then rounded up to the nearest whole number).

2.11 Payout Spreadsheet. Attached as Exhibit F hereto is the Payout Spreadsheet, to be updated and certified by the Chief Executive Officer of the Company and setting forth, as of a date no later than one (1) Business Day prior to the Closing: (i) with respect to the Sellers: (A) the name, address and social security number (or tax identification number, if applicable) of each Seller immediately prior to the Closing; (B) the Pro Rata Portion of each Seller; (C) the corresponding portion of the Closing Cash Consideration, Deferred Cash Consideration, Milestone Consideration and number of Stock Consideration Shares that each such Seller is eligible to receive; (D) the wire instructions for such Seller; (E) any amounts required to be withheld; (F) with respect to the Company Stockholders, the number of shares of Company Common Stock or Company Class A Common Stock, as applicable, held by the Company Stockholders immediately prior to the Closing; (G) with respect to each Company Optionholder or Company SAR holder, the number of Company Options or Company SARs held by each Company Optionholder or Company SAR holder, as applicable, immediately prior to the Closing

and the grant date, exercise price and vesting schedule thereof; (H) the portion of the Aggregate Award Payouts payable to each such Company Optionholder and Company SAR holder subject to his or her execution of an Award Cancellation Agreement; (G) with respect to each Company Noteholder, the outstanding amounts of Company Notes held by each Company Noteholder immediately prior to the Closing and the grant date, and conversion price, if any, thereof; (H) the amount of Merger Consideration payable to each such Company Noteholder subject to his or her execution of a Note Cancellation Agreement; (ii) the Sellers' calculation of the Closing Cash Consideration; and (iii) any other amounts along with wire instructions to be paid by Parent at Closing, including unpaid Company Transaction Expenses, and (v) wire instructions for the Escrow Agent for delivery of the Deferred Cash Consideration and the Milestone Consideration. The Parties agree that Parent, First Merger Sub, Second Merger Sub and the Surviving Entity will have the right to rely on the Payout Spreadsheet as setting forth an accurate listing of all amounts due to be paid by Parent, First Merger Sub, Second Merger Sub and the Company to the Sellers in exchange for all outstanding shares of Company Common Stock and Company Class A Common Stock. Parent, First Merger Sub, Second Merger Sub and the Surviving Entity will not have any liability with respect to the allocation of any shares of Parent Common Stock or cash made to the Sellers in accordance with the Payout Spreadsheet and this Agreement other than performance of its obligations as set forth herein.

2.12 Payments at Closing. At the Closing, Parent shall make, or cause to be made, payments as follows:

(a) Parent shall make payments to the applicable Persons, by wire transfer of immediately available funds, the Company Transaction Expenses, in each case as directed in writing by the Company prior to the Closing pursuant to invoices or other evidence reasonably satisfactory to Parent, except that Parent shall cause any compensatory Company Transaction Expenses payable to Company Employees to be paid through the Surviving Entity's payroll system;

(b) Parent shall (i) deposit or cause to be deposited with the Surviving Entity, by wire transfer of immediately available funds, the applicable portion of the Aggregate Award Payouts for distribution (directly or through a subsidiary of the Surviving Entity) to the employee Company Optionholders and Company SAR holders as of immediately following the Closing pursuant to Section 2.7 and in accordance with the Payout Spreadsheet, and (ii) make payments directly by wire transfer of immediately available funds, the applicable portion of the Aggregate Award Payouts to the non-employee Company Optionholder and Company SAR holder as of immediately following the Closing pursuant to Section 2.7 and in accordance with the Payout Spreadsheet;

(c) Parent shall deposit or cause to be deposited with the Paying Agent, for exchange in accordance with this Article II through the Paying Agent, the applicable portions of the Closing Cash Consideration payable to the Company Stockholders, the Company Noteholders and any other Sellers in accordance with the Payout Spreadsheet, and shall make book-entry shares or issue stock certificates representing the aggregate number of shares of Parent Common Stock issuable to the Sellers as of immediately following the Closing in

accordance with the Payout Spreadsheet and pursuant to Sections 2.6(c)(i), 2.7(c)(i) and 2.8(b)(i); and

(d) Parent shall deposit the Deferred Cash Consideration and the Milestone Consideration with the Escrow Agent.

2.13 Payment of Deferred and Milestone Consideration.

(a) Deferred Cash Consideration. Subject to Section 2.13(c), within five (5) Business Days after the Deferred Consideration Payment Date, Parent and the Representative shall instruct the Escrow Agent as set forth in the Escrow Agreement to pay, and the Escrow Agent shall pay, the Deferred Cash Consideration to the applicable Sellers in accordance with the Payout Spreadsheet; provided, that each applicable Seller, separate from the other applicable Sellers, shall be eligible to receive a portion of the Deferred Cash Consideration.

(b) Milestone Consideration. Within five (5) Business Days following the achievement of the Milestone, Parent shall deliver a notice in writing (the "Milestone Notice") to the Representative regarding the achievement of the Milestone. Subject to Section 2.13(c), within five (5) Business Days following Parent's delivery of the Milestone Notice Parent and the Representative shall instruct the Escrow Agent to pay, and the Escrow Agent shall pay, the Milestone Consideration to the applicable Sellers in accordance with the Payout Spreadsheet.

(c) Payments. The parties acknowledge and agree that: (A) each of the Deferred Cash Consideration and the Milestone Consideration is an integral part of the consideration pursuant to this Agreement and the transactions contemplated hereby; (B) the right of the applicable Sellers to payment of a portion of the Deferred Cash Consideration and to a portion of the Milestone Consideration shall not be represented by a certificate or other instrument; (C) the right of applicable Sellers to payment of the Deferred Cash Consideration or of the Milestone Consideration shall not bear any interest; and (D) the right of one applicable Seller to receive its portion of the Deferred Cash Consideration or its portion of the Milestone Consideration shall be separate from any other applicable Seller's right to receive its portion of Deferred Cash Consideration or Milestone Consideration. Each of the Deferred Cash Consideration and the Milestone Consideration will constitute Merger Consideration payable to the applicable Sellers for their Company Class A Common Stock and not compensation or deemed compensation for any services rendered or to be rendered at any time, and will not be subject to payroll Tax withholding.

2.14 Paying Agent.

(a) SRS Acquiom will act as paying agent hereunder (in such capacity, the "Paying Agent") for the delivery, pursuant to the terms of the Payments Administration Agreement and the terms of this Agreement, of the aggregate Closing Cash Consideration payable to the Sellers as of immediately following the Closing. At or prior to the First Effective Time, Parent will deposit (or cause to be deposited) with the Paying Agent, for the benefit of the Sellers, the aggregate cash for distribution to the Company Stockholders and the Company Noteholders as of immediately following the Closing pursuant to Section 2.6(c)(ii), 2.7(c)(ii)

and 2.8(b)(ii), in each case, in accordance with the Payout Spreadsheet. The Paying Agent will hold and distribute the Closing Cash Consideration payable to applicable Sellers pursuant to the provisions of an agreement between Parent and the Paying Agent.

(b) Letter of Transmittal. Promptly following the First Effective Time, Parent shall cause the Paying Agent to send to the Sellers of record a letter of transmittal in the form attached hereto as Exhibit L (each, a "Letter of Transmittal"). Upon receipt by the Paying Agent of the Letter of Transmittal, duly completed and validly executed in accordance with the instructions (and such other customary documents as may reasonably be required by the Exchange Agent), the Seller shall be entitled to receive in exchange therefor the consideration provided for herein. Parent shall cause the Paying Agent to make payment to each Seller promptly following receipt by the Paying Agent of such duly completed Letter of Transmittal. If payment of any portion of the consideration provided for herein is to be made to any Person other than the Person in whose name the Company Common Stock Certificate, Company Option, Company SAR or Company Note, as applicable, is registered, it shall be a condition of payment that the Person requesting such payment shall have paid any transfer and other Taxes required by reason of the payment of the applicable portion of the consideration provided for herein to a Person other than the registered holder of such Company Common Stock Certificate, Company Option, Company SAR or Company Note, as applicable, or shall have established to the reasonable satisfaction of Parent that such Tax either has been paid or is not applicable. After the First Effective Time, each Company Common Stock Certificate, Company Option, Company SAR or Company Note, as applicable, shall represent only the right to receive the applicable portion of the Merger Consideration or Aggregate Award Payouts, as applicable, provided for herein as contemplated by this Article II.

2.15 Transfer Books; No Further Ownership Rights in Company Common Stock or Company Class A Common Stock. The right to receive the applicable portion of the consideration provided for herein, in accordance with the terms of this Article II shall be deemed to have been paid in full satisfaction of all rights pertaining to the shares of Company Common Stock or Company Class A Common Stock previously represented by such Company Common Stock Certificates, and at the close of business on the day on which the First Effective Time occurs, the stock transfer books of the Company shall be closed and thereafter there shall be no further registration of transfers on the stock transfer books of the Surviving Entity of the shares of Company Common Stock and Company Class A Common Stock that were outstanding immediately prior to the First Effective Time. If, at any time after the First Effective Time, Company Common Stock Certificates are presented to Parent or the Surviving Entity for any reason, they shall be cancelled and exchanged as provided in this Article II.

2.16 No Liability. Notwithstanding anything in this Agreement to the contrary, none of the parties hereto shall be liable to any Person for any portion of the payments contemplated by this Article II delivered to a public official pursuant to any applicable abandoned property, escheat or similar Law.

2.17 Withholding Taxes. The Company, the Merger Subs, the First-Step Surviving Corporation, the Surviving Entity (including any subsidiary of the Surviving Entity) and the

Paying Agent (each, a "Withholding Agent"), shall be entitled to deduct and withhold from that portion of any payments contemplated by this Article II or any other amount payable to a Seller pursuant to this Agreement, and shall pay to the appropriate Governmental Authority, such amounts that are required to be deducted and withheld with respect to the making of such payments under any Tax Law. To the extent amounts are so deducted and withheld and paid to the appropriate Governmental Authority in accordance with applicable Law, such amounts shall be treated for purposes of this Agreement as having been paid to the Seller in respect of which such deduction and withholding were made. Without limiting the foregoing, and in lieu of deducting from any payment, the applicable Withholding Agent may require that any Seller make arrangements satisfactory to such applicable Withholding Agent to satisfy any withholding requirements as a condition to making any payment (including, for example, in an instance where payment is to be made in shares of Parent Common Stock). Notwithstanding anything to the contrary, any compensatory payments for Tax purposes payable pursuant to or as contemplated by this Agreement shall be paid through the payroll system of Parent or a Subsidiary of Parent subject to applicable Tax withholding. For the avoidance of doubt, (i) any such amount withheld shall reduce the cash consideration payable to such Seller regardless of whether the withholding is in respect of cash or equity consideration payable hereunder, and (ii) the payment of Merger Consideration shall not be subject to payroll Tax withholding, unless otherwise required by a change in applicable Law. In the event any amount (other than in respect of compensatory payments) is required to be withheld or deducted pursuant to this Agreement, the parties agree to and shall cooperate in good faith to reduce such amount to be withheld or deducted to the maximum extent permitted under applicable law. Each party shall use commercially reasonable efforts to notify the other parties at least five (5) Business Days in advance before any amount is to be withheld or deducted.

2.18 Effect of the Second Merger on Capital Stock. At the Second Effective Time, by virtue of the Second Merger and without any action to be taken on the part of the holder of any shares of Company Common Stock or Company Class A Common Stock or any units of membership interest in Second Merger Sub, or on the part of the Company, Parent, the Merger Subs or any other Person:

(a) each share of capital stock of the First-Step Surviving Corporation outstanding immediately prior to the Second Effective Time shall be cancelled and shall cease to exist and no consideration shall be delivered in exchange therefor; and

(b) each unit of membership interest in Second Merger Sub outstanding immediately prior to the Second Effective Time shall remain unchanged and continue to remain outstanding as a unit of membership interest in the Surviving Entity. At the Second Effective Time, Parent shall continue as the sole, direct holder of membership interests in the Surviving Entity.

2.19 Tax Treatment.

(a) Each of Parent, the Merger Subs and the Company intends that the Mergers, taken together, constitute a "reorganization" within the meaning of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder, in accordance with IRS Revenue

Ruling 2001-46, 2001-2 CB 321 (the "Intended Tax-Free Treatment"). Each of Parent, the Merger Subs and the Company and its respective Affiliates and representatives (including the Representative (as defined in Section 5.2(a))) shall, unless otherwise required by applicable Law, (A) file all Tax Returns consistent with the Intended Tax-Free Treatment (including attaching the statement described in Treasury Regulations Section 1.368-3(a) on or with the U.S. federal income Tax Returns of the Company and Parent for the taxable year that includes the Mergers), and (B) take no Tax position inconsistent with the Intended Tax-Free Treatment (whether in audits, Tax Returns or otherwise).

(b) This Agreement is intended to constitute, and the parties hereby adopt this Agreement as, a "plan of reorganization" within the meaning Treasury Regulation Sections 1.368-2(g) and 1.368-3(a).

(c) Each of Parent, the Merger Subs and the Company and its respective Affiliates and representatives shall reasonably cooperate and use respective commercially reasonable efforts to cause the Mergers to qualify for the Intended Tax-Free Treatment, and, except for the performance of this Agreement in accordance with its terms, agree not to take any action or fail to take any action, in either case, that could reasonably be expected to prevent or impede the Mergers from qualifying for the Intended Tax-Free Treatment. Such cooperation and commercially reasonable efforts shall include taking actions (and not failing to take actions) to cause the Mergers to qualify for the Intended Tax-Free Treatment, and not taking actions (or failing to take actions) that could reasonably be expected to prevent or impede the Mergers from qualifying for the Intended Tax-Free Treatment.

(d) Notwithstanding any provision herein to the contrary, (i) no party or its respective Affiliates shall have any liability to the other party, or any Seller, with respect to the tax treatment or the tax consequences of the Mergers (other than, for the avoidance of doubt, any liability resulting from (A) any tax representations provided by such party pursuant to Section 2.19(c) (if applicable) and (B) any breach of or failure to perform any covenant or agreement of such party provided for in this Agreement including pursuant to Section 2.19(c) (if applicable)), and (ii) each Seller shall be solely responsible with respect to the tax treatment of the Mergers as to such Seller as well as the tax consequences thereof.

(e) The parties acknowledge and agree that the intended fair market value of the Parent Common Stock payable to the Sellers as Merger Consideration is $67.19 per share as of the date hereof.

2.20 Further Action. If, at any time after the First Effective Time, any further action is determined by Parent to be necessary or desirable to carry out the purposes of this Agreement or to vest the Surviving Entity or Parent with full right, title and possession of and to all rights and property of the Merger Subs and the Company, the officers and directors or managers, as applicable, of the Surviving Entity, Parent shall be fully authorized (in the name of each of the Merger Subs, in the name of the Company, in the name of the Sellers or otherwise) to take such action.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as expressly set forth in the applicable section of the Company Disclosure Schedule (as interpreted in accordance with Section 8.12), the Company represents and warrants to Parent, First Merger Sub and Second Merger Sub as of the date hereof and as of the Closing Date (except where a representation or warranty is made herein as of a specified date) as follows, provided, that for purposes of these representations and warranties (other than those in Sections 4.1, 4.2, 4.3, 4.4 and 4.7), the term "Company" shall include any and all of the Subsidiaries of the Company, unless noted otherwise herein:

3.1 Organization and Good Standing.

(a) The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. The Company has the corporate power and authority to own, lease and license its assets and properties and to carry on its business as currently conducted. The Company is duly qualified or licensed to do business as a foreign corporation and is in good standing in each jurisdiction in which the character of the assets or properties owned, leased or licensed by it or the nature of its business makes such qualification or license necessary, except where the Company's failure to be so qualified, licensed or in good standing, individually or in the aggregate, would not reasonably be expected to have a Company Material Adverse Effect. The Company is not in violation of any of the provisions of the Company Governing Documents.

(b) Section 3.1(b) of the Company Disclosure Schedule sets forth the name of each Subsidiary of the Company, such Subsidiary's jurisdiction of incorporation or formation and the record ownership as of the date hereof of all Equity Interests issued by such Subsidiary. All of the Company's Subsidiaries are wholly owned by the Company, duly organized, validly existing and in good standing under the laws of the jurisdiction in which such Subsidiary is formed (to the extent such concept in recognized in such jurisdiction) and are duly qualified to conduct business under the Applicable Laws of such jurisdiction. Each of the Subsidiaries is qualified to do business as a foreign corporation (or equivalent) under the laws of all jurisdictions where the nature of its business requires such qualification, except where the failure to so qualify would not constitute a Material Adverse Effect. No Subsidiary of the Company is in default under or in violation of any provision of its Organizational Documents.

(c) The Company has made available to Parent true, accurate and complete copies of the Organizational Documents of the Company.

3.2 Authority Relative to this Agreement. The Company has all requisite corporate power and authority to enter into this Agreement and, with receipt of the Requisite Stockholder Approvals in the form of the Stockholder Written Consent, each of which shall become effective at the Written Consent Effective Time, to consummate the Mergers and the other Transactions to which the Company is a party. The execution and delivery of this Agreement and, upon receipt of the Stockholder Written Consents immediately following the execution of this Agreement, the

consummation of the Mergers and the other Transactions to which the Company is a party have been duly authorized by all necessary corporate action on the part of the Company. This Agreement has been duly executed and delivered by the Company and, assuming the due execution and delivery of this Agreement by the other parties hereto, constitutes the valid and binding obligation of the Company enforceable against the Company in accordance with its terms subject only to the effect, if any, of (i) applicable bankruptcy and other similar applicable Law affecting the rights of creditors generally and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies (the "Enforceability Exceptions"). The Company Board, by resolutions duly adopted (and not thereafter modified or rescinded) by the unanimous vote of the Company Board, has (i) approved this Agreement, the Mergers and the other Transactions to which the Company is a party and determined that this Agreement, the Mergers and the other Transactions, including the Mergers, upon the terms and subject to the conditions set forth herein, is advisable and in the best interests of the Company and the holders of Company Common Stock and in accordance with the provisions of applicable Laws and the Company Governing Documents and (ii) has submitted this Agreement to the holders of Company Common Stock for the purpose of adoption and unanimously recommended that the holders of Company Common Stock adopt this Agreement. Except for the Requisite Stockholder Approvals, no other vote or approval of the holders of any class or series of capital stock or other Equity Interests of the Company is necessary to approve or adopt this Agreement, the Mergers and the other Transactions to which the Company is a party.

3.3 Capitalization.

(a) Section 3.3(a) of the Company Disclosure Schedule sets forth the number of authorized, issued and outstanding shares of Company Common Stock (and any other Equity Interests of the Company), the names of the record owners thereof, and the number, type, class and series of Equity Interests held by each such owner (including, in respect of any Company Options, Company SARs or other convertible securities, the number of shares of Company Common Stock (and the class and series of such Company Common Stock) into which such Equity Interest is convertible as of the date hereof). Each Company Option and Company SAR was granted in compliance in all material respects with all applicable Laws and all of the terms and conditions of the Company Equity Plan. All of the issued and outstanding shares of Company Common Stock have been, and all shares which may be issued pursuant to the exercise of the Company's other Equity Interests, when issued in accordance with the applicable security, will be (i) duly authorized, validly issued, fully paid and non-assessable; (ii) not subject to any preemptive rights; and (iii) free of any Liens.

(b) Except as set forth on Section 3.3(b) of the Company Disclosure Schedule, there are no outstanding or authorized Equity Interests, options, stock appreciation rights, warrants, Contracts, calls, puts, rights to subscribe, conversion rights or other similar rights to which the Company is a party or which are binding upon any of them providing for the issuance, disposition or acquisition of any Equity Interests, and the Company does not have any contractual or legal requirement to provide any notice or disclosure to any holder in respect of any such items in connection with the consummation of the Transactions. There are no commitments or agreements to provide any equity-based or equity-linked compensation that has

not been granted other than pursuant to the exercise of Company Options or stock appreciation rights under the Company Equity Plan, or the conversion of Company Notes that are outstanding as of the date of this Agreement. Except as set forth on Section 3.3(b) of the Company Disclosure Schedule, there are no outstanding or authorized phantom stock, profits interests or similar rights with respect to the Company. The Company is not subject to any obligation (contingent or otherwise) to repurchase or otherwise acquire or retire any of its Equity Interests. No former direct or indirect holder of any Equity Interests of the Company has any claim or rights against the Company or any other holder of Equity Interests of the Company that remains unresolved. The Company does not have any obligation to make any investment (in the form of a loan, capital contribution or otherwise) in any Person. There are no declared or unpaid dividends with respect to any shares of Company Common Stock.

(c) Except as set forth on Section 3.3(c) of the Company Disclosure Schedule, (i) there are no voting trusts, proxies, or other agreements or understandings with respect to the voting stock of the Company to which the Company is a party or by which the Company is bound; and (ii) there are no agreements or understandings relating to the registration, sale or transfer (including agreements relating to rights of first refusal, "co-sale" rights, "drag-along" rights or registration rights) of any Company Common Stock, or any other investor rights, including rights of participation (i.e., pre-emptive rights), co-sale, voting, first refusal, board observation, visitation or information or operational covenants (the items described in the foregoing clauses (i) and (ii), collectively, the "Rights Agreements"). On or prior to the First Effective Time, all Rights Agreements shall have been terminated and of no further force or effect.

3.4 Non-Contravention.

(a) Except as described in Section 3.4(a) of the Company Disclosure Schedule and assuming that all filings and notifications described in Section 3.4(b) have been made, neither the execution and delivery of this Agreement, nor the consummation of the Transactions, will: (i) result in the creation of any Lien, other than Permitted Liens, on any of the material properties or assets of the Company or any of the shares of Company Common Stock, (ii) conflict with, or result in any violation of or default under (with or without notice or lapse of time, or both), or give rise to a right of termination, cancellation or acceleration of any obligation or automatic loss of any benefit under, (A) any provision of the Company Governing Documents or any resolution adopted by stockholders of the Company or the Company's board of directors, (B) any Material Contract of the Company or any Contract applicable to its material properties or material assets, or (C) any applicable Law, or (iii) give any Governmental Authority or other Person the right to challenge any of the Transactions or to exercise any remedy or obtain any relief under, any applicable Law or any Order to which the Company or any of the assets owned or used by the Company is subject.

(b) Except for the filing of the Certificate of Merger with the Secretary of State of the State of Delaware, no consent, approval, Order or authorization of, or registration, declaration or filing with, or notice to, any Governmental Authority or any other Person is required by or with respect to the Company in connection with the execution and delivery of this

Agreement or the consummation of the Transactions. The execution and delivery of this Agreement by the Company does not, and the consummation of the Transactions will not contravene, conflict with or result in a violation of any of the terms or requirements of, or give any Governmental Authority the right to revoke, withdraw, suspend, cancel, terminate or modify, any authorization, approval, regulation, permit or other similar instrument from a Governmental Authority that is held by the Company or that otherwise relates to the Business as currently conducted or to any of the assets owned or used by the Company.

3.5 Brokers' Fees. Neither the Company nor any Seller nor any of their respective Affiliates has any liability or obligation to pay any fees or commissions to any broker, finder or agent with respect to the Transactions.

3.6 Title to Assets. Except as set forth in Section 3.6 of the Company Disclosure Schedule, the Company does not hold title to or leasehold interest in any real property and has never owned or leased any real property. The Company is not a party to any Contract to purchase or sell any real property. The Company has good title to, or valid leasehold interest in, all of the tangible properties, and interests in tangible properties and assets, reflected on the Company Balance Sheet or acquired after the Company Balance Sheet Date (except properties and assets, or interests in properties and assets, sold or otherwise disposed of since the Company Balance Sheet Date in the Ordinary Course), or, with respect to leased properties and tangible assets, valid leasehold interests in such properties and tangible assets that afford the Company valid leasehold possession of the properties and tangible assets that are the subject of such leases, in each case, free and clear of all Liens, except Permitted Liens. All machinery, equipment and other tangible personal property owned or leased by the Company is in all material respects structurally sound, and in good operating condition (normal wear and tear excepted) and adequate for the uses to which it is put. Section 3.6 of the Company Disclosure Schedule sets forth each parcel of Leased Real Property and interest therein (the "Company Facilities"), the name of the lessor, licensor, sublessor, master lessor and/or lessee, the commencement date, the term of the Company Lease and each amendment thereto, the size of the premises and the aggregate annual rental payable thereunder. The Company has made available to Parent true, correct and complete copies of all Leases and other Contracts in respect of all Leased Real Property, including all exhibits, addenda, modifications, amendments, renewals, terminations and supplements thereto ("Company Leases"). The Company currently occupies all of the Company Facilities for the operation of its business, and to the Company's Knowledge there are no other parties occupying, or with a right to occupy, the Company Facilities. The Company Facilities are in good operating condition and repair and are suitable for the current conduct of the Business. To the Company's Knowledge, the Company is not violating, and since the Company's formation, has not violated, any Law relating to any Leased Real Property or operations thereon. To the Company's Knowledge, the Company has performed all of its obligations under any termination agreements pursuant to which it has terminated any Lease of real property that is no longer in effect and has no continuing liability with respect to such terminated real property Leases. The Company is not a party to any agreement or subject to any claim that may require the payment of any leasing commission, real estate brokerage commission or other brokerage fee, and no such commission or fee is owed with respect to any of the Company Facilities. To the Company's Knowledge, the Leased Real Property is not subject to any rights of way, building

use restrictions, title exceptions, variances, reservations or limitations of any kind or nature, except (i) those that in the aggregate do not impair the current use, occupancy, value or marketability of title to the Leased Real Property, (ii) as set forth on Section 3.6 of the Company Disclosure Schedule and (iii) to the extent expressly set forth in the Lease relating to such Leased Real Property. To the Company's Knowledge, all buildings, plants, structures and other improvements used by any Company lie wholly within the boundaries of the Leased Real Property and do not encroach upon the property, or otherwise conflict with the property rights, of any other Person. Except as set forth on Section 3.6 of the Company Disclosure Schedule and to the Company's Knowledge, the Leased Real Property complies in all material respects with all applicable Laws, including zoning and land use laws, regulations, codes and/or ordinances, and the Company has not received any notifications from any Governmental Authority or insurance company recommending improvements to the Leased Real Property or any other actions relative to the Leased Real Property outside of Ordinary Course. The Company has not entered into (or been granted) any extension, amendment, waiver or other accommodation in connection with the economic conditions relating to COVID-19 that would have the result of decreasing, delaying or otherwise modifying its payment obligations with respect to the Company Leases or Company Facilities.

3.7 Financial Statements.

(a) Section 3.7(a) of the Company Disclosure Schedule sets forth (i) the Most Recent FYE Financial Statements and (ii) the unaudited consolidated balance sheet of the Company as of April 30, 2021 (the "Company Balance Sheet"; such date, the "Company Balance Sheet Date") and the related consolidated statement of operations for the four-month period then ended (collectively, the "Financial Statements") The Financial Statements (A) are derived from and in accordance with the books and records of the Company, (B) except as set forth on Section 3.7(a) of the Company Disclosure Schedule, were prepared in accordance with GAAP, consistently applied throughout the periods covered thereby, (C) present fairly in all material respects the financial condition and results of operation of the Company at the dates and for the periods therein indicated (subject, in the case of unaudited interim period financial statements, to (1) the absence of notes, which, if included, would not materially differ from the notes to the audited Financial Statements and (2) normal recurring year-end audit adjustments, none of which individually or in the aggregate are expected to be material in amount or nature) and (D) are true and correct in all material respects.

(b) Section 3.7(b) of the Company Disclosure Schedule sets forth a true, correct and complete list of all Company Debt (other than accrued Income Taxes), including, for each item of such Company Debt, the agreement governing such indebtedness and the interest rate, maturity date, any assets securing such Company Debt and a description of any prepayment penalties associated with such indebtedness.

3.8 Undisclosed Liabilities. The Company does not have any Liabilities of any nature other than (i) those set forth or adequately provided for in the balance sheet included in the Financial Statements as of April 30, 2021, (ii) those arising out of the Material Contracts that do not result from any breach of Contract or warranty, and (iii) those incurred in the business of the

Company since April 30, 2021 in the Ordinary Course and, individually or in the aggregate, are not material in nature or amount and do not result from any breach of Contract, warranty, infringement, tort or violation of applicable Law.

3.9 Absence of Certain Changes. Except as set forth in Section 3.9 of the Company Disclosure Schedule and as expressly contemplated by this Agreement and the Transaction Documents, since April 30, 2021, the Company has conducted the business of the Company in the Ordinary Course and has not:

(a) suffered a Company Material Adverse Effect or suffered any material theft, damage, destruction or casualty loss to its material assets, whether or not covered by insurance;

(b) redeemed or repurchased, directly or indirectly, or declared, set aside or paid any dividends on, or made any other distributions (whether in cash or in kind) with respect to, any Equity Interests in the Company;

(c) issued, sold or transferred any notes, bonds or other debt securities, any equity securities, or any securities convertible, exchangeable or exercisable into, directly or indirectly, any Equity Interests in the Company;

(d) borrowed any amount or incurred or become subject to any Company Debt (including contingently as a guarantor or otherwise) or other Liabilities, except current Liabilities incurred in the Ordinary Course;

(e) discharged or satisfied any Lien or paid any Liability related to the Company (other than (i) Permitted Liens or minor liens that will not, in any case or in the aggregate, materially detract from the value of the assets subject thereto or impair the operations of the Company or (ii) Liabilities paid in the Ordinary Course), or prepaid any amount of indebtedness or subjected any portion of its properties or assets to any Lien or other encumbrance (other than (i) Permitted Liens and (ii) Liens that will be released at or prior to the Closing);

(f) sold, leased, subleased, licensed, assigned, transferred or otherwise disposed of (including transfers to any Sellers or officers) any of its material tangible or intangible assets (including Company Intellectual Property) other than non-exclusive licenses to service providers solely to the extent necessary to enable such service providers to perform services for the Company under their applicable agreements with the Company entered in the Ordinary Course;

(g) failed to pay any creditor an amount when due, or waived, canceled, compromised or released any rights or claims of material value, whether or not in the Ordinary Course;

(h) entered into any Material Contract or amended or terminated the rights of the Company thereunder;

(i) (i) other than in the Ordinary Course, made, granted or promised any bonus or any wage, salary or compensation increase to, or made any other change in employment terms for, any director, officer, employee, sales representative or consultant, (ii) granted or promised any increase or acceleration of vesting for any arrangements under any Company Employee Plan or arrangement, (iii) amended or terminated any existing employee Company Employee Plan or arrangement (other than an amendment required by Law), or (iv) adopted any new Company Employee Plan or arrangement;

(j) made any material change in accounting methods or practices;

(k) made any capital expenditures that aggregate in excess of $20,000 or any charitable contributions outside of the Ordinary Course;

(l) made any loans or advances to, or guarantees for the benefit of, any Persons (other than advances to employees for travel and business expenses incurred in the Ordinary Course that do not exceed $10,000 in the aggregate);

(m) instituted or settled any claim or lawsuit or was subject to any investigation brought by any third party, including, but not limited to, any Governmental Authority;

(n) acquired any other business or Person (or any significant portion or division thereof), whether by merger, consolidation or reorganization or by purchase of its assets or stock, or acquired any other material assets;

(o) made or changed any material Tax election, changed any method of accounting in respect of material Taxes, entered into any agreement in respect of material Taxes (other than as set forth in this Agreement), amended or filed any income Tax Return (including any estimated Tax Return or other material Tax Return), unless a copy of such Tax Return had been made available to Parent for review a reasonable time prior to filing, entered into any closing agreement with respect to material Taxes, settled any claim or assessment in respect of material Taxes, surrendered any right to claim a material Tax refund, made or requested any material Tax ruling, entered into any transaction giving rise to a material deferred gain or loss, or consented to any extension or waiver of the limitations period applicable to any material Tax claim or assessment;

(p) disclosed any material and proprietary confidential information to any Person that is not subject to a reasonable confidentiality agreement or obligation of confidentiality;

(q) been involved in any employment dispute, including claims or matters raised by any individual, Governmental Authority, or any workers' representative organization, bargaining unit or union regarding, claiming or alleging any labor issue or claim of breach of contract, policy, or past practice, misrepresentation, wrongful or unlawful discharge or any unlawful employment or labor-related practice, breach or action;

(r) entered into any agreement or modification of any Contract pursuant to which any other party is or was granted marketing, distribution, development, delivery, manufacturing or similar rights with regard to any Company Intellectual Property or Company Product, including Company Products or services currently under development by the Company as of the Closing, other than in the Ordinary Course;

(s) accelerated or delayed the payment of, or agreed to any change in the payment terms of, any accounts payable or other Liabilities or accounts receivable or notes payable; or

(t) committed or agreed, in writing or otherwise, to any of the foregoing, except as expressly contemplated by this Agreement and the Transaction Documents.

3.10 Litigation; Compliance with Laws; Restrictions on Business Activities.

(a) Except as set forth on Section 3.10(a) of the Company Disclosure Schedule, there are no, and since the Company's formation, there have not been any Legal Proceedings pending or involving the Company or any of its assets or properties (or, to the Company's Knowledge, any of its directors, officers, or Company Employees (in their capacities as such or relating to their employment, services or relationship with the Company)). To the Company's Knowledge, no such Legal Proceeding has been threatened. There is no Order outstanding against the Company or any of its assets or properties (or, to the Company's Knowledge, any of its directors, officers, or Company Employees (in their capacities as such or relating to their employment, services or relationship with the Company)). To the Company's Knowledge, there are no presently existing facts or circumstances that would constitute any reasonable basis for any such Legal Proceeding or Order.

(b) The Company has complied in all material respects with, is not in violation in any material respect of, and has not received, to the Company's Knowledge any oral, or written notices of violation with respect to, applicable Law (including all COVID-19 Measures and the CARES Act).

3.11 Tax Matters.

(a) The Company has properly completed and timely filed, or will properly complete and timely file, all income and other material Tax Returns required to be filed by it on or before the Closing Date (after giving effect to any valid extensions of time in which to make such filings that were properly granted by a Governmental Authority) and has timely paid, or will timely pay, all material Taxes required to be paid by it on or before the Closing Date (whether or not shown on any Tax Return). All income and other material Tax Returns that have been, or will be, filed by the Company have been or will be prepared in accordance with applicable Law and are accurate and complete in all material respects. There are no Liens for material Taxes against any of the assets of the Company other than Permitted Liens.

(b) The Company has delivered or made available to Parent (i) true, correct and complete copies of all income and other material Tax Returns for the past four Tax years and

(ii) examination reports and statements of deficiencies, adjustments, and proposed deficiencies and adjustments in respect of the Company for all Taxable periods for which the statute of limitations on assessment has not yet expired.

(c) The Company Balance Sheet and the Financial Statements reflect all Liabilities for material unpaid Taxes of the Company for periods (or portions of periods) covered thereon. The Company does not have any Liability for material unpaid Taxes accruing after the dates covered by the Company Balance Sheet Date or the Financial Statements except for Taxes arising in the Ordinary Course subsequent to the dates covered thereon consistent with amounts previously paid with respect to such Taxes for similar periods in prior years, adjusted for changes in Ordinary Course operating results. The Company maintains reserves adequate for the payment of material unpaid Taxes, arising in the Ordinary Course, from the period of the Financial Statements through the Closing Date.

(d) There is (i) no examination, audit, dispute or claim pending or threatened in writing with respect to any income or other material Tax Return of the Company, (ii) no other procedure, proceeding or contest of any refund or deficiency in respect of Taxes pending or on appeal with any Governmental Authority, (iii) no extension or waiver of any statute of limitations on the assessment of any Taxes granted by the Company currently in effect and (iv) no agreement to any extension of time for filing any income or other material Tax Return that has not been filed. No adjustment relating to any income or other material Tax Return filed by the Company has been proposed, asserted or assessed to the Company or any of its representatives. No claim in writing has ever been made by any Governmental Authority in a jurisdiction where the Company does not file income or other material Tax Returns that the Company is or may be subject to taxation by that jurisdiction.

(e) The Company has not been and will not be required to include any adjustment in Taxable income for any Pre-Closing Tax Period (or portion thereof) pursuant to Section 263A of the Code or any comparable provision under state, local or foreign Tax Laws as a result of transactions, events or accounting methods employed prior to the Mergers.

(f) The Company is not a party to or bound by any Tax sharing, Tax indemnity, or Tax allocation agreement, and the Company does not have any Liability or potential Liability to another party under any such agreement, other than any commercial agreement entered into in the Ordinary Course, the primary purpose of which does not relate to Taxes.

(g) The Company has disclosed on its Tax Returns any material Tax reporting position taken in any income or other material Tax Return that could result in the imposition of penalties under Section 6662 of the Code or any comparable provisions of state, local or foreign Law.

(h) The Company has not consummated or participated in, and is not currently participating in, any transaction that was or is a “Tax shelter” transaction as defined in Sections 6662 or 6111 of the Code or the Treasury Regulations promulgated thereunder. The Company has not participated in, and is not currently participating in, any “reportable transaction” within

the meaning of Section 6707A(c) of the Code or Treasury Regulation Section 1.6011-4(b) or any other transaction requiring disclosure under a corresponding or similar provision of state, local, or foreign Law.

(i) Neither the Company nor any predecessor of the Company has (i) ever been a member of a consolidated, combined, unitary or aggregate group of which the Company or any predecessor of the Company was not the ultimate parent corporation, (ii) any Liability for the Taxes of any Person under Treasury Regulations Section 1.1502-6 (or any similar provision of state, local or foreign Law, including any arrangement for group or consortium relief or similar arrangement), as a transferee or successor, by contract (other than any commercial agreement entered into in the Ordinary Course, the primary purpose of which does not relate to Taxes), by operation of law or otherwise or (iii) ever been a party to any joint venture, partnership or other agreement that would reasonably be treated as a partnership for Tax purposes.

(j) The Company will not be required to include any item of income in, or exclude any item of deduction from, Taxable income for any Taxable period (or portion thereof) ending after the Closing Date as a result of any (i) voluntary or required change in method of accounting for a Taxable period ending on or prior to the Closing Date, (ii) "closing agreement" described in Section 7121 of the Code (or any corresponding or similar provision of state, local, or foreign Tax Law) executed on or prior to the Closing Date, (iii) intercompany transactions or any excess loss account described in Treasury Regulations under Section 1502 of the Code (or any corresponding or similar provision of state, local, or foreign Tax Law) with respect to a transaction occurring on or prior to the Closing Date, (iv) installment sale or open transaction disposition made on or prior to the Closing Date, (v) prepaid amount or deferred revenue received on or prior to the Closing Date outside the Ordinary Course or (vi) election under Section 108(i) or Section 965 of the Code (or any corresponding or similar provision of state, local or foreign Tax Law).

(k) The Company is not, and has not at any time been, a "United States real property holding corporation" within the meaning of Section 897(c)(2) of the Code during the applicable period specified in Section 897(c)(l)(A)(ii) of the Code.

(l) The Company is a resident for Tax purposes solely in its country of incorporation, and is not subject to material Tax in any jurisdiction other than its country of incorporation, by virtue of having employees, a permanent establishment, any other place of business in such jurisdiction or by virtue of exercising management and control in such jurisdiction.

(m) All transactions or arrangements between the Company and/or any other Persons affiliated to or with the Company are and were effected pursuant to arm's length terms and have been made in full compliance with applicable transfer pricing Law.

(n) The Company has provided to Parent all documentation relating to any applicable Tax holidays or incentives of which the Company is entitled. The Company is in compliance with the requirements for any applicable Tax holidays or incentives.

(o) The Company has not constituted either a "distributing corporation" or a "controlled corporation" in a distribution of stock qualifying for Tax-free treatment under Section 355 of the Code (i) in the two (2) years prior to the date hereof or (ii) in a distribution that could otherwise constitute part of a "plan" or "series of related transactions" (within the meaning of Section 355(e) of the Code) in conjunction with the Mergers.

(p) The Company has (i) complied in all material respects with all applicable Law relating to the payment, reporting and withholding of Taxes (including withholding of Taxes pursuant to Sections 1441, 1442, 1445 and 1446 of the Code or similar provisions under any foreign Law), (ii) withheld (within the time and in the manner prescribed by applicable Law) in connection with any amounts paid or owing to any Company Employee, Company Contractor, customer, creditor, stockholder or other Person, and paid over to the proper Governmental Authorities (or is properly holding for such timely payment) all amounts required to be so withheld and paid over under all applicable Law, including foreign, federal and state income Taxes, Federal Insurance Contribution Act, Medicare, Federal Unemployment Tax Act, relevant state income and employment Tax withholding Laws, and (iii) timely filed all withholding Tax Returns, for all periods through and including the Closing Date.

(q) Except as set forth in Section 3.11(q) of the Company Disclosure Schedule, no closing agreements, private letter rulings, technical advice memoranda or similar agreements or rulings relating to Taxes have been entered into or issued by any Governmental Authority with or in respect of the Company. The Company has not requested or received a ruling from any Tax Authority.

(r) The Company has (i) complied in all material respects with its obligations under any Law relating to all sales, use, value added, goods and services and similar Taxes ("VAT"), (ii) collected all VAT required to be collected and (iii) timely remitted such Taxes to the appropriate Governmental Authority in accordance with applicable Laws.

(s) The Company has not deferred any payroll Taxes or claimed any payroll Tax Credits permitted by or created pursuant to the CARES Act or pursuant to any other Laws implementing any Order or directive of a Governmental Authority or Public Official (including any other COVID-19 Measure).

(t) No power of attorney has been executed by, or on behalf of, the Company with respect to any matter relating to Taxes which is currently in force.

(u) Notwithstanding any other provision of this Agreement to the contrary, the representations and warranties contained in this Section 3.11 shall constitute the sole and exclusive representations of the Company with respect to Taxes.

3.12 Intellectual Property.

(a) Section 3.12(a) of the Company Disclosure Schedule identifies each item of Company Owned Intellectual Property which is registered to the Company or for which the Company has applied for registration, with a Governmental Authority (the "Registered

Intellectual Property"), in each case, enumerating specifically the applicable filing or registration number, title, jurisdiction in which the filing was made or from which registration was issued, date of filing and issuance and names of all current applicant(s) and registered owner(s), as applicable. The Company has made available to Parent true, correct and complete copies of each item of Registered Intellectual Property, and written documentation evidencing ownership thereof. Except for any non-compliance that, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect, with respect to each item of Registered Intellectual Property, and to the Company's Knowledge, all registration, renewal, maintenance and other payments that are or have become due with respect thereto have been paid by or on behalf of the Company, and all required documents (including any assignments from inventors or authors) have been filed with the relevant Governmental Authorities and authorized registrars. To the Company's Knowledge, the Company is the sole and exclusive owner of and possesses all ownership right, title and interest in and to each item of Registered Intellectual Property, free and clear of any Lien other than Permitted Liens.

(b) Section 3.12(b) of the Company Disclosure Schedule identifies (i) each Contract pursuant to which the Company licenses Intellectual Property material to the Business that is owned by a Person other than the Company (other than (A) agreements between the Company and its employees, in the Company's standard form thereof entered into in the Ordinary Course and pursuant to which such employees assign to the Company all right, title and interest in and to all Intellectual Property developed by such employees, (B) Off-The-Shelf Software, (C) confidentiality or nondisclosure agreements entered into by the Company in the Ordinary Course, (D) Open Source Licenses, (E) licenses of Intellectual Property on a non-exclusive basis that are not material to the Business including any material transfer agreements, and (F) agreements that can be terminated or cancelled by the Company without penalty or within ninety (90) days' or less notice without terminating any grant of rights to the Company of Company Intellectual Property that is material to the Business) (the Intellectual Property licensed pursuant to any such Contract, the "Licensed Intellectual Property") and (ii) each Contract pursuant to which the Company has granted to any Person any license under any Company Owned Intellectual Property (other than non-exclusive licenses of Intellectual Property granted in the Ordinary Course, including any non-exclusive license to a service provider or consultant to use confidential information or Intellectual Property of the Company on a time-limited basis solely for the purpose of providing the applicable services to the Company thereunder and confidentiality or nondisclosure agreements entered into by the Company in the Ordinary Course) (any Contract described in the clause (i) or clause (ii), an "Intellectual Property License"). None of the execution and delivery of any Transaction Document or the performance of the Transactions, will: (A) have a Material Adverse Effect on the continuity, validity or enforceability of any Intellectual Property License or cause a breach, modification, cancellation, termination or suspension of any Intellectual Property License; (B) bind or subject the Company, pursuant to any Intellectual Property License, to any noncompete or other restriction on the operation or scope of the Business that the Company was not bound by or subject to prior to the Closing; (C) obligate the Company pursuant to any Intellectual Property License to pay any royalties, commissions, honorarias, fees or other payments or provide any discounts or reduced payment obligations, in each case, to any Person in excess of those that would have been payable or provided to such Person had the Transactions not taken place; (D) grant any Person pursuant

to any Intellectual Property License any right or access to, or place in or release from escrow, any source code of any Registered Intellectual Property; or (E) grant any Person pursuant to any Intellectual Property License any Intellectual Property right in any Company Intellectual Property.

(c) The Company has possession of, or access to, the source code for each material version of Company Software, as well as all documentation related thereto. Section 3.12(c) of the Company Disclosure Schedule identifies all escrow agreements pertaining to source code for any Company Software. Neither the Company nor any of its Affiliates, nor, to the Company's Knowledge, any Company Employee or Company Contractor, has licensed, distributed, divulged, deposited, delivered or otherwise disclosed to any Person any source code for any Company Software or agreed to or permitted the deposit, disclosure or delivery of any such source code to any Person, excluding distribution and/or disclosure of such source code by the Company or its Affiliates to any Company Employee or Company Contractor that is bound by a written agreement containing customary confidentiality obligations. No license, lease or similar Contract relating to any Company Software includes any obligation to provide any Person access to, or permit any Person to distribute or create derivative works of, the source code for any Company Software, excluding Contracts with Company Employees or Company Contractors that contain customary confidentiality obligations.

(d) The Company owns or has valid right or license to use, possess, reproduce, modify, display, market, perform, publish, transmit, broadcast, sell, license, distribute or otherwise exploit, in the manner currently used by the Company, all Company Intellectual Property used in and necessary for the operation of the Business as currently conducted. Each item of Company Intellectual Property owned or licensed to the Company immediately prior to the Closing will be owned or licensed for use by the Company on substantially the same terms and conditions immediately following the Closing. The Company has taken reasonable steps consistent with industry standards to maintain and protect each item of Company Owned Intellectual Property or Company's interest in any Licensed Intellectual Property. With respect to each item of Company Owned Intellectual Property, (i) such item is not subject to any Order that materially impairs the right of the Company to use, sell or license or enforce such Company Owned Intellectual Property, (ii) the Company has the exclusive right to bring infringement actions with respect to such item, (iii) no Legal Proceeding is pending or, to the Company's Knowledge, threatened that challenges the legality, validity, enforceability or, as applicable, ownership or use of such item, (iv) neither the Company nor any Affiliate thereof has agreed to indemnify any Person for or against any interference, infringement, or misappropriation with respect to such item (other than indemnification provided in the Ordinary Course). The Company has not: (A) transferred full or partial ownership of, or granted any exclusive license with respect to, any Company Owned Intellectual Property that is or, as of the time of such transfer or exclusive license was, owned or purported to be owned by the Company and material to the Business, as currently conducted, to any other Person; or (B) permitted Company Owned Intellectual Property that is or, was at the time, owned or purported to be owned by the Company and material to the Business as currently conducted to enter into the public domain.

(e) Section 3.12(e) of the Company Disclosure Schedule identifies all Open Source Materials (including the name of or link to such Open Source Materials and release number, if any) included in or integrated with (including as a programming dependency) the current version of the Company Software that the Company uses to discover antibodies. The Company has not used any Open Source Materials subject to a Copyleft License in an OSS Triggering Manner. To the Company's Knowledge, the Company is in compliance in all material respects with the terms of all relevant licenses (including all requirements related to notices and making source code available to third parties) for all Open Source Materials used by the Company, including all copyright notice and attribution requirements and all requirements to offer access to source code. The Company has not distributed any Company Source Code pursuant to an Open Source License.

(f) To the Company's Knowledge, the operation of the Business of the Company as currently conducted has not infringed, violated or misappropriated or does infringe, violate or misappropriate any Intellectual Property of any Person, or constituted or does constitute unfair competition or trade practices under the laws of any Jurisdiction. The Company has not received, any written notice, charge, complaint, claim, demand or other initiation of any Legal Proceeding alleging infringement, violation, misuse, abuse, interference with, misappropriation or other violation of the Intellectual Property of any Person by the Company.

(g) To the Company's Knowledge, no Person has committed or is currently engaging in, the infringement, violation, misuse, misappropriation or other violation of the Company Intellectual Property, and there has not been any written notice, charge, complaint, claim, demand or other initiation of any Legal Proceeding by the Company alleging any such infringement, violation, misuse, abuse, interference with, misappropriation or other violation of the Company Owned Intellectual Property.

(h) The Company has taken reasonable measures consistent with industry standards to protect the secrecy and value of all Trade Secrets of the Company that are material to the Business as currently conducted (including the enforcement by the Company of a policy requiring each Company Employee and Company Contractor with access to such Trade Secrets to execute proprietary information and confidentiality agreements, and all Company Employees and Company Contractors with access to such Trade Secrets have executed such agreements). To the Company's Knowledge, the Trade Secrets of the Company that are material to the Business as currently conducted are not part of the public knowledge or literature and have not been used, divulged or appropriated either to the detriment of the Company or, other than subject to a reasonable confidentiality agreement or obligation of confidentiality, for the benefit of any other Person (including any Affiliate of the Company or any officer, director, stockholder, representative of the Company or any Affiliate of any of the foregoing).

(i) Except as would not be reasonably be expected to have a Company Material Adverse Effect, (A) the Company owns, leases or is provided, as a service from a third party contractor, all computer systems, network connectivity, communication equipment and other technology necessary for the operations of the Company as currently conducted (the "Company Systems"); and (B) the Company Systems owned or controlled by the Company are

in good working condition and sufficient for the operation of the Business as currently conducted, including having sufficient capacity to comply with any applicable Laws or Orders, including all COVID-19 Measures, that require remote work by some or all Company Employees or Company Contractors. In the two (2) years prior to the date of this Agreement, there has been no error, breakdown, failure or other material substandard performance of any Company System that are owned or controlled by the Company which has caused any material disruption or damage to the Company or that was, is or will be reportable to any Governmental Authority. In the two (2) years prior to the date of this Agreement, to the Knowledge of the Company, there have been no material unauthorized intrusions or breaches of the security of the Company Systems owned or controlled by the Company.

(j) No funding, resources, personnel or facilities of any Governmental Authority or any public or private university, college or other educational institution or research center was used in the development of any Company Owned Intellectual Property. To the Company's Knowledge, no Company Employee, Company Contractor or current or former director or officer of the Company who has participated in, been involved in or who contributed to the creation or development of any Company Owned Intellectual Property has performed services for any Governmental Authority, university, college or other educational institution or research center during a period of time during which such Person was also performing services for the Company. The Company is not a member of, or party to, any patent pool, industry standards body, trade association or other organization pursuant to the rules of which it is obligated to license any existing or future Company Owned Intellectual Property to any Person.

(k) Each Company Employee, Company Contractor, and current and former director and officer of the Company (other than those employed by a university, college or other educational institution or research center and disclosed in Section 3.12(k) of the Company Disclosure Schedule) who has participated in, been involved in or who contributed to the creation or development of any Company Owned Intellectual Property has executed valid and enforceable written Intellectual Property assignment and confidentiality agreements assigning such Company Owned Intellectual Property to the Company in the Company's standard form, and the Company has provided true, correct and complete copies of such standard forms to Parent. To the Company's Knowledge, no Company Employee, Company Contractor, or current or former director or officer of the Company (A) has any ownership right, license, or similar interest in or with respect to any of the Company Owned Intellectual Property, (B) has assigned or attempted to assign any right, title or interest in or to any Company Owned Intellectual Property to any other Person (including any Affiliate of the Company), (C) is in violation of any provision or covenant of any contractual obligation with any Person by virtue of such Person's being employed by or performing services for the Company, (D) is obligated pursuant to any provision or covenant of any obligation under any Contract with any Person to assign or convey any right, title or interest in or to any Company Owned Intellectual Property to such Person, or (E) has used equipment, facilities or resources, other than equipment, facilities or resources owned, licensed or controlled exclusively by the Company or the applicable Company Employee, Company Contractor, director or officer, in connection with any services or work performed for or on behalf of the Company.

3.13 Privacy and Information Security.

(a) The Company is, and at all times has been, in material compliance with all Privacy Laws in the collecting, processing, using or disclosing of Personal Information (including employee lists) applicable to the Company's Business.

(b) To the Company's Knowledge, there has been no material Security Incident in which any Person gained unauthorized access to or engaged in unauthorized collecting, processing, using or disclosing of: (i) any Personal Information or Confidential Information in the possession or control of the Company or its subcontractors or Confidential Information held by the Company or any other Person on its behalf; or (ii) any databases, computers, servers, storage media (e.g., backup tapes), network devices or other devices or systems that collect, process, use or disclose Personal Information or Confidential Information owned or maintained by the Company or maintained on the Company's behalf by its subcontractors or vendors, or any other Persons (each, a "Security Breach") that resulted in the provision of notice to any data subject or Governmental Authority as required by applicable Healthcare Laws or Privacy Laws.

(c) To the extent applicable to the Company's Business, the Company is, and at all times has been in material compliance with the terms of all Contracts to which the Company is a party relating to data privacy, security or breach notification (including provisions that impose conditions or restrictions on the collection, use, storage, transfer or disposal of Personal Information).

(d) The Company implements, follows and clearly and conspicuously posts Privacy Policies providing complete and accurate notice of the data privacy, data protection and information security practices of the Company regarding the collecting, processing, using or disclosing of Personal Information to the extent required for compliance in material respects with applicable Privacy Laws.

(e) The Company has made all necessary disclosures to, and obtained all necessary consents from, users, customers, suppliers, Company Employees, Company Contractors, Governmental Authorities or other applicable Persons for compliance with applicable Privacy Laws in all material respects.

(f) Except as would not be material to the Company, the Company contractually obligates and has obligated all subcontractors who collect, process, use or disclose Personal Information for the Company to contractual terms regarding compliance with applicable Privacy Laws and, as applicable, relating to the protection of the Company's IT Systems and the Company's products and services, and any Personal Information thereon.

(g) The Company has and continues to maintain commercially reasonable security measures, and controls, technologies, policies and safeguards designed to protect Personal Information and Confidential Information from a Security Breach, including controls designed to protect such Personal Information and Confidential Information that the Company receives in the Ordinary Course from security breaches and incidents resulting in loss or illegal

or unauthorized access, use, modification, disclosure or other misuse (each, a "Security Incident") as required under applicable Privacy Laws.

(h) Each Company Employee who has access to Personal Information has received training regarding information security that is relevant to each such Company Employee's role and responsibility within the Business and such Company Employee's access to Personal Information.

(i) The Company has established one or more incident response plans to address any actual or threatened Security Breach. The Company has implemented and maintains commercially reasonable organizational, administrative, physical and technical safeguards designed to ensure the continued, uninterrupted and error free operation of the Company's IT Systems, including employing commercially reasonable security, maintenance, disaster recovery, redundancy, backup, archiving and virus or malicious device scanning/protection measures.

(j) There is no Legal Proceeding initiated by any other Person pending or threatened in writing against the Company or, to the Company's Knowledge, its agents or subcontractors alleging a violation of any Person's data privacy, data protection or data security rights by the Company, nor has there been any Order affecting the Company's or, to the Company's Knowledge, its agents' or subcontractors' use, collection, disclosure or other processing of any Personal Information. To the Company's Knowledge, no event has occurred or circumstance exists that, with or without notice or lapse of time or both, would reasonably be expected to constitute a reasonable basis for such Legal Proceeding relating to privacy or data protection. The Company has not received any written communications from or, to the Company's Knowledge, been the subject of any investigation by, the U.S. Federal Trade Commission or any data protection authority or other Governmental Authority regarding any actual or alleged violation of Privacy Laws in the Company's acquisition, use, disclosure or other collecting, processing, using or disclosing of any Personal Information.

(k) Neither the execution and delivery of any Transaction Document nor the consummation of the Transactions, including any transfer of Personal Information in the Transactions, will, directly or indirectly, with or without notice or lapse of time or both, violate in any material respect: (i) any Privacy Law as it currently exists as or, to the extent it remains applicable, as it existed at any time during which any Personal Information was collected or obtained by or on behalf of the Company; (ii) any Privacy Policy as it currently exists or, to the extent it remains applicable, as it existed at any time during which any Personal Information was collected or obtained by or on behalf of the Company; or (iii) any other privacy and data security requirements imposed on the Company under any Contracts to which the Company is a party. Immediately following the Closing, the Company (or the Surviving Entity, as applicable) will have the right to use such Personal Information on terms and conditions identical in all material respects to those on which the Company had the right to use such Personal Information immediately prior to the Closing.

3.14 Health Care Matters.

(a) The Company and each of its Affiliates, Company Employees, to the Company's Knowledge, Company Contractors and any other Person who provides services for or on behalf of the Company are and have been in compliance in all material respects with all applicable Health Care Laws.

(b) No enforcement, regulatory or administrative Legal Proceeding has been filed, commenced, threatened in writing or, to the Company's Knowledge, threatened orally involving the Company or any of the Company's Affiliates alleging any failure to comply in all respects with Health Care Laws. No subpoena, demand, civil investigative demand, or other written notice from any Governmental Authority investigating, inquiring into or otherwise relating to any actual or alleged violation of any applicable Laws, including any Health Care Law, has been filed or received by the Company or any of its Affiliates. Neither the Company nor any of its Affiliates has made a voluntary disclosure to the Department of Health and Human Services Office of Inspector General ("OIG") pursuant to the OIG's self-disclosure protocol or otherwise.

(c) There is no act, omission, event or circumstance of which the Company has knowledge that would reasonably be expected to give rise to or lead to any material enforcement, regulatory or administrative Legal Proceeding against the Company or any of the Company's Affiliates related to material compliance with Health Care Laws. There are no written, or to the Knowledge of the Company, oral, lawsuits, actions, arbitrations, proceedings, charges, complaints or investigations, pending or threatened, with respect to any alleged violation by the Company or any of the Company's Affiliates, or any other Persons acting for or on behalf of any of the foregoing, of any Health Care Law, and the Company and its Affiliates, or any other Persons acting for or on behalf of any of the foregoing, are not party to or subject to, nor is any product subject to, any corporate integrity agreements, monitoring agreements, consent decrees, deferred prosecution agreements, settlement orders or similar Contracts with or imposed by any Governmental Authority related to any Health Care Law, and no such Contract is currently pending or threatened. Neither the Company nor any of the Company's Affiliates, or, to the Knowledge of the Company any other Persons acting for or on behalf of any of the foregoing, are a defendant or named party in any unsealed qui tam/False Claims Act litigation.

(d) While in the employ of the Company, no current or former members, officers, partners, directors, managing employees of the Company, and to the Knowledge of the Company, any contractors, or agents (as those terms are defined in 42 C.F.R. Section 1001.1001): (i) has been debarred, suspended or excluded from participation in the Medicare, Medicaid or any other state or federal healthcare program and has not been included on the OIG List of Excluded Individuals and Entities (LEIE); (ii) has been charged with or convicted of a criminal offense related to any Health Care Law, or been convicted of a criminal offense relating to fraud, theft, embezzlement, breach of fiduciary responsibility, or other financial misconduct in connection with the delivery of a health care item, service, or a program operated by or financed in whole or in part by any Governmental Authority, or engaged in any conduct that has or would reasonably be expected to result in any such debarment, exclusion, disqualification, suspension,

or ineligibility, including, without limitation, (A) debarment under 21 U.S.C. Section 335a or any similar law; (B) exclusion under 42 U.S.C. Section 1320a-7 or any similar law or regulation; (C) exclusion under 48 CFR Subpart Section 9.4, the System for Award Management Nonprocurement Common Rule; or (D) disqualification under any FDA Laws or Regulations; (iii) has had a civil monetary penalty assessed against it, him or her under Section 1128A of the Social Security Act; (iv) is currently listed on the General Services Administration published list of parties excluded from federal procurement programs and non-procurement programs; (v) is the target or subject of any current or threatened investigation relating to any offense related to Medicare, Medicaid or any other state or federal health care program; (vi) is a party to, is bound by, or has a continuing obligation in respect of any Order, individual integrity agreement, corporate integrity agreement, consent decree, settlement order, criminal or civil fine or penalty, or other formal or informal agreement (e.g., deferred prosecution agreement) with any Governmental Authority concerning compliance with any Health Care Law fraud, theft, embezzlement, breach of fiduciary responsibility, financial misconduct, or obstruction of an investigation of controlled substances; or (vii) has engaged in any activity that is in violation of, or is cause for civil penalties or mandatory or permissive exclusion under, any Health Care Law.

(e) Neither the Company nor any of its Affiliates, or, to the Knowledge of the Company, any other Persons, acting for or on behalf of the Company has (i) made, paid or received any unlawful bribes, kickbacks or other similar payments to or from any Person (including any customer or supplier) or Governmental Authority, (ii) made or paid any contributions, directly or indirectly, to a domestic or foreign political party or candidate or (iii) made or paid any improper foreign payment (as defined in the Foreign Corrupt Practices Act).

(f) The Company holds all required licenses, certificates, approvals, permits, exemptions, authorizations or registrations set forth in Section 3.14(f) of the Company Disclosure Schedule (the "Scheduled Permits"), as required for the Company under applicable Health Care Laws in its performance of the Business as currently conducted.

3.15 Other Regulatory Compliance.

(a) To the extent the Company's Business as currently conducted, is directly subject to the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §301 et. seq., or the United States Public Health Service Act or the regulations promulgated thereunder, including without limitation good clinical practices, good laboratory practices and good manufacturing practices regulations and any similar foreign laws and regulations (collectively, "FDA Laws and Regulations"), the Company has complied with FDA Laws and Regulations in all material respects.

(b) The Company has not received any written notice or communication alleging noncompliance with any applicable FDA Laws and Regulations. The Company is not subject to any enforcement, regulatory, or administrative proceedings involving any FDA Laws and Regulations and, to the Company's Knowledge, no such proceedings have been threatened. There is no civil, criminal, or administrative action, suit, demand, claim, complaint, hearing, investigation, demand letter, warning letter, proceeding, or request for information pending against the Company alleging violation of FDA Laws and Regulations.

(c) There are no material permits, licenses, registrations, clearances, approvals that are pending or have been issued under FDA Laws and Regulations ("FD&C Permits") required for the Company to conduct its business operations in or outside the United States as presently conducted.

(d) The Company has neither sponsored nor conducted any nonclinical, preclinical or clinical studies, tests or trials subject to FDA Good Laboratory Practices or Good Clinical Practices.

3.16 Contracts.

(a) Section 3.16 of the Company Disclosure Schedule sets forth a list of each of the following Contracts (other than with respect to Company Employee Plans) to which the Company is a party or by which it or any of its assets are bound that are in effect as of the date hereof (together with all Insurance Policies, the "Material Contracts" and each a "Material Contract"); provided, that for purposes of this Section 3.16(a), "Contract" shall be deemed to include any single Contract or any group of related Contracts:

(i) any Contract providing for payments by or to the Company after the date of this Agreement in an aggregate amount of $50,000 or more on an annualized basis, with the exception of any employment agreements, offer letters, or independent contractor or consulting agreements;

(ii) any exclusive dealer, distributor, reseller or similar agreement, or any Contract providing for the exclusive grant of rights to reproduce, license, market or sell Company's products or services to any other Person;

(iii) (A) any joint venture Contract, (B) any Contract involving any strategic alliance, strategic partnership or other similar arrangement, (C) any Contract that involves a sharing of revenues, profits, cash flows, expenses or losses with any other Person and (D) any Contract that involves the payment of royalties to any other Person;

(iv) any Contract (A) with any of the Company's officers, directors or any Company Employee, Company Contractor, other than (1) employee offer letters, employment agreements or other similar arrangements entered into in the Ordinary Course which are terminable on less than thirty (30) days' notice without Liability (beyond the statutory severance pay to which they are entitled) to the Company, (2) employee invention assignment and confidentiality agreements on the Company's standard form and (3) Company Option or Company SAR grant and exercise agreements on the Company's standard form or (B) with any Person with whom the Company does not deal at arm's length;

(v) any Contract (A) pursuant to which any other party is granted exclusive rights or "most favored party" rights of any type or scope with respect to any of the Company Products, Company Intellectual Property or Company

Data, (B) containing any non-competition covenants that impose restrictions on the Company relating its exploitation of to the Company Products, Company Intellectual Property or Company Data, (C) that materially limits or would materially limit the freedom of the Company or any of its successors or assigns or their respective Affiliates to engage or participate, or compete with any other Person, in any line of business, market or geographic area with respect to the Company Products or the Company Intellectual Property, or to make use of any Company Intellectual Property, Company Data, or Personal Information including any grants by the Company of exclusive rights or licenses to Company Owned Intellectual Property, (D) imposes any minimum sales or other requirements on the Company or otherwise permits the counterparty to claw back amounts previously paid to the Company, or (E) otherwise prohibits, limits or otherwise restricts in any way the Company from soliciting customers or suppliers, or soliciting or hiring employees of any other Person;

(vi) any standstill or similar agreement containing provisions prohibiting a third party from purchasing Equity Interests of the Company or assets of the Company or otherwise seeking to influence or exercise control over the Company;

(vii) any Intellectual Property License that involves aggregate annual individual license or maintenance fees of $20,000 or more on an annualized basis (except those Contracts that are excluded from the disclosure requirement under Section 3.12(b)); any license, sublicense or other Contract pursuant to which the Company has agreed to any restriction on the right of the Company to use or enforce any Company Owned Intellectual Property or pursuant to which the Company agrees to encumber, transfer or sell ownership rights in or with respect to any Company Owned Intellectual Property, Company Data or Personal Information;

(viii) any Contract providing for the development of any Software, technology or Intellectual Property rights, independently or jointly, either by or for the Company (other than employee invention assignment agreements and consulting agreements with Company Employees or Company Contractors on the Company's standard form of agreement, copies of which have been provided to Parent);

(ix) any Contract to license or authorize any third party to exclusively manufacture or reproduce any of the Company Products, including Company Products or services currently under development by the Company as of the Closing, Company Owned Intellectual Property, Company Data or Personal Information;

(x) any settlement agreement;

(xi) any Contract pursuant to which rights of any third party are triggered or become exercisable, or under which any other consequence, result or effect arises, in connection with or as a result of the execution of this Agreement or the consummation of the Mergers or the other Transactions, either alone or in combination with any other event;

(xii) any Contract or plan (including any share option, merger and/or share bonus plan) relating to the sale, issuance, grant, exercise, award, purchase, repurchase or redemption of any Equity Interests of the Company;

(xiii) any Contract with any labor union or any collective bargaining agreement or similar Contract with Company Employees;

(xiv) any Contract (A) evidencing Company Debt, (B) for capital expenditures in excess of One Hundred Thousand Dollars ($100,000) or (C) requiring the Company to post or provide any credit support or security of any variety (including bonds or letters of credit);

(xv) any Contract pursuant to which the Company is a lessor or lessee of any machinery, equipment, motor vehicles, office furniture, fixtures or other personal property involving individual lease payments of more than One Hundred Thousand Dollars ($100,000) in any annual period;

(xvi) any Contract pursuant to which the Company has (A) acquired a business or entity, or assets of a business or entity, whether by way of merger, consolidation, purchase of stock, purchase of assets, license or otherwise, (B) any material ownership interest in any other Person or (C) granted to any Person any preferential rights to purchase any assets or properties of the Company;

(xvii) any Contract with any Governmental Authority; and

(xviii) any Contract with a professional employer organization or other employee staffing agency (excluding Contracts with recruiting agencies and consultants, in each case, (A) that are terminable by the Company at any time without further cost or other Liability and (B) under which the Company has no Liabilities as of the First Effective Time).

(b) The Company has (and, to the Company's Knowledge, each other party thereto has) performed all of the obligations required to be performed by it and is entitled to all benefits under, and is not in default or alleged in writing to be in default in respect of, any Material Contract. To the Company's Knowledge, each Material Contract is in full force and effect, subject only to the effect, if any, of applicable bankruptcy and other similar applicable Laws affecting the rights of creditors generally and rules of law governing specific performance, injunctive relief and other equitable remedies. To the Company's Knowledge, there exists no default or event that, with or without the giving of notice, the lapse of time or the happening of any other event or condition, would reasonably be expected to (i) become a default or event of

default under any Material Contract that would (ii) give any third party (A) the right to accelerate the maturity or performance of any obligation of the Company under any Material Contract; (B) the right to cancel, terminate or modify any Material Contract; or (C) the right to indemnification or other recourse against the Company or any of its Affiliates. The Company has not received any written notice or communication regarding any actual or possible violation or breach of, default under, or intention to cancel or modify any Material Contract. Neither the Company, nor, to the Company's Knowledge, any other party to any Material Contract has declared, stated or threatened to declare or state, (x) any defense to performance under or (y) any legal theory or other reason to cease or delay performance under, any Material Contract (including impossibility, frustration of purpose, force majeure or any other legal doctrine or concept). The Company has made available to Parent copies of each Material Contract that are, in each case, true, complete and accurate.

3.17 Company Employee Plans.

(a) Section 3.17(a) of the Company Disclosure Schedule sets forth a true, complete and correct list of every Company Employee Plan (excluding for listing purposes (i) any Equity Interest agreements, and (ii) any offer letters or employment agreements where employment is "at will" (in the case of offer letters or employment agreements governed by U.S. Law) and that do not contain any change in control pay provisions or severance beyond statutory severance pay or provide for written notice prior to termination beyond statutory notice).

(b) True, complete and correct copies of the following documents, with respect to each Company Employee Plan, where applicable, have been made available or previously been delivered to Parent: (i) all documents embodying or governing such Company Employee Plan (or for unwritten Company Employee Plans a written description of the material terms of such Company Employee Plan) and any funding medium for the Company Employee Plan; (ii) the most recent IRS determination or opinion letter; (iii) the most recently filed Form 5500; (iv) the most recent actuarial valuation report; (v) the most recent summary plan description (or other descriptions provided to employees) and all modifications thereto; (vi) non-discrimination testing results; and (vii) all non-routine correspondence to and from any governmental agency.

(c) Each Company Employee Plan that is intended to qualify under Section 401(a) of the Code is so qualified and has received a favorable determination or approval letter from the IRS with respect to such qualification, or may rely on an opinion letter issued by the IRS with respect to a prototype plan adopted in accordance with the requirements for such reliance, or has time remaining for application to the IRS for a determination of the qualified status of such Company Employee Plan for any period for which such Company Employee Plan would not otherwise be covered by an IRS determination and, to the Company's Knowledge, no event or omission has occurred that would cause any Company Employee Plan to lose such qualification or require corrective action to the IRS or Company Employee Plan Compliance Resolution System to maintain such qualification.

(d) Neither the Company nor any ERISA Affiliate has ever maintained, contributed to, or been required to contribute to or had any liability or obligation (including on

account of any ERISA Affiliate) with respect to (whether contingent or otherwise) (i) any employee benefit plan that is or was subject to Title IV of ERISA, Section 412 of the Code, Section 302 of ERISA, (ii) a Multiemployer Plan, (iii) any funded welfare benefit plan within the meaning of Section 419 of the Code, (iv) any "multiple employer plan" (within the meaning of Section 210 of ERISA or Section 413(c) of the Code), or (v) any "multiple employer welfare arrangement" (as such term is defined in Section 3(40) of ERISA), and neither the Company nor any ERISA Affiliate has ever incurred any liability under Title IV of ERISA that has not been paid in full.

(e) Neither the Company nor any Subsidiary of the Company provides or has any obligation to provide health care or any other non-pension benefits to any employees after their employment is terminated (other than as required by Part 6 of Subtitle B of Title I of ERISA or similar state law or for a limited period of time following a termination of employment pursuant to the terms of an existing employment, severance or similar agreement in effect as of the date hereof) and the Company has never promised to provide such post-termination benefits.

(f) The per share exercise price of each Company Option and each Company SAR is no less than the fair market value of a share of Company Common Stock on the date of grant of such Company Option or Company SAR, as applicable, as determined by the Board in good faith and in a manner consistent with Section 409A of the Code. Each Company Employee Plan that constitutes in any part a nonqualified deferred compensation plan within the meaning of Section 409A of the Code has been operated and maintained in all material respects in operational and documentary compliance with Section 409A of the Code and applicable guidance thereunder. No payment to be made under any Company Employee Plan is, or to the Company's Knowledge, will be, subject to the penalties of Section 409A(a)(1) of the Code.

(g) Any transfer of property which was subject to a substantial risk of forfeiture and which would otherwise have been subject to taxation under Section 83(a) of the Code is covered by a valid and timely filed election under Section 83(b) of the Code, and a copy of such election has been provided to the Company.

(h) Except as set forth in Section 2.17(h) of the Company Disclosure Schedule, no Company Employee Plan is subject to the laws of any jurisdiction outside the United States.

(i) No Company Employee Plan provides for any tax "gross-up" or similar "make-whole" payments.

(j) The Company is and has been in compliance with the Affordable Care Act in all material respects and has made an offer of affordable minimum essential coverage to its respective employees in the manner contemplated under Section 4980H of the Code to the extent required to avoid the adverse Tax consequences thereunder, and the Company is not otherwise liable or responsible for any assessable payment, Taxes or penalties under Section 4980H of the Code or under the Affordable Care Act or in connection with requirements relating thereto.

(k) Neither the execution and delivery of this Agreement, the approval of this Agreement by the Sellers, nor the consummation of the transactions contemplated hereby could (either alone or in conjunction with any other event) (i) result in, or cause the accelerated vesting payment, funding or delivery of, or increase the amount or value of, any payment or benefit to any employee, officer, director or other service provider of the Company or any of Subsidiary of the Company (ii) result in any excess "parachute payment" as defined in Section 280G(b)(2) of the Code (whether or not such payment is considered to be reasonable compensation for services rendered); or (iii) result in a requirement to pay any tax "gross-up" or similar "make-whole" payments.

3.18 Employees; Labor Relations.

(a) The Company has provided or made available to Parent true, correct and complete copies of each of the following: (i) all forms of offer letters, (ii) all forms of employment agreements and severance agreements, (iii) all forms of services agreements and agreements with Company Contractors, (iv) all forms of confidentiality, non-competition or inventions agreements between Company Employees or Company Contractors and the Company (and a true, correct and complete list of employees, Company Contractors and/or others not subject thereto), (v) a schedule of bonus commitments made to Company Employees and (vi) accurate and complete copies of the Company's written employment policies. All Company employees and independent contractors have signed an offer letter or employment agreement and a proprietary information agreement on the Company's standard form.

(b) The Company currently employs 16 full-time employees, 0 part-time employees and engages 7 individual independent contractors. No labor union or any representative thereof represents, or to the Company's Knowledge has made any attempt to organize or represent, employees of the Company. The Company is not a party to any collective bargaining agreements. There are no strikes or lockouts or work stoppages or slowdowns pending or, to the Knowledge of the Company, threatened against the Company. The Company does not have any unsatisfied obligations of any nature due to any of its former employees or independent contractors, and the Company does not have any material liability arising from the termination of its relationship with such employees and contractors. Each former Company employee whose employment was terminated by the Company has entered into a separation agreement providing for a release of claims against the Company. The Company does not have any material liability relating to the classification of any Person as an independent contractor rather than an employee.

(c) No current Company employee has given notice to the Company and, to the Company's Knowledge, no current Company employee intends to terminate his or her employment with the Company. The employment of each of the current Company employees is "at will" and the Company does not have any obligation to provide a written notice prior to terminating the employment of any Company Employee. Except as set forth on Section 3.18(c) of the Company Disclosure Schedule, the Company does not have, and, to the Company's Knowledge, no other Person has, (i) entered into any Contract that obligates or purports to obligate Parent, the First-Step Surviving Corporation, the Surviving Entity or any of their

respective Affiliates to make an offer of employment or engagement to any Company Employee or Company Contractor and/or (ii) promised or otherwise provided any assurances (contingent or otherwise, whether written or not) to any Company Employee or Company Contractor of the Company of any terms or conditions of employment with Parent, the First-Step Surviving Corporation, the Surviving Entity or any of their respective Affiliates following the Closing.

(d) To the Company's Knowledge, no officer or director of the Company or any current Company employee is a party to or bound by any Contract that (i) prohibits the employee from working for the Company or (ii) requires him or her to transfer, assign or disclose intellectual property created during his or her employment with the Company to anyone other than the Company.

(e) The Company has not experienced a "plant closing", "business closing", or "mass layoff" as defined in the Worker Adjustment Retraining Notification Act of 1988, as amended, or any similar state, local or foreign Law or regulation affecting any site of employment of the Company or one or more facilities or operating units within any site of employment or facility of the Company during the ninety (90)-day period preceding the date hereof.

(f) There are no pending claims against the Company under any workers' compensation plan or policy or for long-term disability. There are no controversies pending or, to the Company's Knowledge, threatened, between the Company, on the one hand, and any Company Employee or Company Contractor, on the other hand. Since inception, there have been no Legal Proceedings, insurance claims, or other employment disputes of any nature pending or, to the Company's Knowledge, threatened against the Company (including any claim from any Company Employee or Company Contractor).

(g) None of the execution, delivery and performance of this Agreement, the consummation of the Transactions, any termination of employment or service of any Person and any other event in connection therewith or subsequent thereto will, individually or together or with the occurrence of some other event (whether contingent or otherwise), (i) result in any material payment or benefit (including severance, unemployment compensation, golden parachute, bonus or otherwise) becoming due or payable, or required to be provided, to any Company Employee, director, or Company Contractor (other than payment of Merger Consideration to any such director, Company Employee or Company Contractor with respect to shares of Company Common Stock held by them as of the Closing), (ii) materially increase the amount or value of any benefit or compensation otherwise payable or required to be provided to any Company Employee, Company Contractor or current or former director, (iii) result in the acceleration of the time of payment, vesting or funding of any such benefit or compensation, (iv) increase the amount of compensation due to any Person or (v) result in the forgiveness in whole or in part of any outstanding loans made by the Company to any Person.

3.19 Environmental and Safety Laws. Except as could not reasonably be expected to have a Company Material Adverse Effect, (a) the Company is and has been in compliance with all Environmental Laws; (b) there has been no release or to the Company's knowledge any threatened release of any pollutant, contaminant or toxic or hazardous material, substance or

waste or petroleum or any fraction thereof (each, a "Hazardous Substance"), on, upon, into or from any site currently or heretofore owned, leased or otherwise used by the Company; (c) there have been no Hazardous Substances generated by the Company that have been disposed of or come to rest at any site that has been included in any published U.S. federal, state or local "superfund" site list or any other similar list of hazardous or toxic waste sites published by any governmental authority in the United States; and (d) there are no underground storage tanks located on, no polychlorinated biphenyls ("PCBs") or PCB-containing equipment used or stored on, and no hazardous waste as defined by the Resource Conservation and Recovery Act, as amended, stored on, any site owned or operated by the Company, except for the storage of hazardous waste in compliance with Environmental Laws. The Company has made available to Parent true and complete copies of all material environmental records, reports, notifications, certificates of need, permits, pending permit applications, correspondence, engineering studies and environmental studies or assessments.

For purposes of this Section 3.19, "Environmental Laws" means any law, regulation, or other applicable requirement relating to (a) releases or threatened release of Hazardous Substance; (b) pollution or protection of employee health or safety, public health or the environment; or (c) the manufacture, handling, transport, use, treatment, storage, or disposal of Hazardous Substances.

3.20 Insurance. Section 3.20 of the Company Disclosure Schedule lists each insurance policy and bond maintained by or on behalf of the Company (the "Insurance Policies"), the name of the insurer under each such Insurance Policy, the type of Insurance Policy, the term and termination date of such Insurance Policy, the coverage and premium amounts, and any applicable deductible as of the date hereof, as well as all material claims made under such policies and bonds since inception. A copy of each such Insurance Policy has been provided to Parent. All of such Insurance Policies are in full force and effect, subject to the Enforceability Exceptions, and the Company is not in default with respect to any of its obligations under any of such Insurance Policies. All premiums due and payable under all such policies and bonds have been timely paid and the Company is otherwise in material compliance with the terms of such policies and bonds. To the Company's Knowledge, there is no threatened termination of, or material premium increase with respect to, any Insurance Policy.

3.21 Certain Business Relationships. Except as set forth on Section 3.21 of the Company Disclosure Schedule, none of the officers or directors of the Company, none of the Company Employees, none of the Sellers and, to the Company's Knowledge, none of the immediate family members or Affiliates of any of the foregoing, (i) has any direct or indirect ownership, participation, royalty or other interest in, or is an officer, director, employee of or consultant or contractor for any Person that, directly or indirectly, competes with, or does business with, or has any contractual arrangement with, the Company or any of its Affiliates (except with respect to any interest in less than five percent (5%) of the stock of any corporation whose stock is publicly traded), (ii) is or has ever been a party to, or is or has ever been otherwise directly or indirectly interested in, any Contract to which the Company is or was a party or by which the Company or any of its assets is or was bound, except for normal compensation for services as an officer, director or employee thereof and for Contracts relating

to the grant of Company Options or Company SARs, (iii) has or has ever had any interest in any property, real or personal, tangible or intangible (including any Intellectual Property) that is or has been used in, or that relates to, the business of the Company, except for the rights of stockholders of the Company under applicable Law, (iv) has any claim or right against the Company, in each case, except for normal compensation for services as an officer, director or Company Employee incurred in the Ordinary Course or (v) has any indebtedness owing to the Company. The Company does not have any claim or right against, or owe any indebtedness to, any of its officers, directors or Company Employees, any Seller or any immediate family member or Affiliate of any of the foregoing.

3.22 Books and Records. The Company has made available to Parent true, correct and complete copies of (a) all documents identified on the Company Disclosure Schedule, (b) the Company Governing Documents, (c) the minute books containing records of all proceedings, consents, actions and meetings of the Company's board of directors, committees of the Company's board of directors and stockholders of the Company, and (d) all currently effective Permits. The minute books of the Company provided to Parent contain a true, correct and complete summary of all meetings of directors and of stockholders of the Company or actions by written consent since the time of incorporation of the Company through the date hereof.

3.23 Permits. The Company possesses, and is in compliance in all material respects with all terms and conditions of, all required licenses, approvals, permits, registrations, exemptions, and authorizations of any Governmental Authority that are material to the operation of the Business as currently conducted (collectively "Permits"). To the Company's Knowledge, the Company is not in default or violation in any material respect under any of its Permits and no event, circumstances or state of facts has occurred which, with notice or the lapse of time or both, would constitute a default or violation in any material respect under any of the Permits. There are no Legal Proceedings pending or, to the Company's Knowledge, threatened relating to the suspension, revocation or termination of any of the Company's Permits. The Company has made all required material declarations or filings with applicable Governmental Authorities in each case that are necessary to enable it to lawfully carry on its Business as currently conducted. All Permits held by the Company are set forth on Section 3.23 of the Company Disclosure Schedule.

3.24 Anti-Bribery and Anti-Corruption.

(a) Neither the Company nor, to the Company's Knowledge, any of the officers, directors, stockholders, Company Employees, Company Contractors, agents or representatives of the Company acting for or on behalf of the Company, has directly or indirectly made or attempted to make any contribution, gift, bribe, rebate, payoff, influence payment, kickback or other payment to any Person, private or public, regardless of form, whether in money, property, or services, (i) to obtain favorable treatment for business or Contracts secured, (ii) to pay for favorable treatment for business or Contracts secured, (iii) to obtain special concessions or for special concessions already obtained, or (iv) in violation of any requirement of applicable Law in each jurisdiction where the Company is conducting or has conducted business

(including the United States Foreign Corrupt Practices Act (FCPA) and the U.K. Anti-Bribery Act).

(b) The Company and its officers, directors, stockholders, Company Employees, Company Contractors, agents or representatives of the Company acting for or on behalf of the Company, are and have been in the five (5) years prior to the date of this Agreement in compliance in all material respects with all applicable Laws concerning the trade of any products, technology, technical data and services and trade sanctions ("Anti-Money Laundering, Export Control and Sanctions Laws") to the extent applicable to the Company, including: (i) the Export Administration Regulations, (including the anti-boycott regulations contained therein) and Foreign Trade Regulations administered by the U.S. Department of Commerce; (ii) the International Traffic in Arms Regulations administered by the U.S. Department of State; (iii) the Laws administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"); (iv) the Laws administered by the Bureau of Customs and Border Protection of the U.S. Department of Homeland Security, (v) the U.S. Bank Secrecy Act and implementing regulations; (vi) the USA PATRIOT ACT; and (vii) the applicable anti-money laundering, export control and sanctions laws and regulations of any other relevant jurisdiction. Without limiting the foregoing, in connection with the business of the Company: (A) the Company has obtained all export licenses and other approvals, timely filed all filings required under applicable Anti-Money Laundering, Export Control and Sanctions Laws, and has determined the appropriate export control classifications to all products, in each case as required for its exports of products, software and technologies from the United States and any other applicable jurisdiction; (B) the Company is in material compliance with the terms of all applicable export licenses, classifications, filing requirements or other approvals required under applicable Anti-Money Laundering, Export Control and Sanctions Laws; (C) there are no pending or, to the Company's Knowledge, threatened Legal Proceedings against the Company with respect to compliance with applicable Anti-Money Laundering, Export Control and Sanctions Laws; and (D) to the Company's Knowledge, there are no pending Legal Proceedings with respect to compliance with applicable Anti-Money Laundering, Export Control and Sanctions Laws.

(c) Neither the Company, any of its respective directors, officers, or employees, nor, to the Company's Knowledge, any of their respective agents or other Persons acting on behalf of the Company (i) has been or is designated on, or is directly or indirectly, individually or in the aggregate, 50% or more owned or controlled by any Person that has been or is designated on, any list of any Governmental Authority as Persons with whom U.S. Persons cannot transact, including OFAC's Specially Designated Nationals and Blocked Persons List, or (ii) is organized under the Laws of, or resident in any country or territory which is itself the subject of any comprehensive U.S. economic sanctions by any Governmental Authority.

(d) There are no pending or, to the Company's Knowledge, claims threatened in writing against the Company with respect to compliance with applicable Anti-Money Laundering, Export Control and Sanctions Laws and, to the Company's Knowledge, there are otherwise no actions, conditions, or circumstances pertaining to the Business that would

reasonably be expected to give rise to any material future claims of violation of Anti-Money Laundering, Export Control and Sanctions Laws.

(e) Neither the Company, nor any of its respective directors, officers, or employees, or representatives, have been convicted of violating any Anti-Money Laundering, Export Control and Sanctions Laws or, to the Company's Knowledge, has been, or is currently, subject to any investigation or Legal Proceeding by a Governmental Authority for potential violation of any applicable Anti-Money Laundering, Export Control and Sanctions Laws.

(f) The Company is and has at all times been operated in material compliance with the Tariff Act of 1930, as amended, and with all Laws administered by the U.S. Bureau of Customs and Border Protection.

3.25 Prior Obligations. None of the Major Stockholders has been, nor is any Major Stockholder currently, in breach or violation of any provision of any Contract related to Company Owned Intellectual Property between such Major Stockholder and any Person who was an employer or retained the consulting services of such Major Stockholder at any time since the formation of the Company (each, a "Prior Entity"). To the Company's Knowledge, neither the operation of the Business of the Company as currently conducted nor the use of the Company Intellectual Property in connection therewith has infringed, violated or misappropriated or does infringe, violate or misappropriate any Intellectual Property of any Prior Entity. It is not, and will not be, necessary for the Company to use any Intellectual Property developed solely or jointly with others by any Major Stockholder prior to such Major Stockholder's employment or engagement as a consultant by the Company, including in connection with any for-profit enterprise, any Governmental Authority or any public or private academic or medical institution with which such Major Stockholder may be affiliated now or may have been affiliated in the past, in each case other than any such Intellectual Property that has been validly assigned by the Major Stockholder to the Company, or licensed to the Company by such enterprise or institution at or prior to the Closing.

3.26 PPP Matters.

(a) The Company obtained a loan (the "PPP Loan") under the Paycheck Protection Program (as described in the CARES Act) in an amount of $187,990 from Silicon Valley Bank.

(b) Except for the PPP Loan, the Company has not applied for, or directly or indirectly accepted or received, any benefit (monetary or otherwise), loan, payment, funding, credit, relief, forgiveness or deferral arising under the CARES Act or any similar Law enacted or promulgated by the government of the United States of America or any political subdivision thereof in response to or in connection with COVID-19 (all as in effect from time to time, together with all amendments thereto and all regulations and guidance issued by any Governmental Authority with respect thereto, "COVID Relief Law").

(c) To the Company's Knowledge, as of each of (i) the date of the Company's submission of the application for the PPP Loan (the "PPP Loan Application"), the (ii) date the

Company executed any definitive documentation for or certifications in respect of the PPP Loan (collectively, the "PPP Loan Documents"), and (iii) the date the PPP Loan was funded, the Company satisfied all eligibility requirements for the PPP Loan.

(d) To the Company's Knowledge, all information and certifications included in the PPP Loan Application and all representations, warranties and certifications included in the PPP Loan Documents were complete and accurate as of the date submitted, made or certified, as applicable, and, in the case of all such certifications, were made in good faith following due inquiry and discussion.

(e) The Company submitted an application for forgiveness (the "PPP Forgiveness Application") in connection with the PPP Loan on February 25, 2021, which application was prepared following due inquiry and investigation and which application was accepted as of March 4, 2021. To the Company's Knowledge, all information included in the PPP Forgiveness Application was complete and accurate as of the date of submission and all certifications required to be made pursuant to the PPP Forgiveness Application were made in good faith as of such date.

(f) All debt and other obligations outstanding in respect of the PPP Loan have been discharged in full as of May 26, 2021.

3.27 Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN ARTICLE III OF THIS AGREEMENT, THE COMPANY EXPRESSLY DISCLAIMS ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND OR NATURE, STATUTORY, EXPRESS OR IMPLIED, INCLUDING AS TO THE CONDITION, VALUE OR QUALITY OF THE INTERESTS, THE COMPANY OR THE BUSINESS OR THE ASSETS OF THE COMPANY, OR ANY PART THEREOF, AND EACH OF THE STOCKHOLDERS AND THE COMPANY SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, SUITABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGER SUBS

Except as expressly set forth in the applicable section of the Parent Disclosure Schedule (as interpreted in accordance with Section 8.12), Parent, First Merger Sub and Second Merger Sub represent and warrant to the Company and the Company Stockholders as of the date hereof and as of the Closing Date (except where a representation or warranty is made herein as of a specified date) as follows:

4.1 Organization and Good Standing. Each of Parent and First Merger Sub is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware. Second Merger Sub is a limited liability company duly formed, validly existing and in good standing under the laws of the State of Delaware. Since the date of its incorporation or formation, as applicable, neither First Merger Sub nor Second Merger Sub has engaged in any activities other than in connection with or as contemplated by this Agreement. Since the date of

its formation, Second Merger Sub has been classified for all U.S. federal and applicable state and local income tax purposes as an entity which is disregarded as an entity separate from its owner (within the meaning of Treasury Regulations Section 301.7701-3).

4.2 Authority Relative to this Agreement. Each of Parent, First Merger Sub and Second Merger Sub has the requisite power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is a party and, subject to the adoption of this Agreement by Parent as the sole stockholder of First Merger Sub and the sole member of Second Merger Sub, to perform its obligations hereunder and thereunder, including the issuance of the Stock Consideration Shares. The execution and delivery of this Agreement and the other Transaction Documents to which Parent, First Merger Sub and Second Merger Sub are a party and the performance by Parent, First Merger Sub and Second Merger Sub of their obligations hereunder and thereunder have been duly authorized by all necessary corporate action, and no other corporate proceedings on the part of Parent, First Merger Sub or Second Merger Sub are necessary to authorize this Agreement or to consummate the Mergers and the other Transactions to which Parent, First Merger Sub or Second Merger Sub are a party, including the issuance of the Stock Consideration Shares, other than the filing and recordation of the Certificates of Merger and the adoption of this Agreement by Parent as the sole stockholder of First Merger Sub and the sole member of Second Merger Sub. This Agreement and the other Transaction Documents to which Parent, First Merger Sub and Second Merger Sub are a party constitute the valid and legally binding obligations of Parent and Merger Sub, enforceable against them in accordance with their terms and conditions, subject to the Enforceability Exceptions.

4.3 Non-Contravention. No consent, approval or authorization of, or registration, qualification, notice to or filing with, any Governmental Authority or any other Person is required for the valid execution, delivery and performance of this Agreement or the other Transaction Documents by Parent, First Merger Sub and Second Merger Sub or the consummation by Parent, First Merger Sub and Second Merger Sub of the transactions contemplated hereby, except for the filing of the Certificates of Merger with the Secretary of State of the State of Delaware pursuant to the DGCL.

4.4 Capitalization. Section 4.4 of the Parent Disclosure Schedule sets forth the number of authorized, issued and outstanding shares of Equity Interests of Parent by class and series of Equity Interest, including securities exercisable for or convertible into Equity Interests of Parent. All of the issued and outstanding shares of Equity Interests of Parent have been, and all shares which may be issued pursuant to the exercise or conversion of Equity Interests of Parent, when issued in accordance with the applicable security, will be (i) duly authorized, validly issued, fully paid and non-assessable; (ii) not subject to any preemptive rights; and (iii) free of any Liens. Except as set forth on Section 4.4 of the Parent Disclosure Schedule, there are no outstanding or authorized Equity Interests, options, warrants, Contracts, calls, puts, rights to subscribe, conversion rights or other similar rights to which Parent is a party or which are binding upon any of them providing for the issuance, disposition or acquisition of any Equity Interests, or any outstanding or authorized stock appreciation, phantom stock, profits interests or similar rights with respect to Parent. Parent is not subject to any obligation (contingent or otherwise) to repurchase or otherwise acquire or retire any of its Equity Interests.

4.5 Valid Issuance of Shares. The Stock Consideration Shares, when issued, sold and delivered in accordance with the terms of this Agreement, will be validly issued, fully paid and nonassessable and free of restrictions on transfer other than restrictions on transfer hereunder and under the applicable Restricted Stock Agreement, applicable state and federal securities laws and liens or encumbrances created by or imposed by the Company or a Stockholder. Assuming the accuracy of the representations of the Company in Article III of this Agreement and subject to any filings pursuant to Regulation D of the Securities Act and applicable state securities laws, which have been made or will be made in a timely manner, the Stock Consideration Shares will be issued in compliance with all applicable federal and state securities laws and Parent's governing documents and stockholder agreements, copies of which have been made available to the Company and the Company Stockholders.

4.6 Litigation; Compliance with Laws.

(a) There are no Legal Proceedings pending or involving Parent or any of its material assets or properties that could reasonably be expected to have a Parent Material Adverse Effect. To Parent's Knowledge, no such Legal Proceeding has been threatened. There is no Order outstanding against the Parent or any of its material assets or properties that could reasonably be expected to have a Parent Material Adverse Effect. To Parent's Knowledge, there are no presently existing facts or circumstances that would constitute any reasonable basis for any such Legal Proceeding or Order.

(b) Parent has complied in all material respects with, is not in violation in any material respect of, and has not received any notices of violation with respect to, applicable Law (including all COVID-19 Measures).

(c) There is no Contract or Order (excluding any COVID-19 Measure) binding upon Parent or to which Parent or any of its assets is subject that restricts or prohibits, purports to restrict or prohibit, or has or would reasonably be expected to have (whether before or immediately after and giving effect to the Mergers) the effect of prohibiting, restricting or impairing any current or presently proposed business practice of Parent, any acquisition of property by Parent or the conduct or operation of Parent's business or limiting the freedom of Parent.

4.7 Brokers' Fees. None of Parent, First Merger Sub or Second Merger Sub has any liability or obligation to pay any fees or commissions to any broker, finder, investment banker or agent with respect to the Transactions to which it is a party.

ARTICLE V

CERTAIN COVENANTS AND AGREEMENTS

5.1 Confidentiality. Upon Closing and for five (5) years thereafter, each Seller shall treat and hold as confidential any and all Confidential Information, refrain from using any of the Confidential Information except in connection with any such Seller's employment, consulting or other service relationship with Parent or as otherwise permitted hereunder. Notwithstanding the

foregoing, Confidential Information shall not include information that is (a) generally available to the public other than as a result of a breach of this Section 5.1, (b) is hereafter furnished to such Seller by a third party, as a matter of right and without restriction on disclosure, or (c) is hereafter independently developed by the Seller without reference to or reliance upon Confidential Information and without any breach of this Agreement. In the event that any Seller is requested or required to produce information or documents in any legal proceeding, interrogatory, subpoena, civil investigative demand, or similar process or is otherwise required by Law to disclose any Confidential Information, such Seller shall give Parent reasonable prior notice of the request or requirement so that Parent may seek an appropriate protective order or waive compliance with the provisions of this Section 5.1.

5.2 Tax Matters.

(a) Parent shall timely file or cause to be timely filed (taking into account all extensions properly obtained) all Tax Returns of the Company that are first due (taking into account all extensions properly obtained) after the Closing Date and that relate in whole or in part to a Pre-Closing Tax Period (each, a "Parent Prepared Return"), and Parent shall timely remit or cause to be timely remitted any Taxes due in respect of such Parent Prepared Returns. To the extent any Parent Prepared Return relates in whole or part to a Pre-Closing Tax Period, each such Parent Prepared Return shall (i) be prepared in a manner consistent with the past practice of the Company unless otherwise required by applicable Law, (ii) include all deductions attributable to the Transactions on the income Tax Return of the Company for the taxable period that includes the Closing Date to the extent such deductions are "more likely than not" deductible in a Pre-Closing Tax Period, and (iii) be prepared in a manner consistent with the Intended Tax-Free Treatment, unless otherwise required by applicable Law. Parent will submit such Parent Prepared Return to a representative designated by the Sellers in writing to Parent (the "Representative") for review, comment and consent at least thirty (30) days prior to the due date for filing such Parent Prepared Return (or, if such due date is within sixty (60) days following the Closing Date, as promptly as practicable following the Closing Date), which consent will not be unreasonably withheld, delayed or conditioned.

(b) For all purposes of this Agreement, in the case of any Straddle Period, the amount of Taxes of the Company that are allocable to the portion of a Straddle Period ending on and including the Closing Date shall be determined by assuming that the Straddle Period consisted of two (2) taxable years or periods, one of which ended at the close of the Closing Date and the other of which began at the beginning of the day following the Closing Date, and (i) Taxes based on, or computed with respect to, net income or earnings, gross income or earnings, payroll, capital or net worth, or any other Taxes resulting from or imposed on, sales, receipts, uses, transfers or assignments of property or other assets, payments or accruals to other Persons (including wages) or any other similar transaction or transactions of the Company for the Straddle Period shall be allocated between such two (2) taxable years or periods by treating the taxable year of the Company and any such Subsidiary for such Straddle Period as ending as of the close of the Closing Date and (ii) in the case of all other Taxes, such Taxes shall be equal to the product of the amount of such Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of calendar days in the Straddle Period before and

including the Closing Date and the denominator of which is the total number of calendar days in the entire Straddle Period.

(c) Without the prior written consent of the Representative (such consent not to be unreasonably withheld, delayed or conditioned), to the extent such action could increase the amount of Taxes included in Closing Net Cash or Company Transaction Expenses or result in an indemnification obligation under Section 7.2 for such Taxes by the Sellers, and unless otherwise required by applicable Law, Parent will not: (i) except for Tax Returns that are filed in accordance with Section 5.2(a), file or amend, or permit the Company, the Surviving Entity or any of their Affiliates to file or amend, any Tax Return of the Company relating to a taxable period (or portion thereof) ending on or prior to the Closing Date; (ii) with respect to Tax Returns filed pursuant to Section 5.2(a), after the date such Tax Returns are filed pursuant to Section 5.2(a), amend or permit the Company, the Surviving Entity or any of their Affiliates to amend any such Tax Return; (iii) extend or waive, or cause to be extended or waived, or permit the Company, the Surviving Entity or any of their Affiliates to extend or waive, any statute of limitations or other period for the assessment of any Tax or deficiency related to a taxable period (or portion thereof) of the Company ending on or prior to the Closing Date; (iv) make or change any election or change any method of accounting with respect to Taxes with retroactive effect to a taxable period (or portion thereof) ending on or prior to the Closing Date for the Company; (v) file voluntary disclosure agreements with any Governmental Authority regarding Pre-Closing Taxes; or (vi) except as explicitly contemplated by this Agreement, engage in any transaction on the Closing Date after the Closing outside the Ordinary Course and consistent with the Company's past practice.

(d) Parent will give prompt written notice to the Representative of the assertion of any claim, or the commencement of any Legal Proceeding, with respect to: (x) any Tax Return of the Company that relates to one or more taxable periods (or portions thereof) ending on or prior to the Closing Date; and (y) any Tax liability of the Company for which the Sellers could be partially or wholly responsible under this Agreement (each, a "Tax Claim"). Parent shall have the right to control such Tax Claim, including the defense and settlement thereof; *provided*, to the extent any Tax Claim would reasonably be expected to form the basis for a claim of indemnification against the Sellers, Parent shall (1) keep the Representative reasonably informed concerning the progress of such Tax Claim, (2) provide the Representative copies of all correspondence and other documents relevant to such Tax Claim, and (3) not settle such Tax Claim without the prior written consent of the Representative, which consent shall not be unreasonably withheld, conditioned or delayed. The Representative shall have the right to participate in the defense of any such Tax Claim and to employ counsel, at its own expense, separate from the counsel employed by Parent.

(e) Any transfer, stamp, documentary, sales, use, registration, value-added and other similar Taxes (including all applicable real estate transfer Taxes and real property transfer Taxes and including any filing and recording fees, but not, for the avoidance of doubt, any capital gain Taxes) incurred in connection with this Agreement and the Transactions ("Transfer Taxes") will be borne by Parent. Parent and the Company (prior to the Closing) or the Representative (after the Closing) shall cooperate with each other in the provision of any

information or preparation of any documentation that may be necessary or useful for obtaining any available mitigation, reduction or exemption from any Transfer Taxes.

(f) For all applicable Tax purposes, the parties agree to, and unless otherwise required by applicable Law, no party shall take any action or filing position inconsistent with, the following Tax treatment of the items specified below:

(g) Any payments of Merger Consideration made in respect of Company Options or Company SARs pursuant to this Agreement (A) shall be treated as compensation paid by the Company as and when received by the holder thereof to whom such payment is due, (B) shall be net of any Taxes withheld pursuant to Section 2.7, as may be applicable, and (C) shall, in respect of payments attributable to Company Options or Company SARs held by Company Employees only, be made through the Surviving Entity's (or any Affiliate thereof or successor thereto) standard payroll procedures in accordance with Section 2.7.

5.3 Data Room. At the request of Parent, the Company shall deliver to Parent true, correct and complete electronic copies of all documents and information placed in the virtual data room made available to Parent and its outside counsel at any time prior to the date hereof.

5.4 Benefit Plans.

(a) To the extent requested by Parent no later than five (5) days prior to the Closing Date, effective as of the day immediately prior to the Closing Date and contingent upon the occurrence of the Closing, the Company shall adopt resolutions to terminate or cause the termination of each U.S. tax-qualified defined contribution plan provided to Company Employees.

(b) Following the Effective Time, Parent will arrange for each participant (including, without limitation, all dependents) in the Company Employee Plans (the "Company Participants") to participate in plans or arrangements of Parent or its applicable subsidiary that are substantially similar to the Company Employee Plans set forth on Section 3.17(a) of the Company Disclosure Schedule, in the aggregate ("Parent Plans"). To the extent that any Company Participant is not eligible to participate in any Parent Plan (other than any U.S. tax-qualified defined contribution plan sponsored by Parent) as of immediately following the Effective Time due to eligibility waiting periods applicable to Parent Plans, Parent will continue (or cause the Company to continue) to maintain the Company Employee Plans (other than any U.S. tax-qualified defined contribution plan provided to Company Employees) on substantially the same terms as in effect immediately prior to the Effective Time until such time as the eligibility waiting periods applicable to the Parent Plans are satisfied. Following the Closing Date, Parent will use commercially reasonable efforts to cause (i) each Company Participant to receive credit for purposes of eligibility to participate and vesting under such Parent Plans for years of service with the Company (or any predecessors) prior to the Closing Date, and (ii) any and all pre-existing condition limitations, eligibility waiting periods and evidence of insurability requirements under any Parent Plans that are group health plans in which such the Company Participants will participate to be waived and will use commercially reasonable efforts to provide credit for any co-payments and deductibles prior to the Closing Date for purposes of satisfying

any applicable deductible, out-of-pocket or similar requirements under any such plans that may apply after the Closing Date.

5.5 Officers and Directors Insurance and Indemnification. Prior to the Closing Date, the Company shall obtain a prepaid extended reporting period or tail policy insuring the current and former officers or directors of the Company (the "D&O Indemnified Persons") under the current program of directors' and officers' liability insurance maintained by the Company which shall be effective commencing with the Closing Date and ending six (6) years thereafter and which shall afford coverage for actual or alleged acts or omissions occurring at, during or prior to the Closing Date including with respect to the Transactions (including the Mergers) (the "D&O Tail Insurance"). Parent will cause the Surviving Entity to enforce the D&O Tail Insurance upon request of the D&O Indemnified Persons and will not allow the Surviving Entity to cancel the D&O Tail Insurance during its term. The provisions of this Section 5.5 shall be enforceable by each D&O Indemnified Person and the Surviving Entity shall, and Parent shall cause the Surviving Entity or its successors to, pay all costs and expenses (including reasonable attorneys' fees) incurred by any D&O Indemnified Person (or his or her heirs, personal representatives, successors or assigns) in any legal action brought by such Person that is successful to enforce the obligations of Parent or the Surviving Entity or its successors under this Section 5.5. The obligations of Parent and the Surviving Entity and its successors under this Section 5.5 shall not be terminated, amended or otherwise modified in such a manner as to materially and adversely affect any D&O Indemnified Person (or his or her heirs, personal representatives, successors or assigns) without the prior written consent of such D&O Indemnified Person (or his or her heirs, personal representatives, successors or assigns, as applicable).

5.6 Non-Competition.

(a) In addition to, and not in limitation of the foregoing, as a material inducement for Parent to enter into and to consummate the transactions contemplated by this Agreement and in further consideration of the amounts paid by Parent to or for the benefit of the Major Stockholders hereunder, each Major Stockholder agrees that from the Closing Date until the third (3rd) anniversary thereof, such Major Stockholder shall not, directly or indirectly, engage or participate, as a consultant, independent contractor, agent, employee, officer, partner, director, investor, owner, lender or otherwise, alone or in association with any other Person, anywhere in the world in the Business; provided, that this provision shall not be construed to prohibit (i) the ownership by such Major Stockholder of a passive investment of not more than one percent (1%) of the outstanding shares of the stock of any publicly traded corporation which is listed on a national securities exchange or on an electronic quotation system, (ii) the ownership by such Major Stockholder of up to 5% of the stock of any privately held corporation; (iii) the ownership by such Major Stockholder of a passive equity interest in any investment fund which respect to which the Major Stockholder does not make investment decisions; (iv) such Major Stockholder from providing educational services to any government agency, not-for-profit organization or academic institution, as set forth on Schedule 5.6(a), (v) performing speaking engagements and receiving honoraria in connection with the foregoing activities, as set forth on Schedule 5.6(a); and (vi) such activities as may be consented to in writing by Parent, provided, however, that nothing contained in clauses (i) through (v) hereof shall derogate from, or relieve

such Major Stockholder from, his or her obligations to Parent under any employment, confidentiality and inventions assignment or other agreement by and between such Major Stockholder and Parent from and after the Closing Date.

(b) Each Major Stockholder acknowledges that (i) Parent has required that such Major Stockholder make the covenants set forth in this Section 5.6 as a condition to Parent entering into and consummating the transactions contemplated by this Agreement; (ii) the duration, scope and geographic area are fair, reasonable and necessary to protect and preserve Parent's and the Company's respective interests in and right to the use and operation of the Company's assets and properties in the field of the Business from and after the Closing Date; (iii) the restrictions placed upon such Major Stockholder hereunder are narrowly drawn, are fair and reasonable in time and territory, will not prevent such Major Stockholder from earning a livelihood, and place no greater restraint upon such Major Stockholder than is reasonably necessary to secure the goodwill and other value of the Company and the benefits bargained for by Parent under this Agreement; and (iv) Parent and the Company could be irreparably damaged if such Major Stockholder were to breach the covenants set forth in this Section 5.6, and any such breach could result in irreparable injury to Parent and the Company, for which money damages alone could be inadequate to compensate Parent and the Company, and could be an inadequate remedy for such breach. Each Major Stockholder therefore acknowledges that, if any such restrictions are violated, Parent and/or the Company shall be entitled to seek preliminary and injunctive relief against such Major Stockholder.

(c) If the final judgment of a court of competent jurisdiction declares that any covenant set forth in this Section 5.6 is invalid, unenforceable or unlawful, such covenants will be considered divisible with respect to scope, time and geographic area, and in such lesser scope, time and geographic area, will be effective, binding and enforceable against each Major Stockholder to the greatest extent permissible.

5.7 Commercially Reasonable Efforts.

(a) Commencing on the Closing Date, Parent covenants and agrees that it shall use Commercially Reasonable Efforts to achieve the Milestone. Without limiting the generality of the foregoing, Parent shall not, directly or indirectly, take any action or omit to take any action with the specific intent of avoiding or reducing the payment of the Milestone Consideration.

(b) Once per calendar year following the Closing Date, and ending on the date upon which the Milestone Consideration has been paid, Parent shall make available to the Representative, upon reasonable request, reasonably detailed information outlining its material research, development and commercial activities pertaining to the Company Technology and Enabled Products during each such calendar year, including activity and progress toward achievement of the Milestone during the previous calendar year, as well material development and commercialization activities anticipated for the then-current calendar year.

(c) In addition, at least once in each successive twelve (12) month period following the Closing Date until achievement of the Milestone, upon Representative's request

and no later than thirty (30) days after such request, representatives of Parent who are responsible for managing the activities and business relating to the Company Technology and Enabled Products and knowledgeable about such operations shall meet with Representative, telephonically or in person, to discuss the status of development and commercialization activities with respect to the Company Technology and Enabled Products and progress towards achievement of the Milestone, and any reasonable inquiries Representative may have regarding such matters. Each of Parent and Representative shall bear its own costs and expenses regarding such meetings.

(d) If Representative believes that the Milestone has occurred and Parent has not paid the Milestone Consideration, then Representative may deliver to Parent written notice thereof (a "Milestone Dispute Notice"), in reasonable detail. During the thirty (30) days following delivery of the Milestone Dispute Notice, Parent and Representative shall attempt in good faith to resolve any dispute as to whether the Milestone has occurred and whether the Milestone Consideration is payable. Following such thirty (30) day period, either Party may initiate litigation of such dispute in accordance with Section 8.9 of this Agreement.

(e) In the event that Parent does not pay Milestone Consideration when the Milestone Consideration is due, interest shall accrue on such Milestone Consideration from any including the date on which the applicable Milestone Consideration was due up to and including the date such payment has been made at a rate per annum equal to two percent (2%) over the prime rate published in the Wall Street Journal, Eastern Edition (or the maximum rate permitted by Law, if lower), provided, however, that no interest shall accrue during the period between the delivery of a Milestone Dispute Notice by Representative as set forth in Section 5.7(d) and the conclusion of such dispute.

ARTICLE VI

CONDITIONS TO OBLIGATION TO CLOSE

6.1 Conditions to Obligations of Each Party under this Agreement. The respective obligations of each party to effect the Mergers and the other Transactions to which they are a party shall be subject to the satisfaction at or prior to the First Effective Time of the following conditions, any or all of which may be waived in a writing signed by each of the Company and Parent, in whole or in part, to the extent permitted by applicable Law:

(a) Stockholder Approval. The Requisite Stockholder Approvals shall have been obtained in accordance with the DGCL and the Company Governing Documents. A true and correct copy of the duly executed Stockholder Written Consent in the form attached hereto as Exhibit A, constituting the Requisite Stockholder Approvals, shall have been delivered to Parent.

(b) No Order. There shall not be any Law or Order in effect preventing consummation of any of the Transactions, declaring unlawful any of the Transactions or causing any such Transactions to be rescinded.

6.2 Additional Conditions to Obligations of Parent and the Merger Subs. The obligations of Parent, First Merger Sub and Second Merger Sub to effect the Mergers and the other Transactions to which they are a party are subject to satisfaction of the following additional conditions:

(a) Representations and Warranties. The representations and warranties of the Company set forth in Article III shall be true and correct in all material respects on the date hereof and as of the Closing Date as though made on and as of the Closing Date (other than the representations and warranties which by their express terms are as of a specified date, which shall be true and correct as of such date) as if such representations and warranties were made on and as of each such date, except that those representations and warranties that are qualified by materiality, Company Material Adverse Effect, or similar phrases shall be true and correct in all respects as written on the date hereof and on and as of the Closing Date as if such representations and warranties were made on and as of each such date.

(b) Covenants. The Company Stockholders and the Company shall have performed and complied in all material respects with all of the covenants and agreements under this Agreement to be performed or complied with by such Person on or prior to the Closing Date.

(c) Material Adverse Effect. There shall not have occurred any Company Material Adverse Effect that is continuing.

(d) Legal Proceedings. No Governmental Authority shall have commenced or threatened in writing to commence any Legal Proceeding (i) seeking to prohibit or limit the exercise by Parent of any right pertaining to ownership of Equity Interests of the Company or (ii) seeking to prohibit or limit in any respect the operation by Parent of the Business.

(e) Third Party Consents and Notices. The Company shall have delivered to Parent copies of consents (signed by the applicable third Person) or notices, as applicable, provided to the third Persons specified or referenced in Section 6.2(e) of the Company Disclosure Schedule with respect to the consummation of the Transactions in a form that is reasonably acceptable to Parent.

(f) Resignations. The Company shall have delivered to Parent the written resignations of each Person who is a director or officer of the Company in his or her capacity as such, properly executed by each such Person.

(g) FIRPTA Matters. The Company shall have delivered to Parent (i) a properly executed certificate of the Company certifying that the Company is not, and has not been, a "United States real property holding corporation" within the meaning of Section 897 of the Code, during the applicable period specified in Section 897(c)(1)(a)(ii) of the Code, which complies with the requirements of Section 1445 of the Code and the Treasury Regulations promulgated thereunder and (ii) evidence that notice of such certificate has been provided to the IRS in accordance with the requirements of Treasury Regulation Section 1.897-2(h)(2).

(h) Closing Certificate. The Company shall have delivered to Parent a certificate executed by an authorized officer of the Company certifying on behalf of the Company that each of the conditions specified in Section 6.2(a), Section 6.2(b) and Section 6.2(c) have been satisfied.

(i) Secretary's Certificate. The Company shall have delivered to Parent a certificate of the secretary or an assistant secretary of the Company, properly executed by such Person, certifying as to its certificate of incorporation and bylaws and (A) resolutions of the Company Board and the written consent of the Company Stockholders adopting and approving this Agreement and the Transactions to which the Company is a party, including the Mergers and (B) the names and signatures of the officers of the Company authorized to sign the relevant Transaction Documents and the other documents to be delivered thereunder.

(j) Payout Spreadsheet. The Company shall have delivered to Parent the Payout Spreadsheet.

(k) Offer Letters. Each of the individuals listed on Schedule 7.2(k) attached hereto shall have entered into an offer letter, in substantially the form attached hereto as Exhibit H, or other service provider agreement with Parent.

(l) Award Cancellation Agreements. Each holder of Company Options or Company SAR shall have executed and delivered an Award Cancellation Agreement in substantially the form attached hereto as Exhibit I.

(m) Note Cancellation Agreements. Each holder of Company Notes receiving any Merger Consideration as set forth in the Payout Spreadsheet shall have executed and delivered a Note Cancellation Agreement in substantially the form attached hereto as Exhibit J.

(n) Escrow Agreement. The Stockholder Representative and the Escrow Agent shall have entered into the Escrow Agreement in the form attached hereto as Exhibit K.

(o) Letter of Transmittal. Each of the Sellers shall have executed a Letter of Transmittal in the form attached hereto as Exhibit L.

(p) Restricted Stock Agreements. Parent shall have entered into Restricted Stock Agreements with each of the Major Stockholders receiving Parent Common Stock in substantially the form attached hereto as Exhibit G.

(q) Payments Administration Agreement. The Stockholder Representative and the Paying Agent shall have entered into the Payments Administration Agreement in the form attached hereto as Exhibit M.

Parent may waive any condition specified in this Section 6.2 if it executes a writing delivered to the Company so stating at or prior to the Closing. If the Closing occurs, all closing conditions set forth in this Section 6.2 that have not been fully satisfied as of the Closing shall be deemed to have been waived by Parent and the Merger Subs for the purposes of this Section 6.2.

6.3 Additional Conditions to Obligations of the Company. The obligation of the Company to effect the Mergers and the other Transactions is subject to satisfaction of the following additional conditions:

(a) Representations and Warranties. The representations and warranties of Parent and the Merger Subs set forth in Article IV shall be true and correct in all material respects on the date hereof and as of the Closing Date as though made on and as of that date (except that those representations and warranties that address matters only as of a particular date shall have been true and correct in all material respects only as of such date).

(b) Covenants. Parent and the Merger Subs shall have performed and complied in all material respects with all of their covenants and agreements under this Agreement to be performed or complied with by such Person on or prior to the Closing Date.

(c) Closing Certificate. Parent shall have delivered to the Company a certificate executed by an authorized officer of Parent certifying on behalf of Parent that each of the conditions specified in Section 6.3(a) and Section 6.3(b) have been satisfied.

(d) Secretary's Certificates. Parent shall have delivered to the Company (i) a certificate of the secretary or an assistant secretary of First Merger Sub certifying as to its certificate of incorporation and bylaws and resolutions of the board of directors and sole stockholder of First Merger Sub adopting and approving this Agreement and the Transactions to which First Merger Sub is a party, including the Mergers and (ii) a certificate of the secretary or an assistant secretary of Parent certifying as to its certificate of incorporation and bylaws and resolutions of the Parent Board adopting and approving this Agreement and the Transactions to which Parent is a party, including the issuance of the Stock Consideration Shares.

(e) Offer Letters. Parent shall have entered into an offer letter, in substantially the form attached hereto as Exhibit H, or other service provider agreement with each of the individuals listed on Schedule 7.2(k) attached hereto.

(f) Escrow Agreement. Parent and the Escrow Agent shall have entered into the Escrow Agreement in the form attached hereto as Exhibit K.

(g) Parent Stockholder Consent. Parent shall have obtained all necessary approvals of its stockholders under its certificate of incorporation and bylaws for the issuance of the Stock Consideration Shares pursuant to this Agreement.

(h) Payments Administration Agreement. Parent and Paying Agent shall have entered into the Payments Administration Agreement in the form attached hereto as Exhibit M.

The Company may waive any condition specified in this Section 6.3 if it executes a writing delivered to Parent so stating at or prior to the Closing. If the Closing occurs, all closing conditions set forth in this Section 6.3 that have not been fully satisfied as of the Closing shall be deemed to have been waived by the Company for the purposes of this Section 6.3.

ARTICLE VII

INDEMNIFICATION

7.1 Survival.

(a) From and after the Closing, all representations, warranties, covenants, and agreements of the Company, the Company Stockholders and Parent made in this Agreement, in the Stockholder Disclosure Schedule and the Company Disclosure Schedule delivered to Parent, and in the Parent Disclosure Schedule delivered to the Sellers, if any, (i) shall survive the Closing and (ii) shall bind the parties' successors and assigns (including, without limitation, any successor to Parent, the Company or any Stockholder by way of acquisition, merger or otherwise), whether so expressed or not, and, except as otherwise provided in this Agreement, all such representations, warranties, covenants and agreements shall inure to the benefit of the parties (subject to Section 8.5 below) and their respective successors and assigns, whether so expressed or not.

(b) Notwithstanding Section 7.1(a), (i) (x) the Fundamental Representations other than Section 3.11 (Tax Matters) shall survive the Closing until the seventh (7^{th}) anniversary of the Closing Date and (y) the representations set forth in Section 3.11 (Tax Matters) shall survive the Closing until thirty (30) days following the expiration of the applicable statutory limitations period and (ii) all other representations and warranties of the parties made in this Agreement, in the Stockholder Disclosure Schedule, the Company Disclosure Schedule and the Parent Disclosure Schedule, if any, shall survive the Closing until the date which is twelve (12) months after the Closing Date (the date in clause (i) or (ii), as applicable, the "R&W Survival Date").

(c) No Party hereto shall have any indemnification obligation pursuant to this Article VII or otherwise in respect of any representation, warranty, covenant or agreement unless the party seeking indemnification shall have delivered written notice of the existence of the claim for which indemnification is being sought on or before (i) the R&W Survival Date, for any inaccuracy in or breach of any of the representations or warranties contained herein or (ii) the expiration of the applicable statute of limitations for any breach of a covenant or agreement hereunder or in the Transaction Documents. Any written claim for indemnification pursuant to this Article VII in respect of any representation, warranty, covenant or agreement that is made prior to the applicable expiration date (if any) for such representation, warranty, covenant or agreement and delivered to the party against whom such indemnification is sought in accordance with the provisions of this Article VII, shall survive thereafter and, as to any such claim, such subsequent expiration will not affect the rights to indemnification of the party making such claim, it being agreed that if such claim for indemnification is timely made, the relevant representations, warranties, covenants and agreements shall survive with respect to the claims for indemnification set forth on such notice until such matter is resolved. Such notice shall set forth with reasonable specificity (i) the basis under this Agreement, and the facts that otherwise form the basis of such claim, and (ii) the estimate of the amount of such claim, if reasonably estimable (which estimate shall not be conclusive of the final amount of such claim). The parties further acknowledge that the time periods set forth in this Section 7.1 for the assertion of claims under

this Agreement are the result of arms'-length negotiation among the parties and that they intend for the time periods to be enforced as agreed by the parties.

(d) Notwithstanding anything in this Article VII or any other provision of this Agreement to the contrary, (i) in the event of any acts of fraud or willful misrepresentation, the parties shall have all remedies available at Law or in equity (including for tort) with respect to such fraud or willful misrepresentation, and (ii) claims of a party involving fraud or willful misrepresentation may be brought without regard to any limitation set forth in this Agreement (whether a temporal limitation, a dollar limitation or otherwise). For purposes of this Agreement, "willful misrepresentation" shall require that the person making the representation know that the representation is false at the time that such person willfully made such representation.

7.2 Indemnification for Company Breaches.

(a) Subject to each of the limitations set forth in this Article VII, after the Closing, the Sellers shall, on a several but not joint basis, in accordance with their respective Pro Rata Portion of the Merger Consideration, but subject to subsection (b) below, indemnify, defend and hold harmless Parent, its Affiliates and their respective officers, directors, employees, agents, representatives and permitted successors and assigns (each, a "Parent Indemnified Party") from and against any and all Damages that a Parent Indemnified Party suffers, sustains or becomes subject to as a result of or in connection with:

(i) Any breach by the Company, or any allegation by any third party that, if true, would be a misrepresentation of, inaccuracy in or breach of any of the representations and warranties contained in Article III;

(ii) Any misrepresentation or inaccuracy in the Payout Spreadsheet;

(iii) Any breach by the Company of any obligation, covenant or agreement set forth in this Agreement or any Transaction Document to which the Company is a party;

(iv) Any Company Debt to the extent unpaid as of the Closing and not included in the Net Closing Cash Adjustment Amount;

(v) Any Company Transaction Expenses to the extent unpaid as of the Closing and not included in the Net Closing Cash Adjustment Amount;

(vi) Any Pre-Closing Taxes to the extent not taken into account in the calculation of Company Debt or Company Transaction Expenses;

(vii) any claim by any Seller against any Parent Indemnified Party relating to the allocation or disbursement of the Merger Consideration (other than as required to be paid by Parent or the Surviving Entity, as applicable, pursuant to the terms of this Agreement).

(b) Except in the case of any claims involving fraud or willful misrepresentation, and subject to the limitations set forth in this Article VII, the Parent Indemnified Parties shall only seek recovery for indemnification claims under this Article VII as follows:

(i) First, to the extent that Deferred Cash Consideration has not been previously released to the Sellers or Parent, as applicable, and remains in the Escrow Account, then recovery shall be made against the Deferred Cash Consideration, subject to the limitations set forth in Section 7.5.

(ii) Second, to the extent that the aggregate amount for which recovery is sought exceeds the amount of the Deferred Cash Consideration and Milestone Consideration that has not been released to the Sellers or Parent, as applicable, and remains in the Escrow Account, then solely for the purpose of satisfying any claim related to a Fundamental Representation, recovery shall be made from the Sellers in accordance with their respective Pro Rata Portions against both the Deferred Cash Consideration and Milestone Consideration, and by the forfeiture, under the Restricted Stock Agreements, of Stock Consideration Shares that have not then vested pursuant to the terms of such Restricted Stock Agreements (the "Unvested Stock Consideration Shares"), subject to the limitations set forth in Section 7.5. For purposes of the foregoing, the number of Unvested Stock Consideration Shares to be forfeited in satisfaction of the corresponding Damages shall equal (A) the amount of the Damages, divided by (B) the greater of (i) $67.19 or (ii) the Parent Common Stock FMV.

(iii) Thereafter, to the extent that recovery is not limited to the Escrow Account or from the Unvested Stock Consideration Shares or otherwise limited by Section 7.5, directly from the Sellers, on a several, and not joint basis in accordance with each Seller's Pro Rata Portion, and in no event shall the liability of any Indemnifying Seller hereunder exceed its Pro Rata Portion of the applicable Damages recoverable by the Parent Indemnified Parties, subject to Section 7.5; provided, further, that in no event shall the recovery from any Indemnifying Seller exceed the amount of Merger Consideration received by such Indemnifying Seller.

(c) Surviving Entity. The Parties acknowledge and agree that if the Surviving Entity suffers, sustains or becomes subject to or incurs any Damages, then (without limiting any of the rights of the Surviving Entity as an Indemnified Person), Parent shall also be deemed, by virtue of its ownership of the equity of the Surviving Entity, to suffer, sustain or become subject to or incur such Damages.

7.3 Indemnification by Parent. Subject to each of the limitations set forth in this Article VII, Parent shall indemnify and hold harmless the Sellers, their Affiliates and their respective officers, directors, employees, shareholders, agents, representatives and permitted successors and assigns (collectively, the "Seller Indemnified Parties") from and against any

Damages that a Seller Indemnified Party suffers, sustains or becomes subject to as the result of or in connection with:

(a) Any breach by Parent, or any allegation by any third party that, if true, would be a misrepresentation of, inaccuracy in or breach of any of the representations and warranties contained in Article IV; or

(b) Any breach by Parent, or any allegation by any third party that, if true, would be a breach by Parent of any obligation, covenant or agreement set forth in this Agreement or any Transaction Document.

7.4 Indemnification Procedures for Third Party Claims. In the event that any claim or demand for which a party (an "Indemnifying Party") would be liable to another party under this Article VII (an "Indemnified Party") is asserted against or sought to be collected from an Indemnified Party in a Third Party Claim, the Indemnified Party shall with reasonable promptness, notify the Indemnifying Party of such claim or demand (the "Claim Notice"), but the failure to so notify the Indemnifying Party shall not relieve the Indemnifying Party of its obligations under this Article VII, except to the extent the Indemnifying Party is prejudiced thereby. The Indemnifying Party shall have thirty (30) days from receipt of a Claim Notice from the Indemnified Party (in this Section 7.4, the "Notice Period") to notify the Indemnified Party whether or not the Indemnifying Party desires, at the Indemnifying Party's sole cost and expense, to assume the defense of such claim or demand (to the extent there are any Damages related to such claim or demand). All costs and expenses incurred by the Indemnifying Party in defending such claim or demand shall be a liability of, and shall be paid by, the Indemnifying Party, subject to the limitations set forth in this Article VII. The Indemnified Party is hereby authorized prior to and during the Notice Period to, with the prior written consent of the Indemnifying Party (which shall not be unreasonably withheld, conditioned or delayed), file any motion, answer or other pleading that it shall deem necessary or appropriate to protect its interests or those of the Indemnifying Party and not prejudicial to the Indemnifying Party. Notwithstanding the foregoing, the assumption of defense of any such matters by the Indemnifying Party shall relate solely to the Damages that are subject or potentially subject to indemnification hereunder; *provided, further*, that the option to assume the defense shall not be available to the Indemnifying Party for Third Party Claims (A) where non-monetary relief is sought that is not merely incidental to the monetary relief that is sought, (B) involving criminal allegations, for which defense shall be assumed by the Indemnified Party with the right to retain (at the Indemnifying Party's expense, subject to the limitations set forth in this Article VII) counsel of its choice, reasonably acceptable to the Indemnifying Party, (C) that could reasonably be expected to adversely affect the Taxes of the Indemnified Party for a taxable period (or portion thereof) beginning after the Closing Date, and (D) would reasonably be expected to be for an amount that, if paid, would result in the Indemnified Party bearing a greater share of such Liability than the Indemnifying Party, giving effect to the limitations set forth in this Article VII. If the Indemnifying Party elects to assume the defense of any such claim or demand, the Indemnified Party shall have the right to employ separate counsel at its own expense and to participate in, but not control, the defense thereof. If the Indemnifying Party elects not to assume the defense of such claim or demand (or fails to give notice to the Indemnified Party during the Notice Period),

the Indemnified Party shall be entitled to assume the defense of such claim or demand with counsel of its own choice, at the expense of the Indemnifying Party, subject to the limitations set forth in this Article VII. If the Indemnified Party has assumed the defense pursuant to this Section 7.4, it shall not agree to any settlement without the written consent of the Indemnifying Party (which consent shall not be unreasonably withheld, delayed or conditioned). If the claim or demand is asserted against both the Indemnifying Party and the Indemnified Party and based on the advice of counsel reasonably satisfactory to the Indemnifying Party it is determined that there is a conflict of interest which renders it inappropriate for the same counsel to represent both the Indemnifying Party and the Indemnified Party, the Indemnifying Party shall be responsible for paying separate counsel for the Indemnified Party, subject to the limitations set forth in this Article VII; *provided*, *however*, that the Indemnifying Party shall not be responsible for paying for more than one separate firm of attorneys to represent all of the Indemnified Parties, regardless of the number of Indemnified Parties. If the Indemnifying Party elects to assume the defense of such claim or demand, (i) no compromise or settlement thereof may be effected by the Indemnifying Party without the Indemnified Party's written consent (which shall not be unreasonably withheld, delayed or conditioned) unless the sole relief provided is monetary damages that are paid in full by the Indemnifying Party, the settlement does not include any admission of liability and the Indemnified Party is fully released from all Liabilities relating to such claim or demand and (ii) the Indemnified Party shall have no liability with respect to any compromise or settlement thereof effected without its written consent (which shall not be unreasonably withheld, delayed or conditioned). In addition, the Indemnifying Party shall keep the Indemnified Party apprised of the status of the claim, liability or expense and any resulting suit, proceeding or enforcement action, shall furnish the Indemnified Party with all documents and information that the Indemnified Party shall reasonably request and shall consult with the Indemnified Party prior to acting on major matters, including settlement discussions. In the event that the Indemnifying Party does not assume the defense of such claim or demand, the Indemnified Party shall keep the Indemnifying Party apprised of the status of the claim, liability or expense and any resulting suit, proceeding or enforcement action, shall furnish the Indemnifying Party with all documents and information that the Indemnifying Party shall reasonably request and shall consult with the Indemnifying Party prior to acting on major matters, including settlement discussions. The Indemnifying Party may not enter into any compromise or settlement of such claim or demand in which the Indemnifying Party receives a release from all liabilities relating to such claim or demand in connection with a compromise or settlement, unless such release also applies to the Indemnified Party. With respect to any claim subject to indemnification under this Article VII, the parties shall cooperate in such a manner and use their commercially reasonable efforts to preserve in full the confidentiality of all confidential information and the attorney-client and work-product privileges. In connection therewith, each party agrees that: (i) it will use commercially reasonable efforts, in respect of any claim in which it has assumed or has participated in the defense, to avoid production of confidential information (consistent with applicable Law and rules of procedure), and (ii) it will use commercially reasonable efforts to make all communications between any parties hereto and counsel responsible for or participating in the defense of any Third Party Claim so as to preserve any applicable attorney-client or work-product privilege.

7.5 Certain Limitations.

(a) Notwithstanding the foregoing, the Indemnifying Sellers shall not have any Liability to the Parent Indemnified Parties for any claims for indemnification made by the Parent Indemnified Parties pursuant to Section 7.2(a), and Parent shall not have any Liability to the Seller Indemnified Parties for any claims of indemnification made by the Seller Indemnified Parties pursuant to Section 7.3, in excess of 10% of the aggregate dollar amount of the Closing Cash Consideration (such amount, the "General Indemnity Cap"); *provided*, *however*, that: the General Indemnity Cap shall not apply to any Damages based upon, arising out of, or by reason of (A) any inaccuracy of the Fundamental Representations, (B) any breach by any Seller of the covenants and agreements contained in Section 5.6 (Non-Competition) or (C) fraud or willful misrepresentation; provided, however, that in the event any breach of any breach of any covenants and agreements contained in Section 5.6 or any fraud or willful misrepresentation results solely from the action or inaction of a Seller, only such Seller shall be liable to the Parent Indemnified Parties in respect of such breach, fraud or willful misrepresentation. Any Damages based upon, arising out of, or by reason of (x) any breach of the Fundamental Representations, or the covenants and agreements contained in Section 5.6 (Non-Competition) or (y) fraud or willful misrepresentation shall not count toward the General Indemnity Cap.

(b) All Damages shall be net of any amounts actually recovered by the applicable Indemnified Party under Insurance Policies or other collateral sources (such as contractual indemnitees of any Person which are contained outside of this Agreement) with respect to such Damages, less any actual costs, deductibles or expenses incurred in connection with securing such amounts (including any increased premiums resulting therefrom). The Indemnified Party shall use commercially reasonable efforts to make any insurance or other claims under applicable Insurance Policies then in effect or other collateral sources, in each case, that reasonably relate to or provide coverage with respect to any Damages for which any Indemnified Party has been indemnified under this Article VII. In no event shall any Indemnifying Party have any liability to the Indemnified Party for any punitive, exemplary, incidental, consequential, special or indirect damages, including business interruption, loss of future revenue or income, loss of business reputation or opportunity relating to the breach or alleged breach of this Agreement or any other Transaction Document, or diminution of value or any damages based on any type of multiple; provided, that an Indemnifying Party shall be liable to the Indemnified Party for such punitive or exemplary damages to the extent they are recovered against an Indemnified Party pursuant to a Third Party Claim.

(c) If the amount to be netted pursuant to Section 7.5(a) from any payment required under this Article VII is determined after payment of any amount otherwise required to be paid to an Indemnified Party under this Article VII, the Indemnified Party shall repay to the Indemnifying Parties, promptly after such determination, any amount that the Indemnifying Parties would not have had to pay pursuant to this Article VII had such determination been made at the time of such payment.

(d) The Parent Indemnified Parties will not be entitled to recover Damages pursuant to Section 7.2(a) until the total amount which the Parent Indemnified Parties would

recover under Section 7.2(a), but for this Section 7.5(d), exceeds $400,000 (the "Threshold"), at which point the Parent Indemnified Parties shall be entitled to recover for all from the first dollar exceeding the Threshold; *provided*, that the Threshold shall not apply to claims for indemnification against the Seller Indemnified Parties in respect of an inaccuracy or a breach of any Fundamental Representations, or any Damages arising out of or based upon fraud or willful misrepresentation.

(e) The Sellers shall have no indemnification obligation for Damages with respect to (i) any Taxes that are attributable to a Tax period (or portion thereof) beginning after the Closing Date arising from a breach of the representations and warranties set forth in Section 3.11 (Taxes), other than those set forth in Section 3.8(j), (ii) the amount, value or condition of, or any limitations on, any Tax asset or attribute (e.g., net operating loss or Tax credit) of the Company, including the ability of any Parent or any of its affiliates (including, after the Closing, the Company and the Surviving Entity) to utilize such Tax asset or attribute, in each case, following the Closing, (iii) any Taxes reflected in the calculation of Company Debt or Company Transaction Expenses, and (iv) any Taxes arising from actions taken by Parent, the Company, the Surviving Entity or any affiliate on the Closing Date and after the Closing outside of the ordinary course of business and not contemplated by this Agreement.

(f) Subject to the limitations set forth in this Section 7.5, any claims for indemnification with respect to Company breaches and any claims for indemnification against the Sellers pursuant to this Article VII shall be satisfied by the Sellers, on a several but not joint basis, in accordance with their respective Pro Rata Portion of the Merger Consideration.

(g) Notwithstanding the fact that any Indemnified Party may have the right to assert claims for indemnification under or in respect of more than one provision of this Agreement in respect of any fact, event, condition or circumstance, no Indemnified Party shall be entitled to recover the amount of any Damages suffered by such Indemnified Party more than once, regardless of whether such Damages may be as a result of a breach of more than one representation, warranty, obligation or covenant or otherwise. In addition, any liability for indemnification hereunder shall be determined without duplication of recovery by reason of the state of facts giving rise to such liability, or a breach of more than one representation, warranty, covenant or agreement, as applicable.

(h) Each Party must take and must cause their respective Affiliates and Parent Indemnified Parties or Seller Indemnified Parties, as applicable, to take all reasonable steps to mitigate and otherwise minimize Damages to the maximum extent reasonably possible upon and after becoming aware of any event which would reasonably be expected to give rise to Damages.

(i) Upon making any payment to an Indemnified Party for any indemnification claim pursuant to this Article VII, the Indemnifying Party shall be subrogated, to the extent of such payment, to any rights which the Indemnified Party may have against any Person not a party to this Agreement with respect to the subject matter underlying such indemnification claim and the Indemnified Party shall assign any such rights to the Indemnifying Party.

7.6 Exclusivity. This Article VII shall provide the sole and exclusive remedy for any and all claims for any breach of representations, warranties, covenants and agreements set forth in, or otherwise relating to the subject matter of, this Agreement, except in the case of fraud or willful misrepresentation, or with respect to matters for which Section 8.2 permits a party to seek the remedy of specific performance or injunctive relief (including, for the avoidance of doubt, breaches of Section 5.4 (Non-Competition) of this Agreement).

ARTICLE VIII

MISCELLANEOUS

8.1 Expenses. Except as otherwise expressly provided herein, each party will bear its own costs and expenses (including legal fees and expenses) incurred in connection with this Agreement and the Transactions, whether or not the Mergers are consummated. The costs and expenses incurred by the Paying Agent shall borne by Parent.

8.2 Specific Performance; Remedies. The parties hereto agree that irreparable damage would occur in the event that the provisions contained in this Agreement were not performed in accordance with its specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to seek an injunction or injunctions, without the posting of any bond, to prevent breaches of this Agreement and to enforce specifically the terms and provisions thereof in a court of competent jurisdiction, this being in addition to any other remedy to which they are entitled at law or in equity. Any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy.

8.3 No Third-Party Beneficiaries. This Agreement shall not confer any rights or remedies upon any Person other than the parties, the Parent Indemnified Parties, the Seller Indemnified Parties and their respective heirs, representatives, successors and permitted assigns.

8.4 Entire Agreement. This Agreement, including the Schedules, Exhibits and Annexes hereto, the Stockholder Disclosure Schedule, the Company Disclosure Schedule, the Parent Disclosure Schedule and the other documents, instruments and agreements referred to herein that relate to the Transactions (including the Transaction Documents), constitute the entire agreement among the parties with respect to the subject matter hereof and thereof, and supersedes any prior understandings, agreements or representations by or among the parties, written or oral, to the extent they relate in any way to the subject matter hereof.

8.5 Succession and Assignment. This Agreement shall be binding upon and inure to the benefit of the parties named herein and their respective heirs, representatives, successors and permitted assigns. No party may assign either this Agreement or any of its rights, interests or obligations hereunder without the prior written approval of Parent and the Company; provided, that Parent and the Merger Subs may, without the consent of any Person, assign in whole or in part their rights and obligations pursuant to this Agreement to (a) one or more of its Affiliates or

(b) any successor to, or assignee of, all or substantially all of the business and assets of Parent or its Affiliates.

8.6 Counterparts; Electronic Delivery. This Agreement may be executed in one or more counterparts (including by means of fax, email, Portable Document Format (PDF) file, Joint Photographic Experts Group (JPEG) file or other electronic transmissions), each of which shall be deemed an original but all of which, when taken together, will constitute one and the same agreement. No party shall raise the use of fax, email or other electronic transmission to deliver a signature or the fact that any signature or agreement or instrument was transmitted or communicated through the use of fax, email, PDF, JPEG or other electronic transmission as a defense to the formation or enforceability of this Agreement, and each party forever waives any such defense.

8.7 Headings. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

8.8 Notices. All notices, requests, demands, claims and other communications hereunder shall be in writing and shall be deemed given if delivered personally or by commercial delivery service, or mailed by registered or certified mail (return receipt requested) or sent via facsimile or email (with automated confirmation of receipt) to the parties hereto at the following address (or at such other address for a party as shall be specified by like notice):

(a) if to Parent or any Merger Sub, to:

AbSci Corporation
101 E 6th Street, Suite 300
Vancouver, WA 98660
Attention: Chief Executive Officer
Email: smcclain@abscibio.com

with a copy (which shall not constitute notice) to:

Goodwin Procter LLP
3 Embarcadero Center, 28th Floor
San Francisco, CA 94111
Attention: Kingsley Taft and Maggie Wong
Email: ktaft@goodwinlaw.com
mwong@goodwinlaw.com

(b) if to the Company, to:

Totient, Inc.
c/o SBGH, LLC
1 Main Street, 5th Floor, Suite 500
Cambridge, MA 02142
Attention: Manager

with a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich and Rosati, Professional Corporation
28 State Street, 37th Floor
Boston, MA 02109
Attention: Mark R. Fitzgerald
Email: mfitzgerald@wsgr.com

Any notice, request, demand, claim or other communication hereunder shall be deemed duly given as follows (i) if delivered personally or via email, such notice, request, demand, claim or other communication shall conclusively deemed to have been given or served at the time of dispatch if sent or delivered on a Business Day or, if not sent or delivered on a Business Day, on the next following Business Day and (ii) if sent by commercial delivery service or mailed by registered or certified mail (return receipt requested) shall conclusively be deemed to have been received on the third Business Day after the post of the same; provided, however, that notices sent by mail will not be deemed given until received and, provided, further, that no email notice shall be deemed given when received unless such notice is followed up by one of the other means of notice described herein.

Any party may change the address to which notices, requests, demands, claims and other communications hereunder are to be delivered by giving the other parties notice in the manner herein set forth.

8.9 Governing Law; Jurisdiction; WAIVER OF JURY TRIAL.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Delaware.

(b) Each of the parties hereby (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or, if (and only if) the Court of Chancery of the State of Delaware declines to accept jurisdiction over a particular matter, the Superior Court of the State of Delaware (Complex Commercial Division) or, if (and only if) the Superior Court of the State of Delaware (Complex Commercial Division) declines to accept jurisdiction over a particular matter, any federal court sitting in the State of Delaware, and any appellate courts therefrom, (ii) irrevocably waives any objection that it may now or hereafter have to the venue of any such action, dispute or

controversy in any such court or that such Legal Proceeding was brought in an inconvenient court and agrees not to plead or claim the same, (iii) agrees that it shall not bring any Legal Proceeding relating to this Agreement or the Transactions in any court other than the aforesaid courts, and (iv) irrevocably consents to service of process by first class certified mail, return receipt requested, postage prepaid, to the address at which such party is to receive notice in accordance with Section 8.8, in addition to any other method to serve process permitted by applicable Law.

THE PARTIES TO THIS AGREEMENT EACH HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION, OR CAUSE OF ACTION (A) ARISING UNDER THIS AGREEMENT OR (B) IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO IN RESPECT OF THIS AGREEMENT OR ANY OF THE TRANSACTIONS RELATED HERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER IN CONTRACT, TORT, EQUITY, OR OTHERWISE. THE PARTIES TO THIS AGREEMENT EACH HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION, OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY AND THAT THE PARTIES TO THIS AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OF A COPY OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE PARTIES HERETO TO THE IRREVOCABLE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

8.10 Amendments and Waivers. This Agreement may not be amended, modified or supplemented in any manner, whether by course of conduct or otherwise, except by an instrument in writing specifically designated as an amendment hereto, signed on behalf of each of the parties in interest at the time of such amendment. No waiver by any party of any provision of this Agreement or any default, misrepresentation or breach of warranty or covenant hereunder, whether intentional or not, shall be valid unless the same shall be in writing and signed by the party making such waiver, nor shall such waiver be deemed to extend to any prior or subsequent default, misrepresentation or breach of warranty or covenant hereunder or affect in any way any rights arising by virtue of any prior or subsequent such occurrence.

8.11 Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. The parties further agree to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that shall achieve, to the extent possible, the economic, business and other purposes of the void or unenforceable provisions.

8.12 Disclosure Schedule. The Stockholder Disclosure Schedule, the Company Disclosure Schedule and the Parent Disclosure Schedule are each arranged in sections and subsections corresponding to the sections and subsections contained in Article III and Article IV and are intended to qualify such corresponding sections and subsections, respectively, and other

relevant sections and subsections of this Agreement; provided, however, information furnished in any particular section of the Stockholder Disclosure Schedule, the Company Disclosure Schedule and the Parent Disclosure Schedule shall be deemed to qualify and be included in another section thereof solely to the extent the relevance of such disclosure to such other section is reasonably apparent on its face. No information provided in the Stockholder Disclosure Schedule, the Company Disclosure Schedule or the Parent Disclosure Schedule shall be deemed to enlarge, broaden or enhance in any way any of the covenants, agreements, representations or warranties under this Agreement. The inclusion of any information in any section of the Stockholder Disclosure Schedule, the Company Disclosure Schedule and the Parent Disclosure Schedule or other document delivered by the parties pursuant to this Agreement shall not be deemed to be an admission or evidence of the materiality of such item, nor shall it establish a standard of materiality or determination that any item arose in the Ordinary Course for any purpose whatsoever.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement and Plan of Merger as of the date first written above.

PARENT: ABSCI CORPORATION

By: /s/ Sean McClain
Name: Sean McClain
Title: President and Chief Executive Officer

FIRST MERGER SUB: TARGET DISCOVERY MERGER SUB I, INC.

By: /s/ Sean McClain
Name: Sean McClain
Title: President

SECOND MERGER SUB: TARGET DISCOVERY MERGER SUB II, LLC

By: /s/ Sean McClain
Name: Sean McClain
Title: Manager

COMPANY: TOTIENT, INC.

By: /s/ Deniz Kural
Name: Deniz Kural
Title: President

STOCKHOLDER REPRESENTATIVE: SBGH, LLC

By: /s/ Deniz Kural
Name: Deniz Kural
Title: Manager

MAJOR STOCKHOLDERS:

/s/ Deniz Kural

Deniz Kural

/s/ James Sietstra

James Sietstra

/s/ Daniele Biasci

Daniele Biasci

SBGH LLC

By: /s/ Deniz Kural

Name: Deniz Kural

Title: Member

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated May 6, 2021, in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-257553) and related Prospectus of Absci Corporation for the registration of its common stock.

/s/ Ernst & Young LLP

Seattle, Washington
July 8, 2021

Exhibit 23.2

Consent of Independent Auditors

We consent to the use in this Registration Statement on Form S-1 of Absci Corporation of our report dated June 14, 2021, relating to the consolidated financial statements of Totient, Inc. as of December 31, 2019 and 2020, and for the years then ended, and to the reference to our firm under the heading “Experts” in the Prospectus, which is part of this Registration Statement.

/s/ Moss Adams LLP

Seattle, Washington
July 8, 2021