

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

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-40646

ABSCI CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

85-3383487

(I.R.S. Employer Identification No.)

**18105 SE Mill Plain Blvd
Vancouver, WA**

(Address of Principal Executive Offices)

98683

(Zip Code)

(360) 949-1041

Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock. \$0.0001 par value	ABSI	The Nasdaq Global Select Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports); and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (\$232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes NO

As of June 30, 2022, the aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates was approximately \$176.4 million.

The registrant had outstanding 92,321,907 shares of \$0.0001 par value common stock as of March 15, 2023.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement relating to the 2023 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. The proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2022.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements that may relate to our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs and other information that is not historical information. Many of these statements appear, in particular, under the headings “Business”, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Risk Factors”. Forward-looking statements can often be identified by the use of 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. In addition, any statements or information that refer to expectations, beliefs, plans, projections, objectives, performance or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking. In particular, these forward-looking statements include, but are not limited to:

- our expectations regarding our further development of, successful application of, and the rate and degree of market acceptance of, our Integrated Drug Creation platform, including progress towards fully *in silico* biologic drug discovery;
- our expectations regarding our ability to leverage our Integrated Drug Creation platform to shorten preclinical development of biologics;
- our expectations regarding the markets for our services and technologies, including the growth rate of the biologics market;
- our ability to attract new partners and enter into technology development agreements that contain milestone and royalty obligations in favor of us;
- our potential to receive revenue from the achievement of milestones and from royalties on net sales under agreements with our partners with respect to products originating from our Integrated Drug Creation platform;
- our ability to enter into license agreements for our existing Active Programs with those partners who do not have current milestone payment and royalty obligations to us;
- 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 and developing lead drug candidates for our internal drug discovery efforts;
- our expectations regarding our current and future partners’ continued development of, and ability to commercialize, 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 additional revenue;
- our estimates of the sufficiency of our cash and cash equivalents and short-term investments;
- our ability to establish, maintain or expand 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 Investigational New Drug application IND-ready, including non-standard amino acid incorporation capabilities;
- our ability to obtain, maintain and enforce 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 growth effectively;
- our expectations regarding use of our cash and cash equivalents and short-term investments, including the proceeds from our initial public offering;
- our financial performance and that of companies in our industry and the financial markets generally;

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- 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 impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (JOBS Act); and
- global economic conditions, including market volatility, acts of war and civil and political unrest, and our expectations about market trends and effects from inflation.

We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. Moreover, we operate in a competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Annual Report. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures, or investments we may make or enter into.

You should read this Annual Report and the documents that we file with the Securities and Exchange Commission, or the SEC, with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this Annual Report are made as of the date of this Annual Report, and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

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 Annual Report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Except as otherwise indicated, references in this Annual Report on Form 10-K to “Absci,” the “Company,” “we,” “us” and “our” refer to Absci Corporation and its subsidiaries.

Market and Industry Data and Forecasts

We obtained the industry, market and competitive position data used throughout this Annual Report on Form 10-K from our own internal estimates and research, as well as from industry and general publications and surveys, governmental agencies and publicly available information. 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 Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. These and other factors could cause results to differ materially from those expressed in the estimates made by third parties or by us.

Trademarks

This Annual Report on Form 10-K 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, HiPrBind, Bionic proteins, Translating Ideas into Drugs, Bionic SoluPro, Integrated Drug Creation, Unlimit with us, Denovium, and Denovium Engine. All other trademarks, service

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marks or trade names referred to in this Annual Report on Form 10-K are the property of their respective owners. Solely for convenience, the trademarks and trade names in this Annual Report on Form 10-K 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.

Availability of Other Information about Absci

Investors and others should note that we routinely communicate with investors and the public using our website (www.absci.com) and our investor relations website (investors.absci.com) free of charge, including without limitation, through the posting of investor presentations, SEC filings (including amendments and exhibits to such filings as soon as reasonably practicable after filed with or furnished to the SEC), press releases, public conference calls and webcasts on these websites, as well as on Twitter, LinkedIn and YouTube. The information that we post on these websites and social media outlets could be deemed to be material information. As a result, investors, the media, and others interested in Absci are encouraged to review this information on a regular basis. The contents of our website and social media postings, or any other website that may be accessed from our website or social media postings, shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

Part I.

Item 1. Business

Our Mission

Absci is a generative AI drug creation company that combines AI with scalable wet lab technologies to create better biologics for patients, faster. With the data to train, the AI to create, and the wet lab to validate, our vision is to deliver breakthrough therapeutics at the click of a button, for everyone.

We recognize the extraordinary medical and economic potential of protein-based therapeutics (biologics) and the significant challenges the biopharmaceutical industry faces to discover novel biologics. We look at the end game – getting life-changing medicines to patients, faster — and ask: how? Our technology is built to be that how.

Our Integrated Drug Creation platform replaces the fragmentation and inefficiencies of traditional biologic drug discovery by simultaneously optimizing multiple drug characteristics important to preclinical and clinical development, as well as therapeutic benefit. In turn, this has the potential to significantly shorten time to clinic and increase the probability of success. We leverage our platform to expand biological possibilities — shifting from a paradigm of drug discovery to drug creation — with the goal of advancing better biologics into clinical trials on shortened timelines and, if approved, ultimately into the marketplace to impact people's lives.

Overview

We are a generative AI drug creation company harnessing deep learning and synthetic biology to expand the therapeutic potential of proteins. We leverage our Integrated Drug Creation platform to identify novel drug targets and create biotherapeutic candidates that are optimized. We believe our approach enables us, and our partners, to develop novel biologics that are optimized for many traits at disruptive speed.

We couple our powerful deep learning AI models, built to understand and predict determinants of protein function, with our proprietary synthetic biology capabilities, which include 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). This combination of *in silico* modeling with wet lab testing allows us to generate immense real-world datasets that we harness to train and refine our deep learning models. These models guide our protein and cell line designs and enable *in silico* optimization of multiple attributes. Our target platform technology (formerly "Totient") uses machine learning computational methods to evaluate patient tissue samples and, without biological bias, identify disease-relevant fully human antibodies and their disease- and tissue-specific molecular targets. In addition to the direct utility of these antibodies and targets as drug discovery assets, these data comprising antibody-epitope recognition elements expand our AI models' training sets and may improve predictive capabilities for future discovery campaigns.

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Through iterative AI predictions, wet lab validation, and AI training we enable a virtuous cycle that we believe will accelerate us toward fully *in silico* biologic drug discovery. Our unique Integrated Drug Creation approach has the potential to significantly shorten preclinical development timelines and expand therapeutic possibilities.

Our goal is to become the technology leader in biologic drug creation. Our business model is to use our platform for the rapid creation of biologic drug candidates by establishing partnerships with biopharmaceutical companies and developing our own drug discovery pipeline.

Our core competencies include:

- AI-powered antibody optimization: With multiparametric AI lead optimization, we work to simultaneously evaluate variants for improved target affinity, manufacturability, and other pharmacologic characteristics, bringing lead candidates to the clinic.
- Novel target identification: We reconstruct prevalent immune-response molecules such as antibodies from disease tissue and identify their corresponding antigens, offering new therapeutic targets, as well as the cognate binding partners, for further potential validation and optimization.
- *De novo* antibody design: Starting with an envisioned drug format and target antigen, we generate a library of relevant sequence variants to establish the target specificity, which are designed to create novel lead drug candidates with desirable attributes, including manufacturability and low immunogenicity.
- Antibody-drug conjugate (ADC) capabilities: With genetic engineering, we incorporate site-specific non-standard amino acids (nsAAs) with chemical handles that can be used for post-translational modifications including glycosylation, PEGylation, and ADC-payload conjugation, as well as novel branched proteins and chemical conjugates.

We believe the flexibility of our platform enables us to address specific challenges with existing targets or product candidates and open up opportunities to create new modalities and generate lead drug candidates that previously had not been possible. Our goal is to demonstrate the value of our fully integrated approach and expand our work with an increasing number of partners and programs. We believe we offer a compelling value proposition by:

- Shortening timelines from idea to drug candidate;
- Enabling the creation of new biologic modalities;
- Improving the production capability of biologics;
- Designing better drug candidates;
- Raising biologics production yields and lowering manufacturing costs; and
- Expanding potential life cycle management opportunities related to existing or legacy therapeutic franchises.

Our near-term vision is to enable the discovery of novel, targeted biologic drug candidates for our partners and for our internal drug discovery pipeline.

Strategy

We believe we represent a new breed of biotechnology company, integrating powerful artificial intelligence with new synthetic biology technologies to create biologics. We intend to use our Integrated Drug Creation platform to empower innovation by identifying new targets, creating new modalities, driving efficiencies, broadening pipelines, and shortening preclinical timelines.

Our strategy to accomplish this is as follows:

- **Enable the discovery and development of 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 AI Engine (formerly referred to as our Denovium Engine). 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 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 us and 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 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.** We form partnerships with large pharmaceutical companies, biotechnology companies, and other organizations deploying our breakthrough technologies to enable biologic drug discovery for these partners and to continually expand the breadth and depth of our partnered 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 biologics across multiple indications.
- **Advance the promise of *in silico* drug creation by leveraging proprietary data and AI.** Our AI Engine learns with each new program we undertake. We are enhancing the predictive power of our AI Engine 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 target technology we are expanding the content of our training datasets to develop models that understand immune protein interactions and determinants of antibody-antigen specificity. Our AI Engine is the link that correlates business scale with speed and precision. The more partners we have, the more data we generate, the more our AI Engine learns. As our AI Engine 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, Inc. (AI Engine) and Totient, Inc. (Target platform), 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.

Industry

Biologics

Biologics are generally made using living organisms to produce large, complex molecules that can target specific molecules or pathways involved in disease. This may allow for more precise and targeted therapies, which can lead to fewer side effects compared to traditional small molecule drugs. A number of biologics have been shown to be highly effective in treating chronic diseases such as cancer, autoimmune disorders, and rare diseases that were previously untreatable.

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Biologic drug discovery has been revolutionized by the introduction of next-generation sequencing, bioinformatics and computational biology, which has led to the identification of new targets, improved understanding of disease mechanisms, and the development of new therapeutics.

Market

Over the last two decades, biologics have emerged as one of the fastest growing class of therapeutics. Evaluate Pharma World Preview 2021 forecasts that worldwide pharma R&D spend will grow at an annualized rate of 4.2% to \$254 billion in 2026, and worldwide prescription sales will top \$1 trillion by 2026, with the top 10 best-selling drugs mostly being biologics valued at \$127 billion. Therapies based on biotechnology are estimated to account for 37% of total prescription and over-the-counter sales in 2026, up from 30% in 2020. In 2020, cumulative global sales of 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.

We believe that the biopharmaceutical industry remains constrained in pursuing new biologic modalities because it lacks suitable and cost-effective approaches to efficiently create 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 to derive and apply non-obvious insights across the discovery and manufacturing process development value chain nor to explore potential drug sequences and structures that lie beyond nature's boundaries.

Challenges

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. On average, preclinical drug development for biologics takes several years, ranging from 2 to 5 years or more, before the drug candidate is ready to move into clinical trials. A 2021 Nature's Review cited that, from investigational new drug application (IND) to U.S. Food and Drug Administration (FDA) approval, it takes another 8.3 years (median time). A Journal of the American Medical Association publication cited that a 2020 study of 63 new therapeutic drugs and biologic agents approved by the FDA between 2009 and 2018, the estimated median capitalized research and development cost per product was \$1.1 billion, counting expenditures on failed trials.

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.
- Commercially available biologic drug discovery platforms are generally constrained as to the types of biologic modalities they can explore.
- Current approaches to biologic drug production are not readily adaptable to novel protein modalities.
- Current approaches do not leverage AI to explore beyond opportunities within nature.
- Existing production organisms, or systems, can be inefficient and costly.

Accordingly, 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.

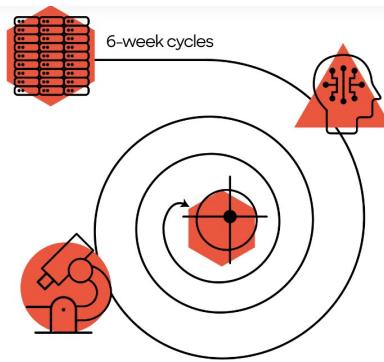
Our Integrated Drug Creation Platform

AI promises to revolutionize drug discovery, but advances in drug creation also depend on scalable wet lab technologies to produce and validate biological data at scale. Our Integrated Drug Creation platform

combines the data to train, the AI to create, and the wet lab to validate millions of AI-generated designs a week. It can take us from AI-designed antibodies to wet lab-validated candidates in as little as six weeks.

Data to Train

Proprietary wet-lab assays generating billions of protein-protein interaction data to train ML models.



AI to Create

Generative AI engine to create novel designs of antibodies/next-gen biologics.

Wet Lab to Validate

Scalable wet lab infrastructure operationalized to validate AI generated designs in a matter of weeks.

Data to Train: Our SoluPro technology is a multiplex synthetic biology approach designed to overcome the limitations of today's highest-throughput automation labs. It constructs billions of genetically-distinct cells, each containing instructions to make one version of a protein of interest, as well as a different assortment of folding and expression solutions. Our ACE assay then evaluates and sorts hundreds of millions of designs to collect the best hits - versions of the protein-of-interest, based on target binding, protein quality, and expression titer. We use this high-quality, high-throughput data to train our AI models.

AI to Create: We design new therapeutic candidates using generative AI models similar to those used for creating text and images from natural language prompts. Working from massive biology datasets, we apply generative AI to design drug candidates that are optimized based on target affinity, tolerability, manufacturability, and other traits. Generative AI expands the solution space and enables us to create completely new antibody designs in the computer, unlocking new opportunities in *in silico* drug design.

Wet Lab to Validate: We support our generative AI designs with our wet lab's throughput functional validation capabilities, which are designed to prove our AI models in the lab. They can take us from AI-designed antibodies to wet lab-validated candidates in as little as six weeks. The quality and scale of wet lab data give us extensive training data, propelling our iterative design-build-test-learn cycle.

Applications of our Integrated Drug Creation Platform

The flexibility of our platform enables us 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 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 target technology. We may also design and optimize a high-titer production cell line for a partner's already-established lead drug candidate.

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

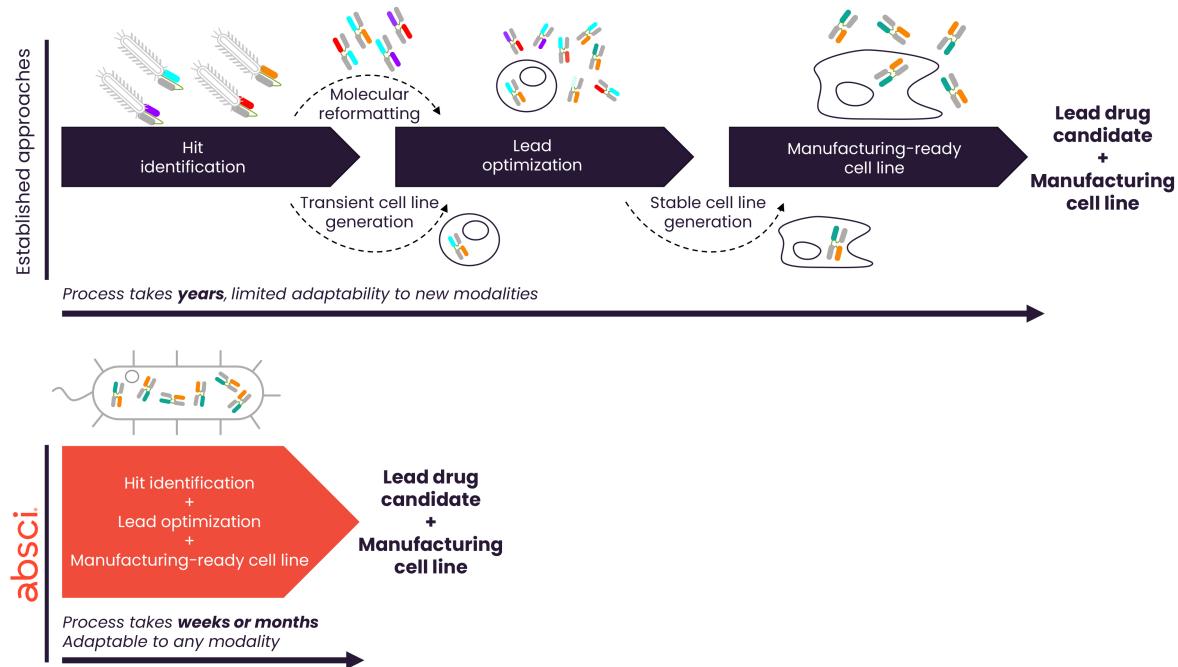
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screening methods commonly used for biologic drug discovery, we are screening for hit variants in the complete scaffold, not a domain fragment to be subsequently reformatted. We also screen in production cell line variants. Our Discovery applications 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. The Discovery applications that we 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.
- Scaffold design and drug platform development - We are uniquely capable of assembling and producing new-to-nature 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.
- *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).
- 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.
- 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 biologics derived from these sequences as lead drug candidates in partnered programs.
- 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 that also may expand the potential life cycle management opportunities. Thus we can optimize leads that our partners may advance through preclinical development.

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.

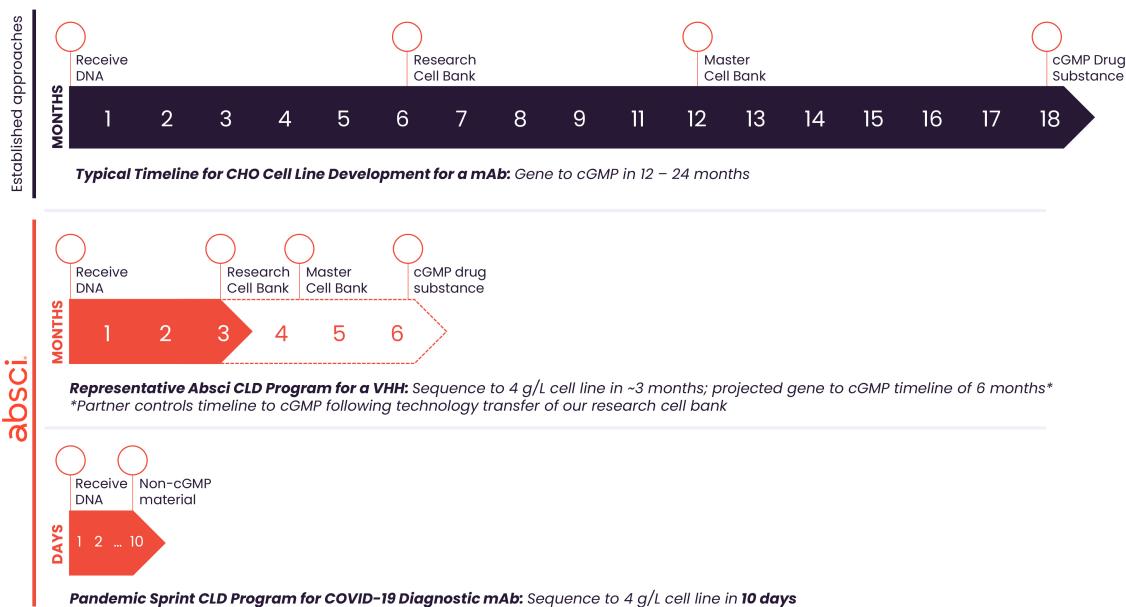


Our Integrated Drug Creation platform aims to provide the following potential benefits:

- **Shortened timelines from idea to drug candidate:** Our platform integrates biologic drug discovery and cell line development, collapsing time-consuming fragmented activities into one integrated process. We can bypass common failure points and avoid the need for molecular reformatting or subsequent cell line development because from the start we screen for hits *in the*

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desired scaffold format and *in the cell line that will scale up for manufacturing*. Our timelines relative to industry standards are depicted in the figure below.



- Creation of new biologic modalities:** Utilizing our Integrated Drug Creation platform, we specialize in creating new biologic modalities, discovering new biologics in engineered scaffolds, and creating Bionic proteins that incorporate nsAAs.
- Efficient production of complex biologics:** With our Integrated Drug Creation platform, 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 billions of potential strains to efficiently identify configurations of folding and expression solutions that confer protein production performance that is optimized.
- 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 harness evidence from each project to progressively train our deep learning AI Engine, which then outputs progressively more relevant and valuable predictions to direct our synthetic constructions. Our AI Engine models enable multi-parameter predictions and simultaneous optimization of attributes in parallel, making predictions that solve for desired attributes. Insights we achieve through the integration of deep learning will ultimately help identify new drug candidates with the best chances for clinical success.

Our Business Model

Our business model is to use our platform for rapid creation of biologic drug candidates by:

Establishing partnerships with stakeholders in the drug and technology development life cycle:

We develop drug candidates for partners, including those who are responsible for preclinical and clinical testing of the biologic candidates generated by our platform. Our partnerships will provide us with the opportunity to participate in the future success of the biologic candidates 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' biologics across multiple indications.

Developing our own drug discovery pipeline:

We intend to develop drug candidates for our own drug discovery pipeline. With the potential to find both targets and lead candidates, we intend to

develop promising lead candidates to up to the IND stage or later. We believe this will increase the value of our assets and serve as further validation of our platform as we continue to simultaneously establish partnerships with stakeholders in the drug and technology development life cycle. We may enter into clinical trials and/or manufacturing partnerships to advance a lead candidate.

We believe our business model is capital efficient as our partners fund our technology development work, and we do not significantly invest in clinical development or scaled manufacturing infrastructure.

Our Partnerships

We structure our partnerships as technology development agreements (each molecule we address 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 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. 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.

Active Programs

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.

As of December 31, 2022, we had drug candidates in 16 Active Programs across five current partners’ preclinical or clinical pipelines. We have negotiated license agreements, or expect to negotiate license agreements upon completion of certain technology development activities, with potential downstream milestone payments and royalties for all active programs.

Thirteen Active Programs comprise of Discovery applications, which include three through our agreement with Merck & Co., Inc., three through our agreement with EQRx, and seven with an undisclosed biotechnology company. Three Active Programs are focused on developing production cell lines for drug candidates that our partners are developing. Two of these cell line development Active Programs are preclinical and one is in Phase 3 (PhaseBio Pharmaceuticals’ drug candidate, bentracimab, assumed by SFJ Pharmaceuticals, Inc. in January 2023).

Exclusive of our 16 Active Programs with partners, we have utilized our platform to perform technology development activities related to 31 additional molecules. These programs were both internal research programs and technology development programs with third parties intended to demonstrate our platform’s capabilities as we address successively broader ranges of biologics and modalities. We have not transferred technology or granted licenses related to these programs.

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

Biologic Modality	# of Programs	
	Active Programs	All Programs
Bispecific mAb	1	1
Bispecific T-cell engager		3
Cytokine		2
Fab*	1	4
Multivalent Fc*-fusion		2
Plasma protein	1	1
mAb	1	6
Fc-fusion		2
scFv*-fusion		3
VHH*-fusion		2
Enzyme		4
Hormone		5
Not specified	12	12
Total	16	47

AbSci Pipeline

In addition to our partnerships, we intend to selectively develop lead drug candidates for our own drug discovery pipeline. With the potential to find both targets and lead candidates, we intend to develop promising lead candidates up to the IND stage or later. We may out-license or transfer our drug candidates for clinical advancement by a partner for a greater share in the economics relative to the milestone and royalties we secure for our core platform technology development. We believe our pipeline will increase the value of our assets and serve as further validation of our platform.

Our Growth Strategy

Our goal is to establish our proprietary, end-to-end platform as the industry standard for biologic drug discovery. 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, while also initiating our own drug discovery pipeline. 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 we work with our existing partners.

- **Expand the scope of our partnerships across the biologic drug discovery value chain.** We intend to grow existing partnerships across all of our drug creation 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.
- **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 biologic 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 aim to 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. 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 our proprietary asset pipeline.** We intend to selectively create our own lead drug candidates and advance them up to the IND stage or later. In some cases we may out-license or transfer drug candidates for clinical advancement by a partner, with the expectation of a greater 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 biopharmaceutical 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 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 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 Insite, 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;

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- 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.

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 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 Biologic Drug 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.”

Human Capital

Our employees, who we refer to as “Unlimiters”, are essential in our ability to serve our partners and achieve our mission to create better biologics for patients, faster.

Our core values set the tone for how we work together:

- Believe in the impossible
- Proceed with passion and grit
- Foster collaboration and communication
- Expect integrity and excellence
- Enjoy the adventure

Building these values into our culture enables our people to translate ideas into impact as we strive to create a better, faster path to new medicines. Collectively and individually we are defying conventions and disrupting the biopharmaceutical industry with bold ideas and passionate pursuit of new possibilities.

As of December 31, 2022, we had 193 employees, many of whom have advanced post-graduate degrees. We believe that our Unlimiters are our most important asset.

To facilitate talent attraction and retention, we strive to make Absci an inclusive, safe, and healthy workplace with opportunities to grow and develop, supported by strong compensation, benefits, community, health and well-being programs.

Compensation and benefits: Our compensation philosophy is designed to establish and maintain a fair and flexible compensation program that attracts and rewards talented individuals who possess the skills necessary to support our mission, create long-term value for our stockholders and assist in the achievement of our strategic goals. We provide employees with competitive pay, a wide range of benefits, and an equity incentive program. The principal purposes of our equity incentive plans are to attract, retain, and motivate

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selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards while aligning the interests of our employees with our stockholders. All full-time employees receive an equity grant upon hire and are eligible for annual equity grants thereafter. Our employee benefits includes an employee stock purchase plan, generous healthcare benefits for employees and their families, unlimited vacation, parental leave, 401(k) matching, referral bonuses, access to mental health resources, wellness programs, and onsite services.

Training and development: We offer a number of educational resources and development opportunities with emphasis on internal mobility and fair and equitable talent practices. Employees take advantage of live courses, leadership programs, online training, team building events, seminars, conferences, lectures, university programs, peer-to-peer and leadership-guided training and other learning opportunities across the company. All employees are eligible for an annual monetary stipend for continuing education and career development training. Additionally, we have a paid internship program that offers university or graduate students real-world experience and the chance to work with our extraordinary people, while helping Absci identify and develop the next generation of Unlimiters.

Ethics and compliance: We have adopted and regularly review the Code of Business Conduct and Ethics to aid our directors, officers and employees in making ethical and legal decisions when conducting business and performing day-to-day duties. All directors, officers and employees are required to review and sign an acknowledgment regarding the Code of Business Conduct and Ethics. We have established a reporting hotline and web form that enables employees to anonymously report any suspected violations of the Code of Business Conduct and Ethics, and we have a strict non-retaliation policy for all claims brought forward in good faith.

Communication and employee engagement: We employ a variety of tools to facilitate open and direct communication including open forums with executives, employee surveys and engagement through employee-led groups and committees. Our campus is intentionally designed to create a space for collaboration and camaraderie. We hold company wide meetings monthly and regularly schedule time for our colleagues to connect. We appraise and refine our employee programs through our company pulse surveys. We conducted our first annual employee engagement survey in 2022 to assist us in appraising and refining our employee programs. Our annual employee engagement survey process utilizes a third-party survey tool, and we supplement this process with periodic pulse surveys to help us gauge ongoing progress and employee sentiment. The executive leadership team continues to identify key initiatives that tie directly back to employee feedback to further increase employee engagement.

Diversity, equity, inclusion and belonging (DEIB): Our vision is to deliver breakthrough therapeutics at the click of a button — for everyone. That vision isn't possible unless we live in a diverse and equitable world, where everyone benefits from the potentially life-changing technology we're creating. In addition to creating innovative change in the world, we are also working for change much closer to home. We are committed to building a team with a variety of backgrounds, skills and views. We encourage grassroots efforts by employees such as the formation of affinity groups like our Women's Alliance Group and Rainbow Group. All employees complete annual DEIB training that includes details on how to report any violation of DEIB policies. We continue to evolve and advance our DEIB efforts. We believe the more inclusive we are, the better our work will be.

Health, safety, wellbeing: We are committed to promoting the health, safety, and wellbeing of our employees. Our Employee Safety Committee is comprised of cross-departmental members and meets regularly to review workplace safety and adherence to safety policies. We require annual workplace safety training to reinforce workplace safety procedures that may be useful in the event of emergency situations and to assist our employees in helping to prevent workplace accidents. We have numerous employees with current first aid, CPR, and AED certifications for emergency preparedness. We have been dedicated to prioritizing the health and safety of our employees and business partners during the COVID-19 pandemic. We continue to monitor federal, state and local laws and regulations to prevent the spread of COVID-19 at our workplace.

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

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without infringing valid and enforceable patents and other proprietary rights of third parties and to identify new opportunities for intellectual property protection.

As of December 31, 2022, we own 61 issued or granted patents and 126 pending patent applications worldwide, which includes seven issued U.S. patents and 57 pending U.S. patent applications. We also have granted patents in the EU, Australia, Japan, Canada, China, Hong Kong, Israel, and Mexico. Our patents and patent applications, if issued, are expected to expire between August 2033 and December 2042, 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:

Technology	Issued Patents	Pending Applications	Type of Protection
Cell Line & Expression Technology	7 U.S. 54 foreign	42 applications	Compositions, methods, kits
Proprietary Assays and Techniques		22 applications	Compositions, Methods
Antibody Discovery		51 applications	Compositions, methods, kits
Artificial Intelligence		9 applications	Systems, 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 (USPTO) to meet 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 December 31, 2022, we owned registered trademarks for Absci, SoluPro and SoluPure in the United States, as well as eleven 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 AI 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.”

Environmental, Social and Governance (ESG)

We are integrating ESG considerations into our business strategy as we continue to grow. To establish an oversight structure, in 2022, we amended the charter of the Nominating and Corporate Governance Committee of the Board (the “Committee”) to stipulate that the Committee would oversee and coordinate with the Board and its other committees the periodic review of corporate responsibility and ESG matters pertaining to the Company, which may include the evaluation of industry practices, investor views, reputational impact, legal standards, and overall risks and benefits of ESG initiatives, as well as public reporting on these matters.

Cybersecurity

Our cybersecurity program is aligned with standards established by the National Institute of Standards and Technology (NIST) and the Center for Internet Security (CIS). We conduct regular internal security audits, a comprehensive annual third-party cybersecurity audit, and we engage with third-party experts to perform industry standard penetration testing. We maintain cybersecurity insurance coverage to provide financial protection against certain cyber liability and data breach claims. For a discussion of the risks we face relating to cybersecurity, see “Risk Factors—General Risk Factors.” As of the date of this filing, we have not to our knowledge experienced any cyber security incidents or breaches.

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. 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

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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 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.

We may selectively create our own biologic product candidates and advance such candidates up to the investigational drug application IND stage or later 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

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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. Furthermore in August 2022, President Biden signed the Inflation Reduction Act, which among other things: allows for the Centers for Medicare & Medicaid Services to impose price controls for certain single-source drugs and biotherapeutics reimbursed under Medicare Part B and Part D.

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.

Corporate Information

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 under the name Absci Corporation and all outstanding membership interests in AbSci LLC were exchanged for equity interests in Absci Corporation.

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Our principal executive offices are located at 18105 SE Mill Plain Boulevard, Vancouver, Washington 98683. Our telephone number is (360) 949-1041. Our website address is <https://www.absci.com/>. Information contained on, or that can be accessed through, our website should not be considered to be part of this Annual Report.

You are advised to read this Annual Report in conjunction with other reports and documents that we file from time to time with the SEC. In particular, please read our Quarterly Reports on Form 10-Q and any Current Reports on Form 8-K that we may file from time to time. You may obtain copies of these reports directly from us or from the SEC. In addition, the SEC maintains information for electronic filers (including Absci Corporation) at its website at www.sec.gov. We make our periodic and current reports available on our internet website, free of charge, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC.

Available information

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, proxy and information statements and amendments to reports filed pursuant to Sections 13(a), and 15(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act) are filed with the SEC. We are subject to the informational requirements of the Exchange Act and file or furnish reports, proxy statements and other information with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov. Such documents and other information filed by us with the SEC are available free of charge on our investor relations website (<https://investors.absci.com/>) when such reports are available on the SEC's website.

Investors and others should note that we may announce material information to the public through filings with the SEC, on our investor relations website (<https://investors.absci.com/>), press releases, public conference calls, and public webcasts. We encourage our investors and others to review the information disclosed through such channels as such information could be deemed to be material information. Please note that this list may be updated from time to time.

Item 1A. Risk Factors

Factors that could cause or contribute to differences in our future financial and operating results include those discussed in the risk factors set forth in this Annual Report on Form 10-K. The risks described in this Annual Report and are not the only risks that we face. Additional risks not presently known to us or that we do not currently consider significant may also have an adverse effect on the Company. If any of the risks actually occur, our business, results of operations, cash flows or financial condition could suffer.

Summary of Risk Factors

Below is a summary of the principal factors that make an investment in our common stock speculative or risky. This summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found below under the heading "Risk Factors" and should be carefully considered, together with other information in this Annual Report on Form 10-K and our other filings with the SEC, before making investment decisions regarding our common stock.

- 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;
- 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 execute on our business strategy or compete successfully, which would harm our business, operations, and financial condition;
- Our commercial success depends on the technological capabilities of our Integrated Drug Creation platform;

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- 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;
- 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;
- If we cannot maintain our current relationships with partners, or if we fail to expand our relationships with our current partners or enter into new relationships, our operating results would be adversely affected as a general matter;
- 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;
- 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 partnerships, this could negatively affect our revenue opportunity for that program, and/or have broader deleterious effects on our reputation and future partnership prospects;
- 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 achieve and sustain profitability;
- 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;
- 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;
- The loss of any member of our senior leadership team or our inability to attract and retain highly skilled scientists, business development professionals, and other personnel could adversely affect our business;
- If we are unable to obtain and maintain sufficient intellectual property protection for our technologies, including our cell line and expression technologies, generative deep learning technology, proprietary assays and techniques and computational antibody and target discovery 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; and
- Our share price may be volatile, and our operating results may fluctuate significantly from time to time.

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 Annual Report and in our other public filings in evaluating our business. 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 and the market price of our common stock.

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. Total revenue was \$5.7 million for the year ended December 31, 2022 compared to \$4.8 million for the year ended December 31, 2021. Our revenue was generated primarily from technology development activities. We are very early in the adoption phase of our business model, and, as of March 15, 2023, 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. 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 raise sufficient 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 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.

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, 2022 and 2021, we incurred net losses of \$104.9 million and \$101.0 million, respectively. As of December 31, 2022, we had an accumulated deficit of \$295.9 million. We expect that our operating expenses will continue to increase as we grow our business. Since our inception, we have financed our operations primarily from private placements of our preferred equity securities, convertible promissory notes, the sale of common stock in our initial public offering (IPO), the incurrence of other indebtedness and other financing activities, and to a lesser extent, revenue derived from our technology development activities leveraging 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.

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.

As of December 31, 2022, we had \$164.4 million in cash and cash equivalents and short term investments. In July 2021, we consummated our IPO and issued 14,375,000 shares of common stock, including full exercise of the underwriters' overallotment option, for net proceeds of \$210.1 million, after deducting underwriting discounts and offering related expenses. We expect our current cash and cash equivalents and short term investments 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. If our available resources 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, higher expenses than we anticipate related to our investments in our platform technology and the preclinical or later development of internal assets or the realization of other risks described in this "Risk Factors" section, we will be required to raise additional capital 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 or translational medicine;
- acquire, license or invest in additional technologies or complementary businesses or assets;
- pursue opportunities to apply our protein creation technologies beyond the biopharmaceutical industry;
- advance internal assets through preclinical or later validation; and
- finance capital expenditures and general and administrative expenses.

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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 collaborating with partners to leverage our platform and business development activities associated therewith;
- our rate of progress in, and cost of, developing 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 year ended December 31, 2022, substantially all of our revenue was generated by technology development fees through performing technology development activities addressing molecules in programs for our partners. 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. 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 may 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 and may not result in meaningful revenues to us, or at all, 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.

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 generate more promising molecules and cell lines and to shorten 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 ability to successfully identify appropriate molecules and production cell lines through our platform and provide them to our partners on the desired timeframes and for further development;
- 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' entering 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 use our generative AI models to create actionable biological insights;
- 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 and leverage this data to train our generative AI models;
- whether competitors develop a platform that enables biologic drug discovery and cell line development more effectively than our platform;
- 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 using our target technology;
- our ability to construct diverse genetic libraries covering sufficient diversity of protein sequence variants and folding and expression solutions combinations;

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- our ability to reliably adapt our assays to each program to screen large strain libraries and routinely identify molecules/strains that meet the program deliverable requirements;
- our ability to optimize our fermentation conditions to scale at an effective level;
- 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 biologic drug development, and the continued market growth and clinical and regulatory 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;
- our ability to further validate and enhance our platform through research and technology development activities;
- our ability to leverage our platform technologies to create product candidates for internal development and advancement into clinical trials.

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 CLD applications. Substantially all of our revenue generated to date is from technology development arrangements for our CLD applications. To date, we have very limited experience and expertise in the biologic drug discovery using our platform and have achieved limited 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 will likely depend on our ability to leverage our Integrated Drug Creation platform, together with our custom libraries, data sets and other proprietary tools, into other areas of biopharmaceutical research and development, including biologics drug discovery. However, we may not be able to successfully validate that our Integrated Drug Creation platform will shorten the hit identification and lead optimization steps of biologic drug discovery or that our platform will enable us to discover promising biologic candidates for further development.

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 opportunities such as 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.

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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 or 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 development and commercialization of the molecules discovered using our platform, which are typically 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 depends 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 that they develop and were generated utilizing our platform. Given the nature of our relationships with our partners and future 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 little control. If a partner determines not to proceed with the future development of a product candidate discovered or initially developed utilizing our Integrated Drug Creation platform, if it implements a clinical or regulatory strategy that ultimately does not enable the further development, approval or commercialization of the product candidate, or if we cannot find a partner to advance an asset that we develop using our platform, 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 platform, we may not be able sustain our business model.

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, 2022 and 2021, revenue from three partners accounted for 98% and two partners accounted for 73% of our technology development revenue, respectively. 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 resources 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. We target partnerships with biotechnology and pharmaceutical companies. Macro-economic market conditions have had, and may continue to have a significant effect on the formation, funding and research and development budgets of these types of entities and could have a significant effect on the number of viable companies with whom we may partner or the programs viable partners may elect to pursue. Our partners may also determine their research and development budgets based on other factors, including conservation of cash resources, changes in business priorities, the need to develop new products, technological expertise, continued availability of governmental and other funding, competition, and intellectual property landscape. If research and development budgets of viable partners are reduced or the number of viable partners decline, the impact could adversely affect our business, financial condition, results of operations and prospects.

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 efforts.

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 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 limited experience with the discovery of novel biologic drug candidates and incorporation of nsAAs. 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 continue to integrate generative AI deep learning technology and computational antibody and target discovery technology into our Integrated Drug Creation platform to shorten drug discovery and cell line development timelines. 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 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 less favorable 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.

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.

We must adapt to rapid and significant technological change and respond to introductions of new products and technologies to remain competitive.

The industries in which we operate are characterized by significant enhancements and evolving industry standards. As a result, our partners' needs are rapidly evolving. If we do not successfully innovate and invest in new technologies, including within the field of AI, our platform may become less competitive, and our partners could move to new technologies or engage in drug discovery themselves. Without the timely introduction of technological advancements, our platform technologies will likely become less competitive over time, in which case our competitive position and results of operations could suffer. Accordingly, we focus substantial resources on the development and identification of new technologies to further broaden and deepen our capabilities and expertise in AI-powered drug discovery and cell line development. To the extent we fail to timely introduce new and innovative technologies, adequately predict our partners' needs or fail to obtain desired levels of market acceptance, our business may suffer and our results of operations could be adversely affected.

We may not be successful in our efforts to identify or discover internally-generated drug candidates.

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. The development of internal assets through preclinical or later validation requires financial and human resource investments in R&D. We have not internally developed any drug candidates to date, and we may fail to identify viable drug candidates. Similarly, a key element of our business plan is to continue to expand our Integrated Drug Creation platform through an increase in partnered programs.

Our business prospects and business development efforts could be limited if we are unable to validate aspects of our platform to discover drug candidates for our own internal development. Our efforts to develop an internal asset may also limit the resources available for other programs and may be less successful than if we allocated those resources to a partnered program. The development of any drug candidate we pursue may also ultimately prove to be unsuccessful or less successful than another potential drug candidate that we might have chosen to pursue on a more aggressive basis or at all.

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 a regulatory submission, such as an IND application or BLA, for a drug candidate generated using our platform. 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 and 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 preclinical 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 intend to advance proprietary drug candidates through preclinical or later 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 in this "Risk Factors" section, 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 partnerships, 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 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;

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- 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 de-prioritize 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, or suspension of, the development of the product candidates developed by our partners generated using our technology 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 achieve and 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 Insite, Inc., TScan Therapeutics, Inc. and 3T Biosciences, Inc.;

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- 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. 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 Bioscience, Inc. 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. and Adimab LLC;
- 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 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 organizations 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 achieving and sustaining profitability.

The market for our platform, 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 and AI technologies.

The market for our platform, 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 and AI technologies. 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 and AI-powered drug discovery markets are relatively new, and potential partners may be hesitant to allocate resources in relatively unproven fields. 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 successfully 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 an adequate return on their investment in such therapeutics, and may lead to discontinuation or deprioritization of development, 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 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.

Furthermore in August 2022, President Biden signed the Inflation Reduction Act, which among other things: allows for the Centers for Medicare & Medicaid Services to impose price controls for certain single-source drugs and biotherapeutics reimbursed under Medicare Part B and Part D. Over time, the Inflation Reduction Act could reduce the revenues we are able to collect from sales of products developed using our platform; however, the degree of impact that the Inflation Reduction Act will ultimately have upon our business remains unclear.

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 direct regulation by the FDA or other regulatory bodies. However particularly if we determine to advance internally-developed product candidates generated from our Integrated Drug Creation platform into clinical development, our business could in the future become subject to more direct oversight by the FDA, or other domestic or international agencies. In addition, we may become 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 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

We rely on a limited number of suppliers for laboratory equipment and materials and may not be able to find replacements or transition to alternative suppliers on a timely basis, or at all.

We rely on a limited number of 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 activities 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 a bioreactor system and related equipment, consumables and liquid handling robotics, and associated consumables. We obtain our supplies of equipment and materials under purchase orders and do not have supply contracts in place with certain suppliers. Any disruption in the supply chain for these products could materially affect our business. While there are alternative types of

equipment that we could use as a replacement, switching to different systems could 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 licensing technology from our platform advance into clinical testing or progress to manufacture in a cGMP environment, which may reduce our existing and prospective 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 reduction 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 December 31, 2022, we had 193 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 and expand our number of programs. As we seek to increase the number of our partnerships, expand the scope of our existing partnerships, pursue internal programs 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 future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. 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 growth 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 growth, 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 growth.

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.

Our corporate reorganization plan and the associated workforce reduction announced in August 2022 may not result in the full anticipated savings and may disrupt operations.

In August 2022, we announced a corporate reorganization plan to streamline our scientific and technical teams and prioritize key technical initiatives including AI drug and target discovery. We may not fully realize the anticipated benefits, savings and improvements in our cost structure from our reorganization efforts due to unforeseen difficulties, delays or unexpected costs. If we are unable to realize anticipated cost savings from the reorganization, our operating results and financial condition may be adversely affected. Furthermore, our corporate reorganization plan may be disruptive to our operations. For example, our workforce reductions could lead to unanticipated consequences, such as turnover beyond planned reductions, increased difficulties in our day-to-day operations or claims of unlawful discharge. Our workforce reductions may also harm our ability to attract and retain qualified personnel who are critical to our business. Any failure to attract or retain qualified personnel could prevent us from successfully executing key technical initiatives.

The loss of any member of our senior leadership 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 leadership team, including Sean McClain, our founder and Chief Executive Officer, and Andreas Busch, Ph.D., our Chief Innovation 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 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 AI-powered biologic drug discovery and cell line development, as well as qualified business development and sales professionals, among life sciences companies. Competition for personnel with expertise in AI-powered drug discovery is particularly intense. Additionally, our headquarters located in Vancouver, Washington, which does not have as high a concentration of innovative biotechnology or AI companies as other geographic locations, may negatively impact our ability to attract and retain 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 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 the assets acquired in the Denovium transaction will continue to benefit our projects or that we will be able to achieve our ultimate goal of *in silico* biologic drug discovery and cell line design. Further, it is possible that we will experience disruption of our ongoing business. 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 acquired businesses and diverted from day-to-day business operations, which may disrupt our ongoing business and the business of the combined company. We have incurred 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, and third parties with whom we have relationships may have an adverse effect on our business, financial condition, results of operations and prospects.

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, joint ventures or other commercial deal structures 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 in January 2021 and 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, joint venture, or other commercial deal structure. 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 equipment financing agreements may contain 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.

We have entered into a Master Financing Agreement (MFA) pursuant to which the lender agreed to provide us equipment financing. Until we have repaid such indebtedness, the MFA subjects us to various customary covenants, including requirements as to financial reporting, liquidity ratios and maintaining insurance. Our business may be adversely affected by these restrictions on our ability to operate our business.

We may be required to repay the outstanding indebtedness under the MFA if an event of default occurs under the MFA. An event of default will occur if, among other things, we fail to make required payments under the MFA; we breach any of our covenants under the MFA, subject to specified cure periods with respect to certain breaches; the lender determines that a material adverse change (as defined in the MFA) 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 other parties the 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 MFA, which collateral includes substantially all of our property. Our business, financial condition, results of operations and prospects could be materially adversely affected as a result of any of these events.

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 have not 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, which 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 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 third-party providers, and a private graphics processing unit 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, procurement, 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, we currently maintain offices and have employees located in Zug, Switzerland and Belgrade, Serbia. 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;

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- 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 (particularly in light of potential escalating conflicts between Russia and Ukraine), outbreak of disease, boycotts, curtailment of trade, including as a result of tariffs, export controls and sanctions implemented by or against the United States in relation to other countries or jurisdictions, 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.

The COVID-19 pandemic has led to the implementation of various responses, including government imposed shelter-in-place orders, quarantines, travel restrictions, vaccination and mask mandates 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 the event that government authorities were to impose additional restrictions due to COVID-19 or other public health crises, 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.

Our business may continue to experience delays in technology development activities due to supply chain interruptions, as well as diversion of biotechnology research and biomanufacturing supplies to healthcare organizations and vaccine developers. 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 may adversely impact our ability to conduct our business generally and have a material adverse impact on our operations and financial condition and results.

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 cell line and expression technologies, generative deep learning technology, proprietary assays and techniques, and antibody and target discovery technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize technologies similar or identical to ours, and our ability to successfully leverage our 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.

We own issued, or granted, patents and pending patent applications worldwide. 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 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.

As another example, a European Unified Patent Court (UPC) is scheduled to come into force during 2023. The UPC will be a common patent court to hear patent infringement and revocation proceedings effective for member states of the European Union. This could enable third parties to seek revocation of any of our European patents in a single proceeding at the UPC rather than through multiple proceedings in each of the jurisdictions in which the European patent is validated. Any such revocation and loss of patent protection could have a material adverse impact on our business and our ability to commercialize or license our technology and products. Moreover, the controlling laws and regulations of the UPC will develop over time, and may adversely affect our ability to enforce our European patents or defend the validity thereof. We may decide to opt out our European patents and patent applications from the UPC. If certain formalities and requirements are not met, however, our European patents and patent applications could be challenged for non-compliance and brought under the jurisdiction of the UPC. We cannot be certain that our European patents and patent applications will avoid falling under the jurisdiction of the UPC, if we decide to opt out of the UPC.

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. Because 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 on 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 USPTO 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 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

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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 Our Common Stock

Our share price may be volatile, and you could lose all or part of your investment.

The market price of our common stock is volatile and 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 or expand the scope of existing 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, our industry or our competitors, 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 public health crises, including the 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 Select 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. 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 in the past have had, and in the future may have, a material weakness in our internal control over our financial reporting process. If we are unable to remediate an identified material

weakness, we may not be able to accurately or timely report our financial condition or results of operations.

Prior to our IPO, we were a private company with limited accounting personnel to adequately execute our accounting processes and other supervisory resources with which to address our internal control over financial reporting. 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. As of December 31, 2022, this material weakness has been remediated, see "Part II — Item 9A—Remediation of Material Weakness" in this Annual Report on Form 10-K. Although we were able to remediate this material weakness, there is no guarantee that we will not experience additional material weaknesses in the future or that we will be able to remediate any such material weakness in a timely manner or at all.

If we identify future material weaknesses in our internal control over financial reporting, 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.

We are obligated to develop and maintain proper and effective internal control over financial reporting. These internal controls may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on the effectiveness of our internal control over financial reporting on an annual basis. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective. Any failure to remediate 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, and we may be subject to investigation or sanctions by the SEC.

We continue to identify key business metrics to evaluate our business and technology, 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 (milestone payments 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 on a Net Present Value (NPV) basis, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. To date, we have only entered into a limited number of programs with respect to which we have or are positioned to negotiate royalty- and milestone-bearing licenses. Accordingly, we do not presently have sufficient information to make accurate predictions regarding our potential revenue and future 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.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans, 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.

Pursuant to our 2021 Stock Option and Incentive Plan (2021 Plan) we are authorized to grant stock options, restricted stock units, stock appreciation rights and other stock-based awards to our employees, directors and consultants. Pursuant to our 2021 Employee Stock Purchase Plan (2021 ESPP), we may sell shares of our common stock to eligible employees at a discount to the market price of our common stock.

As of January 1, 2023 the aggregate number of shares of our common stock that may be issued pursuant to share awards under the 2021 Plan and 2021 ESPP is 15,322,711 shares. The number of shares of common stock reserved for issuance under the 2021 Plan and 2021 ESPP are automatically increased on each January 1 by 5% and 1%, respectively, 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 issuance each year, our stockholders will experience additional dilution, which could cause our share price to fall.

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.

As of March 15, 2023, our executive officers, directors, and 5% stockholders beneficially owned greater than 50% of our common stock. Therefore, these stockholders 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, including any time following the expiration of legal restrictions on resale or the perception in the market that the holders of a large number of shares of our common stock intend to sell shares, could reduce the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We have filed a registration statement on Form S-3 with respect to potential future sales of our securities. We have also filed a registration statement on Form S-8 to register our common stock that is issuable pursuant to our equity incentive plans. Shares registered under the registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options. Additionally, certain holders of our common stock are 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. 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.

An active trading market for our common stock may not be maintained.

Our common stock began trading on the Nasdaq Global Select Market in July 2021, and we can provide no assurance that we will be able to maintain an active trading market on the Nasdaq Global Select Market or any other exchange in the future. If an active trading market for our common stock is not maintained, or if we fail to satisfy the continued listing standards of the Nasdaq Global Select Market for any reason and our common stock is delisted, it may be difficult for our stockholders to sell shares without depressing the market price for the shares or at all. An inactive market may also impair our ability to raise additional capital by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

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 (the “Restated Certificate”) and our amended and restated bylaws 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 acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of our company;
- stockholders must include management’s nominees on its proxy card in contested director elections, which may decrease the likelihood that a potential acquirer can replace a majority of the Board; 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 provides that the Court of Chancery of the State of Delaware is 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 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 bylaws also provide that the federal district courts of the United States of America are 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 do 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 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 net operating loss (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). 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.

Changes in tax law may adversely affect us or our investors.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our common stock. For example, under Section 174 of the Code, in taxable years beginning after December 31, 2021, expenses that are incurred for research and development in the U.S. are now capitalized and amortized, which may have an adverse effect on our future cash flows. In recent years, many such changes have been made, and changes are likely to continue to occur in the future. It cannot be predicted whether, when, in what form or with what effective dates tax laws, regulations and rulings may be enacted, promulgated or issued, which could result in an increase in our or our shareholders' tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law.

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. If an insufficient number of securities or industry analysts commence and continue coverage of our company, the trading price for our common stock would likely be negatively impacted. After 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. 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. Recently, the rate of inflation has increased throughout the U.S. economy. Inflation may adversely affect us by increasing the costs associated with performing research and development on internal research initiatives and partnered programs. We may experience significant increases in the prices of labor, consumables, and other costs of doing business. In an inflationary environment, such cost increases may outpace our expectations, causing us to use cash faster than forecasted. A weak or declining economy may also 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.

Adverse developments affecting the financial services industry, such as actual events or concerns involving liquidity, defaults, or non-performance by financial institutions or transactional counterparties, could adversely affect our current and projected business operations and our financial condition and results of operations.

Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank ("SVB") was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. Although a statement by the U.S. Department of the Treasury, the Federal Reserve and the FDIC indicated that all depositors of SVB would have access to all of their money after only one business day of closure, including funds held in uninsured deposit accounts, borrowers under credit agreements, letters of credit and certain other financial instruments with SVB or any other financial institution that is placed into receivership by the FDIC may be unable to access undrawn amounts thereunder. Although we are not a borrower or party to any such instruments with SVB or any other financial institution currently in receivership, if any of our customers, suppliers or other parties with whom we conduct business are unable to access funds pursuant to such instruments or lending arrangements with such a financial institution, such parties' ability to pay their

obligations to us or to enter into new commercial arrangements requiring additional payments to us could be adversely affected.

Although the U.S. Department of Treasury, FDIC and Federal Reserve Board have announced a program to provide up to \$25 billion of loans to financial institutions secured by certain of such government securities held by financial institutions to mitigate the risk of potential losses on the sale of such instruments, widespread demands for customer withdrawals or other liquidity needs of financial institutions for immediate liquidity may exceed the capacity of such program. Additionally, there is no guarantee that the U.S. Department of Treasury, FDIC and Federal Reserve Board will provide access to uninsured funds in the future in the event of the closure of other banks or financial institutions, or that they would do so in a timely fashion.

In addition, investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Any decline in available funding or access to our cash and liquidity resources could, among other risks, adversely impact our ability to meet our operating expenses, financial obligations or fulfill our other obligations, result in breaches of our financial and/or contractual obligations or result in violations of federal or state wage and hour laws. Any of these impacts, could have material adverse impacts on our liquidity and our current and/or projected business operations and financial condition and results of operations.

Any further deterioration in the macroeconomic economy or financial services industry could lead to losses or defaults by our partners or vendors, which in turn, could have a material adverse effect on our current and/or projected business operations and results of operations and financial condition. For example, a partner may fail to make payments when due, default under their agreements with us, become insolvent or declare bankruptcy, or a vendor may determine that it will no longer deal with us as a customer. In addition, a partner or vendor could be adversely affected by any of the liquidity or other risks that are described above as factors that could result in material adverse impacts on us, including but not limited to delayed access or loss of access to uninsured deposits or loss of the ability to draw on existing credit facilities involving a troubled or failed financial institution. Any partner or vendor bankruptcy or insolvency, or the failure of any partner to make payments when due, or any breach or default by a partner or vendor, or the loss of any significant vendor relationships, could result in material losses to us and may have a material adverse impact on 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.

Operating as a public company makes it more difficult and more expensive for us to maintain 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, remediation costs, lost revenues, damages to our competitiveness, stock price and long-term stockholder value, 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 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.

Social media platforms present new risks and challenges to our business.

As social media continues to expand, it also presents us with new risks and challenges. Social media is increasingly being used to communicate information about us, our technology and our programs. Social media practices in the pharmaceutical and biotechnology industries are evolving, which creates uncertainty and risk of noncompliance with regulations applicable to our business. In addition, there is risk of inaccurate disclosure of information about us, our technology, or our programs on any social media platform. Although we have adopted policies and procedures around the use of social media by our employees, we may be unable to control the disclosure of non-public information by our workforce. Any of these events or our failure to comply with applicable regulations could expose us to liability, restrictive regulatory actions, irreversible damage to our reputation, brand image and goodwill, or have a material adverse effect on our business, prospects, operating results, and financial condition and could adversely affect the price of our common stock.

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 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 PCAOB 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 completed our IPO, 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 our IPO, (b) in which we have total annual gross revenue of at least \$1.235 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 have incurred and will continue to 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 have incurred and will continue to incur significant legal, accounting, insurance and other expenses that we did not incur as a private company. We are subject to the reporting requirements of the Exchange Act, which 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 Select Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas, such as "say-on-pay" and proxy access. 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 our IPO. 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.

These rules and regulations applicable to public companies have increased and will continue 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, these rules and regulations have made 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, we are required to furnish a report by our management on our internal control over financial reporting. To achieve compliance with Section 404 annually, we will engage 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, engage outside consultants, execute our 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.

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 US 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 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.

We are 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.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

Our corporate headquarters and primary research and development facilities are located in Vancouver, Washington in a 77,974 square foot facility that includes general administrative office and laboratory space. Our AI Research Lab is located in New York, New York and our Innovation Center is located in Zug,

Switzerland. Additionally, we have research and development presence in Belgrade, Serbia. Substantially all of our office space is leased with varying expiration dates. We believe our facilities are adequate and suitable for our current and near future needs.

Item 3. Legal Proceedings

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.

Item 4. Mine Safety Disclosures

Not applicable.

Part II.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock has been listed on the Nasdaq Global Select Market under the trading symbol "ABSI" since July 22, 2021. Prior to that date, there was no public trading market for our common stock.

Holders of Common Stock

As of March 15, 2023, there were 54 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees.

Dividend Policy

We have not declared or paid any cash dividends on our capital stock since our inception. We intend to 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. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements and contractual restrictions of then-existing debt instruments and other factors that our board of directors deems relevant.

Equity Compensation Plans

Information regarding securities authorized for issuance under equity compensation plans is included in Part III, Item 12 of this report.

Unregistered Sales of Equity Securities

There were no unregistered sales of equity securities during the year ended December 31, 2022.

Use of Proceeds

We completed our IPO pursuant to the registration statement on Form S-1 (File No. 333-257553), as amended, that was declared effective on July 21, 2021. On July 26, 2021, we sold 14,375,000 shares of our common stock, including the full exercise of the underwriters' 30-day option to purchase additional shares, at a public offering price of \$16.00 per share for aggregate gross proceeds of \$230.0 million. J.P. Morgan Securities LLC, Credit Suisse Securities (USA) LLC, BofA Securities, Inc., Cowen and Company, LLC, and Stifel, Nicolaus & Company, Incorporated acted as joint book-running managers for the offering.

The net proceeds of our IPO were \$210.1 million, after deducting underwriting discounts and commissions of \$16.1 million and offering related expenses of \$3.8 million. No offering expenses were paid directly or

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indirectly to any of our directors or officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates.

As of December 31, 2022, we have used \$157.8 million of the net proceeds from the IPO. Cash used since the IPO is described elsewhere in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of our periodic reports filed with the SEC. There has been no material change in our planned use of the net proceeds from the IPO as described in the final prospectus for our IPO.

Issuer Purchases of Equity Securities

None.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

We are a generative AI drug creation company harnessing deep learning and synthetic biology to expand the therapeutic potential of proteins. We leverage our Integrated Drug Creation platform to identify novel drug targets and create encouraging biotherapeutic candidates. We believe our approach enables us, and our partners, to develop novel biologics that are optimized for many traits at disruptive speed.

We couple our powerful deep learning AI models, built to understand and predict determinants of protein function, with our proprietary synthetic biology capabilities, which include 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). This combination of *in silico* modeling with wet lab testing allows us to generate immense real-world datasets that we harness to train and refine our deep learning models. These models guide our protein and cell line designs and enable *in silico* optimization of multiple attributes. Our target platform technology (formerly "Totient") uses machine learning computational methods to evaluate patient tissue samples and, without biological bias, identify disease-relevant fully human antibodies and their disease- and tissue-specific molecular targets. In addition to the direct utility of these antibodies and targets as drug discovery assets, these data comprising antibody-epitope recognition elements expand our AI models' training sets and may improve predictive capabilities for future discovery campaigns.

Through iterative AI predictions, wet lab validation, and AI training, we enable a virtuous cycle that we believe will accelerate us toward fully *in silico* biologic drug discovery. Our unique Integrated Drug Creation approach has the potential to significantly shorten preclinical development timelines and expand therapeutic possibilities.

Our goal is to become the technology leader in biologic drug creation. Our business model is to use our platform for the rapid creation of biologic drug candidates by:

Establishing partnerships with stakeholders in the drug development life cycle: We develop drug candidates for partners, including those who are responsible for preclinical and clinical testing of biologics generated by our platform. 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' biologics across multiple indications.

Developing our own drug discovery pipeline: We intend to develop drug candidates for our own drug discovery pipeline. With the ability to find both targets and lead candidates, we intend to develop promising lead candidates to up to the investigational drug application IND stage or later. This will increase the value of our assets and serve as further validation of our platform. We may enter into clinical trials and/or manufacturing partnerships to advance a lead candidate.

Total revenue was \$5.7 million for the year ended December 31, 2022, respectively, compared to \$4.8 million for the year ended December 31, 2021, due to timing of project-based milestones achieved and the mix of ongoing programs utilizing our Integrated Drug Creation platform. Throughout 2021 and 2022, we have continued making investments in our operating capacity which has enabled us to achieve additional project-based milestones in our technology development and partnership 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. For the years ended December 31, 2022 and 2021, we incurred net losses of \$104.9 million and \$101.0 million, respectively. Research and development expenses increased by \$14.3 million, or 32%, for the year ended December 31, 2022 compared to the year

ended December 31, 2021. As of December 31, 2022, we had an accumulated deficit of \$295.9 million and cash and cash equivalents and short-term investments totaling \$164.4 million.

Prior to our initial public offering (IPO), we financed our operations primarily through private placements of redeemable convertible preferred stock and convertible notes. From the date of our company formation up to the IPO, we had raised aggregate gross proceeds of \$230.0 million. In July 2021, we consummated our IPO and issued 14,375,000 shares of common stock, including a full exercise of the overallotment option, for net proceeds of \$210.1 million, after deducting underwriting discounts and offering related expenses.

We expect to continue to incur significant expenses 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
- continue to operate as a public company.

Our corporate headquarters and primary research and development facilities are located in Vancouver, Washington in a 77,974 square foot facility that includes general administrative office space and laboratory space. Our AI Research Lab is located in New York, New York and our Innovation Center is located in Zug, Switzerland. Additionally, we have research and development presence in Belgrade, Serbia. We believe our facilities are adequate and suitable for our current needs and that should it be needed, suitable additional or alternative space will be available to accommodate our operations.

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 Annual Report 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.
- **Increase the number of programs under existing partnerships:** The execution of our long-term strategy relies substantially on the value our partners believe can be recognized from our programs. Our continued growth depends on our ability to expand the scope of our existing partnerships and add new molecules for Discovery or CLD partnerships with current partners.
- **Successfully complete our technology development activities and enter licensing arrangements with our partners:** Our business model depends upon entering into licensing arrangements with our partners to advance the drug candidates which we generate through clinical development to commercialization. Both our ability to successfully complete technology development activities to meet the needs of a partner, and the partner’s prioritization of the subject program, impact the likelihood and timing of any election by a partner to enter into a licensing arrangement. There is no assurance that a partner will elect to license.
- **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

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clinical trials and commercialization. Given the nature of our relationships with our partners, we do not control the progression, clinical development, regulatory strategy, public disclosure or eventual commercialization, if approved, of these product candidates. As a result, our future success and our potential eligibility to receive milestone payments 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 also invest significantly in developing our own proprietary lead drug candidates and advancing them through preclinical or later 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.
- **Create our proprietary asset pipeline.** We intend to selectively create our own lead drug candidates and advance them up to the IND stage or later. In some cases we may out-license or transfer drug candidates for clinical advancement by a partner, with the expectation of a greater share in the economics relative to the milestones and royalties we may secure for our core platform technology development licenses.
- **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 continue to identify 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.

	December 31, 2022	December 31, 2021
Partners, Cumulative ⁽¹⁾	19	18
Programs, Cumulative ⁽²⁾	47	34
Active Programs ⁽³⁾	16	12

⁽¹⁾ 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.

⁽²⁾ 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.

⁽³⁾ 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

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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.

As of December 31, 2022, we had drug candidates in 16 Active Programs across five current partners' preclinical or clinical pipelines. We have negotiated license agreements, or expect to negotiate license agreements upon completion of certain technology development activities, with potential downstream milestone payments and royalties for all Active Programs.

We have thirteen Active Programs comprising Discovery applications include three through our agreement with Merck & Co., Inc., three through our agreement with EQRx and seven with an undisclosed biotechnology company. Three Active Programs are focused on developing production cell lines for drug candidates that our partners are developing. Two of these cell line development ("CLD") Active Programs are preclinical and one is in Phase 3 (PhaseBio Pharmaceuticals' drug candidate, bentracimab, assumed by SFJ Pharmaceuticals, Inc. in January 2023).

Exclusive of our 16 Active Programs with partners, we have utilized our platform to perform technology development activities related to 31 additional molecules. These programs include both internal research programs and technology development programs with third parties intended to demonstrate our platform's capabilities as we address successively broader ranges of biologics and modalities. We have not transferred technology or granted licenses related to these programs.

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) and partnership agreements, 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, upon the achievement of specified project-based milestones, and throughout the program.

We expect revenue to increase over time as we enter into additional partnership agreements and as our partnerships continue to include more drug discovery activities. We expect revenue to increase over time as we 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. In September 2021, the JMA was amended to shorten the term to approximately three years, ending in October 2022. Pursuant to the JMA, we received a non-refundable upfront payment of \$0.8 million and milestone and other payments of \$2.6 million in the aggregate, which had been received as of December 31, 2022, upon the achievement of specific milestones.

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) for personnel performing research and development

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functions, consulting fees, equipment and allocated facility costs (including occupancy and information technology). These expenses are exclusive of depreciation and amortization. Research and development activities consist of continued development of our Integrated Drug Creation platform, internal pipeline, target discovery and technology development for partners. We derive improvements to our platform from each type of activity. Research and development efforts apply to our platform broadly and across programs.

We expect research and development expenses to continue to increase in absolute dollars over the long-term 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, marketing and other administrative functions. Marketing and business development expenses include costs associated with attending conferences and all promotion efforts of our Integrated Drug Creation platform. Professional service expenses such as external legal expenses, accounting and tax service expenses, and other consultants, and allocated facilities costs (including occupancy and information technology) are also included within selling, general and administrative expenses. These expenses are exclusive of depreciation and amortization.

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 stabilize as we more effectively control 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 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.

We have a comprehensive intellectual property portfolio directed towards the many aspects of our Integrated Drug Creation platform, including those related to our proprietary cell lines and protein expression technologies, non-standard amino acid technology, proprietary screening assays, antibody discovery methods, and generative AI models. We regularly file patent applications to protect innovations arising from our research and development. We also hold trademarks and trademark applications in the United States and foreign jurisdictions. Costs to secure and defend our intellectual property are expensed as incurred and are classified as selling, general and administrative expenses.

Depreciation and amortization

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

We expect depreciation expense to stabilize following the completion of the build-out of our primary facility, though it may fluctuate in the future in line with continued growth and compute demands in absolute dollars if we purchase additional equipment.

Other Income (Expense)

Interest Expense

Interest expense, net, consists primarily of interest related to borrowings under our term debt and financed laboratory equipment. Prior to our initial public offering in 2021, interest expense also included convertible note interest.

Other Income (Expense)

Other income (expense) consists primarily of interest income from our investments. Prior to our initial public offering in 2021, other income (expense) also included adjustments of our convertible notes and preferred stock warrant liability to fair value.

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Results of Operations

The results of operations presented below should be reviewed in conjunction with our consolidated financial statements and notes included elsewhere in this Annual Report. The following tables set forth our results of operations for the periods presented (In thousands):

	For the Years Ended December 31,	
	2022	2021
Revenues		
Technology development revenue	\$ 4,529	\$ 4,009
Collaboration revenue	1,218	773
Total revenues	5,747	4,782
Operating expenses		
Research and development	58,908	44,586
Selling, general and administrative	40,552	28,780
Depreciation and amortization	13,037	6,654
Total operating expenses	112,497	80,020
Operating loss	(106,750)	(75,238)
Other income (expense)		
Interest expense	(972)	(3,432)
Other income (expense), net	2,357	(31,189)
Total other income (expense), net	1,385	(34,621)
Loss before income taxes	(105,365)	(109,859)
Income tax benefit	461	8,899
Net loss	\$ (104,904)	\$ (100,960)

Comparison of the Years Ended December 31, 2022 and 2021

The following table summarizes our results of operations for the years ended December 31, 2022 and 2021 (In thousands, except for percentages):

Revenue

	For the Years Ended December 31,		\$ Change	% Change
	2022	2021		
Revenues				
Technology development revenue	\$ 4,529	\$ 4,009	\$ 520	13 %
Collaboration revenue	1,218	773	445	58 %
Total revenues	\$ 5,747	\$ 4,782	\$ 965	20 %

Total revenue was \$5.7 million for the year ended December 31, 2022, representing an increase of approximately \$1.0 million, or 20%, compared to \$4.8 million for the year ended December 31, 2021.

Technology development revenue increased by \$0.5 million, or 13%, for the year ended December 31, 2022 compared to the year ended December 31, 2021, driven by a combination of overall program progress, the timing of project-based milestones achieved, and the mix of ongoing programs activity, most significantly the result of progress and milestone achievement associated with our Merck partnership utilizing our non-standard amino acid technology.

Collaboration revenue increased by \$0.4 million, or 58%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. In September 2021, the JMA was amended to shorten the term to approximately three years, ending in October 2022.

Operating Expenses

The following table summarizes our operating expenses for the years ended December 31, 2022 and 2021 (In thousands, except for percentages):

	For the Years Ended December 31,		\$ Change	% Change
	2022	2021		
Operating expenses				
Research and development	\$ 58,908	\$ 44,586	\$ 14,322	32 %
Selling, general and administrative	40,552	28,780	11,772	41 %
Depreciation and amortization	13,037	6,654	6,383	96 %
Total operating expenses	\$ 112,497	\$ 80,020	\$ 32,477	41 %

Research and development

Research and development expenses increased by \$14.3 million, or 32%, for the year ended December 31, 2022 compared to the year ended December 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 average headcount and related personnel costs in the amount of \$7.0 million and increased purchases of supplies and services related to lab operations of \$7.9 million specifically for our technology development agreements and internal research and platform development activities, offset by a \$0.7 million decrease in facility overhead.

Selling, General and Administrative Expenses

Selling, general, and administrative expenses increased by \$11.8 million, or 41%, for the year ended December 31, 2022 compared to the year ended December 31, 2021. The increase was primarily driven by increased personnel costs in the amount of \$3.4 million, increased stock-based compensation of \$2.0 million, and increased administrative costs of \$6.5 million. The increases in the administrative expenses include professional services, insurance costs, and other expenses that are primarily the result of our operating as a public company for a full year.

Depreciation and amortization

Depreciation and amortization expense increased by \$6.4 million, or 96%, for the year ended December 31, 2022 compared to the year ended December 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, purchases of property, equipment, and leasehold improvements related to our new corporate headquarters, and the amortization of intangible assets acquired in 2021.

Other Income (Expense)

The following table summarizes our other income (expense) for the years ended December 31, 2022 and 2021 (In thousands, except for percentages):

	For the Years Ended December 31,		\$ Change	% Change
	2022	2021		
Other income (expense)				
Interest expense	\$ (972)	\$ (3,432)	\$ 2,460	(72)%
Other income (expense), net	2,357	(31,189)	33,546	(108)%
Total other income (expense), net	\$ 1,385	\$ (34,621)	\$ 36,006	(104)%

Interest Expense

Interest expense was \$1.0 million for the year ended December 31, 2022 compared to \$3.4 million for the year ended December 31, 2021, representing a decrease of \$2.4 million, or 72%. During the year ended December 31, 2021, we recognized interest expense related to the convertible promissory notes issued in March 2021.

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These notes converted into common stock in connection with the IPO in July 2021, resulting in decreased interest expense for the year ended December 31, 2022.

Other income (expense), net

Other income (expense), net, was \$2.4 million income for the year ended December 31, 2022 compared to \$31.2 million expense for the year ended December 31, 2021, representing a change of \$33.5 million, or 108%. For the year ended December 31, 2021, other income included the adjustment of the fair value of our convertible notes for \$28.0 million, and the change in the preferred stock warrant liability's fair value in the amount of \$4.1 million, offset by recognition of a gain on extinguishment for the forgiveness of our Payroll Protection Plan loan in the amount of \$0.6 million. For the year ended December 31, 2022, other income primarily included interest income.

Liquidity and Capital Resources

Overview

As of December 31, 2022, we had \$164.4 million of cash and cash equivalents and short-term investments.

We have incurred net operating losses since inception. As of December 31, 2022, our accumulated deficit was \$295.9 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 cash and cash equivalents and short-term investments 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 filing.

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, issuances of equity securities, borrowings under long-term debt agreements, and to a lesser extent, cash flow from operations.

Redeemable convertible preferred stock

Prior to our IPO in July 2021, we had raised a total of \$104.3 million from the issuance of redeemable convertible preferred stock, net of issuance costs, which included shares of Series E redeemable convertible preferred stock for net proceeds of \$4.9 million in February 2021. Immediately prior to our IPO in July 2021, all convertible preferred stock was converted into an aggregate of 46,266,256 shares of common stock.

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Bridge Bank Loan and Security Agreement

In June 2018, we entered into a Loan and Security Agreement (LSA) with Bridge Bank (Bank), a division of Western Alliance 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. The loan was to mature in May 2022, at which time all outstanding principal and accrued and unpaid interest would have been due and payable. In June 2021, we entered into a fifth amendment to the LSA. This amendment modified the term loan's maturity date to June 16, 2023. This loan was secured by substantially all our tangible assets; intellectual property were excluded from this secured collateral, but was subject to a negative pledge in favor of Bank. In June 2022, we paid off the remaining outstanding balance of \$2.4 million of the LSA, which terminated the LSA and extinguished all of our obligations therein.

Convertible notes

In March 2021, we issued \$125.0 million aggregate principal amount of convertible notes to certain existing and new investors. In July 2021, the convertible notes converted into an aggregate of 9,732,593 shares of common stock immediately prior to our IPO, at a price per share calculated based on 82% of the IPO price of \$16.00.

Initial Public Offering

In July 2021, we completed our IPO and issued 14.4 million shares of our common stock, including 1.9 million shares pursuant to the full exercise of the underwriters' option to purchase additional shares, at a price of \$16.00 per share and received net proceeds of \$210.1 million from the IPO.

Equipment Financing

In 2022, we received a total of \$12.0 million of proceeds from equipment financing arrangements. Terms of the agreements require monthly payments over 42-48 month periods with imputed interest rates ranging from 8%-10%. As of December 31, 2022, the combined outstanding balance on these agreements is \$10.9 million.

Shelf Registration Statement on Form S-3

On August 24, 2022, we filed a shelf registration statement on Form S-3 (the Shelf Registration Statement) with the SEC relating to the registration of up to an aggregate of \$250.0 million in shares of our common stock, preferred stock, debt securities, warrants and units or any combination thereof. The Shelf Registration Statement was declared effective by the SEC on September 2, 2022. To date, we have not issued any securities or received any proceeds from the sale of any securities registered pursuant to the Shelf Registration Statement.

Cash Flows

The following summarizes our cash flows (In thousands):

	For the Years Ended December 31,	
	2022	2021
Net cash provided by (used in)		
Operating activities	(81,339)	(60,598)
Investing activities	(126,982)	(67,377)
Financing activities	5,237	336,193
Net (decrease) increase in cash, cash equivalents, and restricted cash	\$ (203,084)	\$ 208,218

Cash Flows from Operating Activities

In the year ended December 31, 2022, net cash used in operating activities was \$81.3 million and consisted primarily of a net loss of \$104.9 million adjusted for non-cash items, including depreciation and amortization expense of \$13.0 million, stock-based compensation of \$12.5 million, and a net increase in operating assets and liabilities in the amount of \$1.5 million.

In the year ended December 31, 2021, net cash used in operating activities was \$60.6 million and consisted primarily of a net loss of \$101.0 million adjusted for non-cash items, including depreciation and amortization expense of \$6.7 million stock-based compensation of \$10.6 million, an increase to our convertible note liability of \$30.7 million, an increase to our preferred stock warrant liability of \$4.1 million, and a net increase in operating assets and liabilities in the amount of \$3.1 million.

Cash Flows from Investing Activities

In the year ended December 31, 2022, net cash used in investing activities was \$127.0 million. The net cash used resulted primarily from purchases of short-term investments of \$108.6 million, purchases of lab equipment of \$16.2 million, and cash paid as part of our acquisition of Totient of \$8.0 million, partially offset by cash provided by maturities of short-term investments of \$5.0 million.

In the year ended December 31, 2021, net cash used in investing activities was \$67.4 million primarily from purchases of lab equipment and leasehold improvements of \$38.0 million, cash paid as part of our acquisitions of Denovium and Totient of \$28.1 million and an investment in equity securities of \$1.2 million.

Cash Flows from Financing Activities

In the year ended December 31, 2022, net cash provided by financing activities was \$5.2 million. The net cash provided resulted primarily from new equipment financing agreements of \$12.0 million, partially offset by cash used for principal payments of \$7.5 million made for financed equipment and long-term debt.

In the year ended December 31, 2021, net cash provided by financing activities was \$336.2 million. The net cash provided resulted primarily from total net proceeds of \$210.1 million from the IPO, the issuance of \$125.0 million of convertible promissory notes and Series E redeemable convertible preferred stock, net of issuance costs, in the amount of \$4.9 million, partially offset by principal payments made for financed equipment and long-term debt in the amount of \$4.1 million.

Income taxes

Our effective income tax rate from continuing operations was 0.4% and 8.1% for the years ended December 31, 2022 and 2021, respectively. The difference between the effective rate and the statutory rate is primarily attributed to the change in the valuation allowance against net deferred tax assets.

We estimate an annual effective income tax rate based on projected results for the year and apply this rate to income before taxes to calculate income tax expense. When applicable, the income tax provision also includes adjustments for discrete tax items. Any refinements made due to subsequent information that affects the estimated annual effective income tax rate are reflected as adjustments in the current period.

Critical Accounting 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 (US GAAP). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in [Note 2: Summary of Significant Accounting Policies](#) to our financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates. Critical accounting policies and estimates are those that we consider the most important to the portrayal of our financial condition and results of operations because they require our most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of the matters that are inherently uncertain.

Goodwill

Goodwill is tested for impairment on an annual basis in the fourth fiscal quarter, or sooner if an indicator of impairment exists. We may elect to first assess qualitative factors to determine whether it is more-likely-than-not that the fair value of goodwill at the reporting unit level is less than the carrying amount. The qualitative assessment includes our consideration of relevant events and circumstances that would affect our single reporting unit, including macroeconomic, industry and market conditions, our overall financial performance, and trends in the market price of our common stock.

We perform a qualitative assessment of goodwill at the reporting unit level by comparing the carrying amount to the estimated fair value of the reporting unit, including an estimated control premium. Assumptions are subject to change as a result of changing economic and competitive conditions. Based on our assessment in the fourth quarter of the fiscal year ended December 31, 2022 using the qualitative approach, we concluded that the fair value of the reporting unit exceeded the carrying value and that there was no impairment of goodwill.

Revenue recognition

We recognize revenue as control of our products and services are transferred to our 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. 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 to the discovery, development and technology readiness phases of technology development and partnership agreements. We refer to our customers as "partners" when describing our relationship in an agreement.

Technology development revenue

Our TDAs generally include multiple phases of Discovery and/or CLD; such as target discovery, library design, assay development, strain screening, fermentation optimization, purification, and analytics that typically 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. Primarily all of our contracts with our partners include an enforceable right to payment. While there is no alternative use 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.

We measure progress toward the completion of the performance obligations satisfied over time using an input method based on an overall estimate 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 TDAs 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.

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 primarily establish 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 we use 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. We recorded adjustments during the year ended December 31, 2021 related to our Totient acquisition. Business combinations also require us to estimate the useful life of certain intangible assets acquired and this estimate requires significant judgment.

Stock-based compensation

Stock-based compensation includes compensation expense for 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. We account for forfeitures as they occur.

See [Note 12: Stock-based compensation](#) to our financial statements included elsewhere in this Annual Report on Form 10-K 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.

Emerging Growth Company Status

We are an emerging growth company, as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. Section 107 of the JOBS Act provides that an emerging growth company may take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933 for complying with new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. Section 107 of the JOBS Act provides that we can elect to opt out of the extended transition period at any time, which election is irrevocable. 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.

Subject to certain conditions, as an emerging growth company, we may rely on certain other exemptions and reduced reporting requirements, including without limitation (i) providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board (PCAOB) regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements, known as the auditor discussion and analysis. We will remain an emerging growth company until the earlier of (a) the last day of the fiscal year in which we have total annual gross revenue of \$1.235 billion or more; (b) December 31, 2026, the last day of the fiscal year following the fifth anniversary of the date of the completion of our IPO; (c) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (d) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

Inflation rates have increased during the periods covered by this Annual Report on Form 10-K, and macroeconomic factors are expected to continue to contribute to increased inflationary pressure for the near future. Inflationary factors, such as increases in the cost of labor, laboratory consumables, interest rates and other overhead costs may adversely affect our operating results. We cannot predict how long these inflationary pressures will continue, or how they might change over time, but we expect to see continued impacts on the global economy. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, we have experienced some effect from inflation. If inflationary pressures continue to persist, they may have an adverse impact on our operating results.

We have exposure to interest rate risk that relates to our cash and cash equivalents and investments held in money market funds, U.S. Treasury securities, commercial paper and corporate securities. The primary objectives of our investment policy are liquidity and capital preservation. We believe that we do not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates due to the short-term nature of our cash and cash equivalents and investments.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Shareholders 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, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, changes in redeemable convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the two years in the period ended December 31, 2022, 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 at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, 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 internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our 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

March 30, 2023

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ABSCI CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except for share and per share data)	December 31, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 59,955	\$ 252,569
Restricted cash	15,023	10,513
Short-term investments	104,476	—
Receivables under development arrangements, net	1,550	1,425
Prepaid expenses and other current assets	5,859	8,572
Total current assets	186,863	273,079
Operating lease right-of-use assets	5,319	6,538
Property and equipment, net	52,723	52,114
Intangibles, net	51,622	54,992
Goodwill	21,335	21,335
Restricted cash, long-term	1,864	16,844
Other long-term assets	1,282	1,293
TOTAL ASSETS	\$ 321,008	\$ 426,195
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,412	\$ 8,385
Accrued expenses	20,481	17,434
Long-term debt	2,946	2,400
Operating lease obligations	1,690	1,502
Financing lease obligations	2,296	2,785
Deferred revenue	445	1,353
Total current liabilities	30,270	33,859
Long-term debt - net of current portion	7,984	1,124
Operating lease obligations - net of current portion	7,317	8,969
Finance lease obligations - net of current portion	750	3,231
Deferred tax, net	238	743
Other long-term liabilities	35	12,162
TOTAL LIABILITIES	46,594	60,088
Commitments (See Note 10)		
STOCKHOLDERS' EQUITY		
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized as of December 31, 2022 and December 31, 2021; 0 shares issued and outstanding as of December 31, 2022 and December 31, 2021	—	—
Common stock, \$0.0001 par value; 500,000,000 shares authorized as of December 31, 2022 and December 31, 2021; 92,411,103 and 92,648,036 shares issued and outstanding as of December 31, 2022 and December 31, 2021, respectively	9	9
Additional paid-in capital	570,454	557,136
Accumulated deficit	(295,929)	(191,025)
Accumulated other comprehensive loss	(120)	(13)
TOTAL STOCKHOLDERS' EQUITY	274,414	366,107
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 321,008	\$ 426,195

The accompanying notes are an integral part of these consolidated financial statements.

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ABSCI CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except for share and per share data)	For the Years Ended December 31,	
	2022	2021
Revenues		
Technology development revenue	\$ 4,529	\$ 4,009
Collaboration revenue	1,218	773
Total revenues	5,747	4,782
Operating expenses		
Research and development	58,908	44,586
Selling, general and administrative	40,552	28,780
Depreciation and amortization	13,037	6,654
Total operating expenses	112,497	80,020
Operating loss	(106,750)	(75,238)
Other income (expense)		
Interest expense	(972)	(3,432)
Other income (expense), net	2,357	(31,189)
Total other income (expense), net	1,385	(34,621)
Loss before income taxes	(105,365)	(109,859)
Income tax benefit	461	8,899
Net loss	(104,904)	(100,960)
Cumulative undeclared preferred stock dividends	—	(2,284)
Net loss applicable to common stockholders	\$ (104,904)	\$ (103,244)
Net loss per share attributable to common stockholders:		
Basic and diluted	\$ (1.15)	\$ (2.08)
Weighted-average common shares outstanding:		
Basic and diluted	90,845,629	49,685,194
Comprehensive loss:		
Net loss	\$ (104,904)	\$ (100,960)
Foreign currency translation adjustments	(66)	(13)
Unrealized loss on investments	(41)	—
Comprehensive loss	\$ (105,011)	\$ (100,973)

The accompanying notes are an integral part of these consolidated financial statements.

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ABSCI CORPORATION
STATEMENTS OF CHANGES IN REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS'

EQUITY (DEFICIT)

(In thousands, except for share and per share data)	Redeemable Convertible Preferred Stock						Accumulated Other Comprehensive Loss	Total Stockholders' Equity (Deficit)
	Shares	Amount	Common Stock	Additional Paid-In Capital	Accumulated Deficit			
Balances - December 31, 2020	13,752,043	\$156,433	17,887,631	\$ 2	\$ 635	\$ (90,065)	—	\$ (89,428)
Issuance of Series E preferred stock, net of issuance costs	254,886	4,944	—	—	—	—	—	—
Issuance of restricted stock	—	—	703,425	—	—	—	—	—
Issuance of shares upon option exercise	—	—	153,416	—	169	—	—	169
Stock-based compensation	—	—	—	—	9,932	—	—	9,932
Issuance of shares in acquisitions	—	—	3,222,504	—	14,259	—	—	14,259
Issuance of common shares upon initial public offering, net of issuance costs	—	—	14,375,000	1	210,133	—	—	210,134
Conversion of convertible note	—	—	9,732,593	1	155,721	—	—	155,722
Conversion of redeemable convertible preferred stock	(14,006,929)	(161,377)	46,266,256	5	161,372	—	—	161,377
Conversion of warrant liability	—	—	—	—	4,822	—	—	4,822
Foreign currency translation adjustments	—	—	—	—	—	—	(13)	(13)
Issuance of shares upon warrant exercise	—	—	307,211	—	93	—	—	93
Net loss	—	—	—	—	—	(100,960)	—	(100,960)
Balances - December 31, 2021	—	—	92,648,036	\$ 9	\$ 557,136	\$ (191,025)	\$ (13)	\$ 366,107
Issuance of shares under stock plans, net of shares withheld for tax payments	—	—	552,913	—	656	—	—	656
Stock-based compensation	—	—	—	—	12,662	—	—	12,662
Repurchase and forfeiture of common stock	—	—	(789,846)	—	—	—	—	—
Foreign currency translation adjustments	—	—	—	—	—	—	(66)	(66)
Unrealized loss on investments	—	—	—	—	—	—	(41)	(41)
Net loss	—	—	—	—	—	(104,904)	—	(104,904)
Balances - December 31, 2022	—	—	92,411,103	\$ 9	\$ 570,454	\$ (295,929)	\$ (120)	\$ 274,414

The accompanying notes are an integral part of these consolidated financial statements.

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ABSCI CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	For the Years Ended December 31,	
	2022	2021
Cash Flows From Operating Activities		
Net loss	(104,904)	(100,960)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	13,037	6,654
Deferred income taxes	(505)	(8,901)
Stock-based compensation	12,540	10,608
Change in fair value of convertible promissory notes	—	30,722
Accretion of discount on short-term investments	(688)	—
Other	721	301
Preferred stock warrant liability expense	—	4,124
Changes in operating assets and liabilities:		
Receivables under development arrangements	(148)	230
Prepaid expenses and other current assets	2,382	(7,636)
Operating lease right-of-use assets and liabilities	(640)	3,256
Other long-term assets	13	126
Accounts payable	(533)	1,574
Accrued expenses and other liabilities	(1,707)	581
Deferred revenue	(907)	(1,277)
Net cash used in operating activities	(81,339)	(60,598)
Cash Flows From Investing Activities		
Purchases of property and equipment	(16,175)	(38,047)
Acquisitions, net of cash acquired	(8,000)	(28,130)
Investment in equity securities	—	(1,200)
Investment in short-term investments	(108,590)	—
Proceeds from maturities of short-term investments	5,000	—
Proceeds from sales of property and equipment	133	—
Proceeds from property insurance settlements	650	—
Net cash used in investing activities	(126,982)	(67,377)
Cash Flows From Financing Activities		
Proceeds from issuance of redeemable convertible preferred units and stock, net of issuance costs	—	4,944
Proceeds from issuance of long-term debt	12,031	—
Principal payments on long-term debt	(4,651)	(1,600)
Principal payments on finance lease obligations	(2,799)	(2,547)
Proceeds from issuance of common stock, net of issuance costs	656	210,396
Proceeds from issuance of convertible promissory notes	—	125,000
Net cash provided by financing activities	5,237	336,193
Net (decrease) increase in cash, cash equivalents, and restricted cash	(203,084)	208,218
Cash, cash equivalents and restricted cash - Beginning of year	279,926	71,708
Cash, cash equivalents, and restricted cash - End of period	\$ 76,842	\$ 279,926
Supplemental Disclosure of Cash Flow Information		
Cash paid during the period for interest	\$ 895	\$ 652
Supplemental Disclosure of Non-Cash Investing and Financing Activities		
Property and equipment purchased under finance lease	—	4,313
Right-of-use assets obtained in exchange for operating lease obligation	111	3,330
Cash paid for amounts included in the measurement of operating lease liabilities	2,299	1,631
Property and equipment purchases included in accounts payable	123	5,565

The accompanying notes are an integral part of these consolidated financial statements.

ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and nature of operations

Absci Corporation (the “Company”) is a generative AI drug creation company harnessing deep learning and synthetic biology to expand the therapeutic potential of proteins. Absci leverages its integrated drug creation platform (the “Integrated Drug Creation Platform”) to identify novel drug targets and create promising biotherapeutic candidates. 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 (the “LLC Conversion”). The Company’s headquarters are located in Vancouver, Washington.

Authorized shares of common stock

In June 2021, the Company’s board of directors (the “Board”) and stockholders increased the number of authorized shares of common stock to 78,320,000.

Initial Public Offering

In July 2021, the Company completed its initial public offering (the “IPO”) and issued 14.4 million shares of its common stock, including 1.9 million shares pursuant to the full exercise of the underwriters’ option to purchase additional shares, at a price of \$16.00 per share and received net proceeds of \$210.1 million from the IPO. Immediately prior to the completion of the IPO, all shares of redeemable convertible preferred stock then outstanding were converted into 46.3 million shares of common stock and all convertible notes issued in March 2021 were converted into 9.7 million shares of common stock.

Amendments to Certificate of Incorporation or Bylaws

In connection with the consummation of the IPO, the Company filed an amended and restated certificate of incorporation (the “Restated Certificate”) with the Secretary of State of the State of Delaware. The Board and stockholders previously approved the Restated Certificate to be filed in connection with, and to be effective upon, the consummation of the IPO. The Restated Certificate amended and restated the Company’s existing amended and restated certificate of incorporation, as amended, in its entirety to, among other things: (i) authorize 500,000,000 shares of common stock; (ii) eliminate all references to the previously-existing series of preferred stock; (iii) authorize 10,000,000 shares of undesignated preferred stock that may be issued from time to time by the Board in one or more series; (iv) establish a classified board divided into three classes, with each class serving staggered three-year terms and (v) require the approval of holders of at least 75% of the voting power of the Company’s outstanding shares of voting stock to amend or repeal certain provisions of the Restated Certificate.

Stock split

On July 16, 2021, the Board and stockholders approved an amendment to the Company’s amended and restated certificate of incorporation to effect a forward stock split of the Company’s issued and outstanding common stock at a 3.3031-to-1 ratio, which was effected on July 19, 2021. The par value and convertible preferred stock were not adjusted as a result of the forward stock split. All issued and outstanding common stock, options to purchase common stock and units, and per share and unit amounts contained in the financial statements have been retroactively adjusted to reflect the forward stock split for all periods presented. The financial statements have also been retroactively adjusted to reflect a proportional adjustment to the conversion ratio for each series of preferred stock that was effected in connection with the forward stock split.

2. Summary of significant accounting policies

Basis of presentation

The consolidated financial statements are prepared in accordance with US 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.

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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 US 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. Cash and cash equivalents consist of deposits with commercial banks in checking and interest-bearing accounts, highly liquid money market funds, and U.S. Treasury securities.

Restricted cash represents amounts pledged as collateral for future property lease payments via standby letters of credit (see Note 10: Commitments and contingencies) and amounts held in escrow related to acquisitions by the Company (see Note 4: Acquisitions).

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Investments

The Company's short-term investments may include funds invested in highly liquid money market funds, U.S. Treasury securities and corporate debt securities with original maturities at the date of purchase greater than three months but less than one year. These investments are classified as available-for-sale debt securities, which are recorded at fair value based on quoted prices in active markets.

If the estimated fair value of a debt security is below its amortized cost basis, the Company evaluates whether it is more likely than not that the Company will be required to sell the security before its anticipated recovery in market value and whether credit losses exist for the related securities. A credit loss exists if the present value of expected cash flows is less than the amortized cost basis of the security. Credit-related losses are recognized as an allowance for credit losses on the balance sheet with a corresponding adjustment to earnings. Unrealized gains and losses that are unrelated to credit deterioration are reported in accumulated other comprehensive loss. Purchase premiums and discounts are recognized as interest income using the interest method over the terms of the securities. Realized gains and losses, and declines in fair value deemed to be other than temporary, are reflected in our consolidated statements of operations and comprehensive loss. The Company uses the specific identification method to compute gains and losses on investments.

Receivables under development arrangements and allowances for credit losses

Receivables under development arrangements consist of amounts due from partners for services performed, net of estimates for credit allowance. 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. Credit losses are included in selling, general and administrative expenses on the consolidated statements of operations and comprehensive loss. See contract asset discussion in Note 3: Revenue Recognition regarding unbilled receivables.

Fair value of financial instruments

Certain assets and liabilities are carried at fair value under US GAAP. 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. The Company measures certain financial assets at fair value on a recurring basis, including available-for-sale debt securities, which are recorded at fair value based on quoted prices in active markets. 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 elected the fair value option to account for its convertible promissory notes issued during the year ended December 31, 2021. In accordance with ASC 825, the Company recorded these convertible promissory notes at fair value on its consolidated balance sheet. Changes in fair value of the warrant to purchase convertible preferred stock and the convertible promissory notes were recorded in the consolidated 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 certain 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.

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Prior to its IPO, the Company primarily utilized the probability of a liquidity event and the expected IPO price to estimate fair value of the fee-in-lieu of warrant liability, the convertible note, and the preferred stock warrant liability.

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 years ended December 31, 2022 and 2021, three partners represented approximately 98% and two partners represented approximately 73% of technology development revenue, respectively.

As of December 31, 2022, two partners represented approximately 100% of total receivables under technology development arrangements. As of December 31, 2021, four partners represented approximately 84% of total receivables under technology development arrangements.

Supplies

Supplies, comprised principally of supplies and other materials used in the Company's laboratory, are stated at the lower of cost or net realizable value and using the first-in, first-out method, applied on a consistent basis. The supplies inventory is included in prepaid expenses and other current assets on the consolidated balance sheet.

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 operating expense in the consolidated 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 and reported as operating expense in the consolidated statements of operations and comprehensive loss.

Goodwill

Goodwill is evaluated for impairment on an annual basis as of October 1, or more frequently if an indicator of impairment is present. As part of the impairment evaluation, the Company may elect to perform an assessment of qualitative factors. If this qualitative assessment indicates that it is more likely than not that the fair value of the reporting unit that includes the goodwill is less than its carrying value, then a quantitative impairment test would be prepared to compare this fair value to the carrying value and record an impairment charge if the carrying value exceeds the fair value.

Redeemable convertible preferred stock warrant liability

Outstanding warrants that were related to the Company's redeemable convertible preferred stock were classified as liabilities on the consolidated balance sheets. As the warrants were exercisable for redeemable convertible preferred stock, prior to its IPO, the Company recognized a liability for the fair value of its warrants on the consolidated balance sheets upon issuance and subsequently remeasured the liability to fair

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value at the end of each reporting period until the earlier of the expiration or exercise of the warrants. See Note 11: Redeemable convertible preferred stock for further discussion.

Revenue recognition

The Company recognizes revenue as 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 drug discovery and/or 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. Primarily all of the Company's contracts with its partners include an enforceable right to payment. 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.

The Company measures progress toward the completion of the performance obligations satisfied over time using an input method based on an overall estimate 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. Contract assets are included in receivables under development arrangements on the consolidated balance sheets.

Income taxes

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 federal, state and various foreign 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, 2022 and 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

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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 consolidated 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 include the cost of materials, personnel-related costs (comprised of salaries, benefits and share-based compensation) for personnel performing research and development functions, consulting fees, equipment and allocated facility costs (including occupancy and information technology). These expenses are exclusive of depreciation and amortization. Research and development activities consist of continued development of the Company's Integrated Drug Creation Platform, internal pipeline, target discovery and technology development for partners. The Company derives improvements to its platform from each type of activity. Research and development efforts apply to the Company's platform broadly and across programs.

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

Basic and diluted net loss per common share is calculated by dividing net loss by the weighted-average number of common shares outstanding during the period, without consideration for common stock equivalents. The Company was in a loss position for all periods presented, therefore basic net loss per share and diluted net loss per share are the same for all periods as the inclusion of all potential common securities outstanding would have been 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

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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 have a material impact on its consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740) – Simplifying the Accounting for Income Taxes, which simplifies the accounting for income taxes. The amended guidance is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company adopted this standard in 2022 on a prospective basis. The adoption did not have a material impact on its consolidated financial statements.

3. Revenue recognition

Contract balances

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and the Company records a contract asset when it has an unconditional right to consideration. As of December 31, 2022 and December 31, 2021, contract assets were \$1.1 million and \$0.6 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, 2022 and December 31, 2021, contract liabilities were \$0.4 million and \$1.4 million, respectively. During the years ended December 31, 2022 and 2021, the Company recognized \$1.4 million and \$1.5 million, respectively, as revenue that had been included in deferred revenue at the beginning of the period.

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. In September 2021, the JMA was amended to shorten the term to approximately three years, ending in October 2022. Pursuant to the JMA, the Company received a non-refundable upfront payment of \$0.8 million and milestone and other payments of \$2.6 million in the aggregate upon the achievement of specific milestones.

4. 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 integrated 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 consisted of (in thousands):

Cash consideration	\$ 2,670
Equity consideration	368
Total purchase consideration	\$ 3,038

Cash consideration included a \$2.5 million upfront payment and a payment for working capital adjustments.

In addition to the \$2.5 million paid upfront, \$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, and was included in current restricted cash and accrued expenses on the consolidated balance sheet as of December 31, 2021. The \$2.5 million deferred payment was disbursed from escrow in January 2022.

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The Company issued 1,010,296 shares of its common stock to the Denovium co-founders, of which 80% or 808,238 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 202,058 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	3,780
Accounts payable and accrued expenses	109
Deferred tax liability	633
TOTAL LIABILITIES	742
Fair value of net assets acquired and liabilities assumed	\$ 3,038

Goodwill arising from the acquisition of \$1.1 million was attributable to the assembled workforce and expected synergies between the Integrated Drug Creation Platform and the Denovium Engine. The goodwill is not deductible for tax purposes. As of December 31, 2021, the Company had fully completed the analysis to assign fair values to all assets acquired and liabilities assumed.

The following table reflects the 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
	<u>\$ 2,507</u>	

Acquisition of Totient

On June 4, 2021, the Company entered into a merger agreement with Totient, Inc. ("Totient"), a discovery company harnessing human immune responses to identify novel antibodies and their therapeutic targets.

Pursuant to the merger agreement, at closing, Totient shareholders became eligible to receive an aggregate payment of \$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 specified milestones, and 2,212,208 shares of the Company's common stock. The \$40.0 million cash consideration included \$8.0 million of deferred cash payment, due in one year. This amount was included in current restricted cash and accrued expenses on the consolidated balance sheet as of December 31, 2021. The \$8.0 million of deferred cash payment was disbursed from escrow in June 2022. All common stock issued is unrestricted, except for those shares granted to certain members of Totient's management, of which 25% of the shares issued were vested upon the closing of the transaction and the remaining 75% will vest over 2.5 years, in six-month installments subject to their respective continuing service relationships with the Company. In October 2022, 540,229 restricted shares were forfeited back to the Company due to certain former members of Totient's management's service relationship ceasing.

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The following table summarizes the purchase price (in thousands):

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	12,000	(iii)
Total	\$ 61,259	

- (i) Pursuant to the merger agreement, the initial purchase price includes \$40.0 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, 2,212,208 shares of common stock issued in payment to Totient stockholders with 1,282,747 vesting immediately and therefore included in the purchase price consideration.
- (iii) Represents the estimated fair value of the contingent consideration that is payable upon the achievement of the milestone of (A) Absci's 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 (I) Absci is entitled to receive at least \$2.0 million in aggregate upfront cash or equity payments (provided, that the minimum upfront payment under any individual agreement shall be \$1.0 million and (II) an option for a license or a license or similar right is granted to the third party; or (B) first commercial sale of a Totient product or enabled product. The fair value estimate is based on a probability-weighted approach and will be updated as we obtain more information. The \$12.0 million of contingent consideration originally measured was adjusted to reflect the increased probability of achievement. As of December 31, 2022 the fair value is \$12.8 million and is included in accrued expenses on the consolidated balance sheet. Changes in the contingent consideration liability fair value are reflected within research and development expenses on the consolidated statement of operations and comprehensive loss.

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The following table summarizes the allocation of the estimated consideration to the identifiable assets and liabilities acquired by us as of June 4, 2021 (in thousands).

Current assets:		
Cash and cash equivalents	\$ 1,751	
Prepaid expenses and other current assets	189	
Total current assets	1,940	
Operating lease right-of-use assets	266	
Property and equipment, net	118	
Goodwill	20,280 (i)	
Intangible assets	54,600 (ii)	
Other long-term assets	23	
TOTAL ASSETS	77,227	
Current liabilities:		
Accounts payable	78	
Accrued expenses	6,588	
Operating lease obligations	122	
Total current liabilities	6,788	
Operating lease obligations - net of current portion	144	
Deferred tax, net	9,012	
Other long-term liabilities	24	
TOTAL LIABILITIES	15,968	
Fair value of net assets acquired and liabilities assumed	\$ 61,259	

- (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)⁽ⁱ⁾	Estimated useful lives (in years)⁽ⁱⁱⁱ⁾
Monoclonal antibody library	\$ 46,300	20
Developed software platform and the related methods patents	8,300	15
Total	\$ 54,600	

- (i) 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 18%-23%. These fair values are based on the most recent estimate of the fair value available and will be updated as we obtain more information.
- (ii) 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.

As of March 31, 2022, the Company had fully completed the analysis to assign fair values to all assets acquired and liabilities assumed and recorded no adjustments to the preliminary purchase price allocation in the year ended December 31, 2022. During the year ended December 31, 2021, the Company recorded adjustments to goodwill of \$1.6 million primarily related to deferred taxes.

The Company's results of operations for the year ended December 31, 2022 include the operating results of Totient within the consolidated statement of operations and comprehensive loss. The operating results of

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Totent are included within the consolidated statement of operations and comprehensive loss from June 4, 2021 through December 31, 2021 for the year ended December 31, 2021.

Acquisition costs of \$0.9 million were included in the consolidated statement of operations and comprehensive loss as selling, general and administrative for the year ended December 31, 2021.

The financial information in the table below summarizes the combined results of operations of the Company and Totient on a pro forma basis, as though the companies had been combined as of January 1, 2020. These pro forma results were based on estimates and assumptions, which we believe are reasonable. The pro forma financial information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at the beginning of our fiscal year 2020. The pro forma financial information includes adjustments to share-based compensation expense, amortization for acquired intangible assets, interest expense, and transaction costs, and related tax effects.

The pro forma financial information for the year ended December 31, 2021 combines the Company's results, which include the results of Totient subsequent to June 4, 2021, and the historical results for Totient for the periods prior to acquisition.

The following table summarizes the pro forma financial information (in thousands):

	For the year ended December 31, 2021	
Net loss applicable to common stockholders	\$	(113,119)

5. Investments

Cash equivalents, marketable securities and deposits are classified as available-for-sale and are, therefore, recorded at fair value on the consolidated balance sheet, with any unrealized gains and losses reported in accumulated other comprehensive income (loss), which is reflected as a separate component of stockholders' equity in the Company's consolidated balance sheet, until realized. The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

The amortized cost and fair value of investments are as follows (in thousands):

	December 31, 2022			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair market value
Assets				
Money market funds	\$ 5,050	\$ —	\$ —	\$ 5,050
Certificates of deposit	27,740	—	—	27,740
U.S. treasury bills	76,777	2	(43)	76,736
Total	<u>\$ 109,567</u>	<u>\$ 2</u>	<u>\$ (43)</u>	<u>\$ 109,526</u>
Classified as:				
Cash equivalents				\$ 5,050
Short-term investments				104,476
Long-term investments				—
Total				<u>\$ 109,526</u>

Investments held as of December 31, 2022 consist of cash equivalents with contractual maturities of three months or less and U.S. treasury bills with original maturities between four and six months. Proceeds and interest income from maturities of U.S. treasury bills were \$85.0 million and \$0.4 million, respectively, for the year ended December 31, 2022. Unrealized gains and losses on securities were primarily due to changes in interest rates. There are no investments in a continuous unrealized loss position for more than twelve months as of December 31, 2022. The Company does not intend to sell securities that are in an unrealized loss

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position and believes that it is not more likely than not that it will be required to sell these securities before recovery of amortized cost. The Company held no investments as of December 31, 2021.

6. Property and equipment, net

Property and equipment consists of the following (in thousands):

	December 31, 2022	December 31, 2021
Construction in progress	\$ 293	\$ 933
Lab Equipment	34,168	27,776
Software	298	311
Furniture, Fixtures and Other	6,307	4,804
Leasehold Improvements	26,860	24,671
Total Cost	67,926	58,495
Less accumulated depreciation and amortization	(15,203)	(6,381)
Property and equipment, net	<u>\$ 52,723</u>	<u>\$ 52,114</u>

Depreciation expense was \$9.7 million and \$4.5 million for the years ended December 31, 2022 and 2021, respectively.

7. Goodwill and Intangibles, net

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 integrated Denovium's technology into its Integrated Drug Creation Platform. Goodwill arising from the acquisition was attributable to the assembled workforce and expected synergies between the Integrated Drug Creation Platform and the Denovium Engine ("AI Engine"). In June 2021, the Company entered into a merger agreement with Totient, Inc. ("Totient"), a discovery company harnessing human immune responses to identify novel antibodies and their therapeutic targets, surviving as a wholly owned subsidiary of the Company. Goodwill represents the excess of the estimated purchase price over the estimated fair value of Totient's identifiable assets acquired and liabilities assumed. Refer to Note 4: Acquisitions for further information.

Goodwill is as follows (in thousands):

	December 31, 2022	December 31, 2021
Denovium	\$ 1,055	\$ 1,055
Totient	20,280	20,280
Goodwill	<u>\$ 21,335</u>	<u>\$ 21,335</u>

Goodwill is tested for impairment on an annual basis in the fourth quarter, or sooner if an indicator of impairment exists. The Company may elect to first assess qualitative factors to determine whether it is more-likely-than-not that the fair value of goodwill at the reporting unit level is less than the carrying amount. The qualitative assessment includes consideration of relevant events and circumstances that would affect the Company's single reporting unit, including macroeconomic, industry and market conditions, overall financial performance, and trends in the market price of the Company's common stock.

The Company performed its annual goodwill impairment test on October 1, 2022 utilizing the qualitative assessment allowable under ASC 350 Intangibles – Goodwill and Other at the reporting unit level. This analysis included comparing the entity's carrying amount to its estimated fair value, including an estimated control premium. The Company's annual qualitative assessment determined that a quantitative analysis was

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not necessary. There were no impairment losses netted against the goodwill balance for the years ended December 31, 2022 and 2021.

Intangible assets are as follows (in thousands):

	December 31, 2022			December 31, 2021		
	Gross Assets	Accumulated Amortization	Net	Gross Assets	Accumulated Amortization	Net
Denovium Engine	2,507	(975)	1,532	2,507	(473)	2,034
Monoclonal antibody library	46,300	(3,640)	42,660	46,300	(1,325)	44,975
Developed software platform and the related methods patents	8,300	(870)	7,430	8,300	(317)	7,983
Intangible assets, net	\$ 57,107	\$ (5,485)	\$ 51,622	\$ 57,107	\$ (2,115)	\$ 54,992

Amortization expense related to intangible assets was \$3.4 million and \$2.1 million for the years ended December 31, 2022 and 2021, respectively, and is reflected within depreciation and amortization expense on the consolidated statement of operations and comprehensive loss.

Future amortization expense for the Company's intangible assets as of December 31, 2022 are estimated as follows (in thousands):

Years Ending December 31:		
2023	\$	3,370
2024		3,370
2025		3,370
2026		2,897
2027		2,868

8. Long-term debt and other borrowings

Loan and Security Agreement ("LSA")

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 2018. Interest on outstanding borrowings under the LSA was charged at a rate of 6% per annum. This loan was secured by substantially all tangible assets of the Company; intellectual property was excluded from the secured collateral but was subject to a negative pledge in favor of the Bank.

The Company was permitted to 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 was required to pay a final payment equal to 3% of the principal amount funded, which was payable upon the earliest to occur of (i) the maturity date, (ii) acceleration and (iii) the prepayment of the loan.

The Company was required to pay a fee of 3.5% of the aggregate amount of term loans funded by 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. This fee became payable upon completion of the Company's IPO on July 26, 2021 and was paid during the year ended December 31, 2021.

This loan was scheduled to originally mature in May 2022, at which time all outstanding principal and accrued and unpaid interest was due and payable.

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In March 2019, the Company entered into a first amendment to the LSA that increased total borrowings to \$3.0 million and added 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 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. 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. The second amendment extended the term of the fee to May 11, 2030.

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.

In June 2021, the Company entered into a fifth amendment to the LSA. This amendment modified the term loan's maturity date to June 16, 2023.

In February 2022, the Company entered into a sixth amendment to the LSA. This amendment modified various definitions and terms within the agreement, with no adjustments to the financial terms.

In June 2022, the Company paid off the remaining \$2.4 million outstanding balance of the LSA.

Convertible Notes

In March 2021, the Company entered into a Note Purchase Agreement to issue and sell \$125.0 million convertible promissory notes (the "2021 Notes") to certain investors. The 2021 Notes accrued interest at 6% per annum. 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, which was included in other long-term liabilities on the consolidated balance sheet through the date of the IPO. Based on the terms of the agreement, the 2021 Notes converted at an 18% discount from the offering price to the public in the IPO. Prior to the conversion, the Company recorded a final fair value adjustment of the 2021 Notes using the Company's common stock price at the IPO. Immediately prior to the completion of the IPO, all outstanding principal under the 2021 Notes and the related accrued interest expense were converted into an aggregate of 9,732,593 shares of our common stock based on an initial public offering price of \$16.00 per share.

Equipment Financing

In 2022, the Company received a total of \$12.0 million of proceeds from equipment financing arrangements. Terms of the agreements require monthly payments over 42-48 month maturities with imputed interest rates ranging 8%-10%. All outstanding principal and accrued and unpaid interest are due and payable at maturity. These loans are secured by certain tangible assets of the Company and include certain financial liquidity covenants. The Company was in compliance with all applicable financial covenants as of December 31, 2022.

The carrying amount of the long-term debt approximates fair value.

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Future undiscounted payments for the Company's financing liabilities as of December 31, 2022 are as follows (in thousands):

Years ending December 31:	
2023	\$ 3,759
2024	3,827
2025	3,425
2026	1,593
2027	—
Total future payments	12,604
Less: Imputed interest	(1,674)
Total long-term debt	\$ 10,930

9. Leases

Facility leases

The Company leases its corporate headquarters and primary research and development facility located in Vancouver, Washington in a 77,974 square foot facility that includes general administrative office and laboratory space. The corporate headquarters lease commenced in December 2020 and ends in April 2028, with an option to renew the lease for an additional five-year term, at then-current market rates. The lease agreement provides for annual base rent of approximately \$1.4 million in the first year of the lease term which increases on an annual basis to approximately \$2.0 million in the final year of the initial lease term. As part of the lease agreement, the lessor provided tenant incentives in the amount of \$3.1 million. The Company has a one-time option to terminate the lease after five years.

The Company moved from its former office and laboratory facility during the second quarter of 2021, for which the Company's lease continues through August 2024. The Company determined it would no longer utilize the space and during the years ended December 31, 2022 and 2021, the Company recognized \$0.4 million and \$0.9 million, respectively, in impairment expense of certain operating lease right-of-use assets and related leasehold improvements resulting from the discontinued use.

For each of the Company's facility lease agreements, the Company is responsible for taxes, insurance and maintenance costs.

The components of lease expense are as follows (in thousands):

	For the Years Ended December 31,	
	2022	2021
Operating lease cost	1,626	1,780
Variable lease cost	434	425
Short-term lease cost	489	155
	<hr/> <hr/> <hr/> \$ 2,549	<hr/> <hr/> <hr/> \$ 2,360

Equipment leases

The Company leases certain laboratory equipment under finance leases. Property and equipment includes approximately \$7.0 million and \$8.8 million of assets under finance leases as of December 31, 2022 and December 31, 2021, respectively. Accumulated depreciation related to assets under finance leases was approximately \$3.1 million and \$1.8 million as of December 31, 2022 and December 31, 2021, respectively.

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Future undiscounted lease payments for the Company's lease liabilities as of December 31, 2022 are as follows (in thousands):

	Operating leases	Finance leases
2023	\$ 2,353	\$ 2,443
2024	2,195	704
2025	1,873	86
2026	1,929	—
2027	1,987	—
Thereafter	672	—
Total future lease payments	11,009	3,233
Less: Imputed interest	(2,002)	(187)
Present value of lease liabilities	<u>\$ 9,007</u>	<u>\$ 3,046</u>

Additional information related to the Company's leases is as follows:

	December 31, 2022	December 31, 2021
Weighted average remaining lease term (in years)		
Operating leases	4.9	6.0
Finance leases	1.6	2.2
Weighted average discount rate		
Operating leases	8 %	8 %
Finance leases	8 %	7 %

10. Commitments and contingencies

As of December 31, 2022, future lease payments are secured by irrevocable standby letters of credit totaling \$1.9 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.

The Company is not currently party to any material claims or legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss or a potential range of loss is both probable and reasonably estimable.

11. Redeemable convertible preferred stock

Redeemable Convertible Preferred Stock

Prior to its conversion to common stock in connection with the Company's IPO, the convertible preferred stock was classified as temporary equity on the accompanying consolidated balance sheets since the shares contained certain redemption features that were not solely within the control of the Company. The Company had not previously accreted the convertible preferred stock to its redemption value since the shares were not redeemable and redemption was not deemed to be probable.

Immediately prior to the completion of the IPO, all shares of redeemable convertible preferred stock then outstanding were converted into 46,266,256 shares of common stock.

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

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warrant was 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 prior to the IPO. The warrant was converted into a warrant to purchase 307,211 shares of the Company's common stock upon the closing of the IPO. The warrant holder fully exercised the warrant to purchase common stock for cash during the year ended December 31, 2021, following the IPO.

12. 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 replacement awards for outstanding awards under the 2015 Plan and as new awards to incentivize employee service. Upon completion of the IPO, the Company adopted the 2021 Stock Option and Incentive Plan ("2021 Plan").

Total stock-based compensation expense related to all of the Company's stock-based awards was recorded in the consolidated statements of operations and comprehensive loss as follows (in thousands):

	For the Years Ended December 31,	
	2022	2021
Research and development	\$ 4,734	\$ 4,637
Selling, general and administrative	7,924	5,971
Total stock-based compensation expense	<u>12,658</u>	<u>10,608</u>

Restricted Stock

Upon the LLC Conversion, the outstanding 3,329,707 incentive units were exchanged for 2,671,907 restricted shares of common stock 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 the Company's right of repurchase or forfeiture. In connection with its acquisitions of Denovium and Totient, the Company issued restricted shares of common stock that vest over time subject to continued service.

Activity for the restricted shares is shown below:

	Number of shares
Unvested as of December 31, 2021	2,585,670
Repurchased	(789,846)
Vested	(782,516)
Unvested as of December 31, 2022	<u>1,013,308</u>

As of December 31, 2022, there was \$2.3 million of unrecognized compensation expense related to the restricted shares expected to be recognized over a remaining weighted-average period of 2.0 years.

During the year ended December 31, 2022, the Company granted 68,175 shares of restricted stock units to certain employees and consultants under the 2021 Plan. As of December 31, 2022, 36,129 shares of these restricted stock units were outstanding and unvested. As of December 31, 2022, total unrecognized stock-based compensation related to these restricted stock units was \$0.3 million, which the Company expects to recognize over a remaining weighted average period of 2.6 years.

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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	1,202,435	\$ 0.47
Granted	—	—
Vested	—	—
Exchange of Phantom Units for Cash Payment Rights, SARs, and/or Stock Options	(1,202,435)	\$ 0.47
Unvested as of December 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 Company recognizes expense associated with the cash payment rights within stock-based compensation and began to make payments in February 2022 for vested rights. As cash payment rights continue to vest, payments are made monthly.

The aggregate intrinsic value of the 394,736 SARs outstanding as of December 31, 2022 is \$0.8 million based on the Company's closing stock price of \$2.10 per share as reported on the Nasdaq Global Select Market on such date.

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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 1-4 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, 2021	7,757,401	\$ 3.72	9.2	\$ 40,939
Granted	7,679,043	5.40		
Exercised	(537,078)	1.26		
Canceled/ Forfeited	(3,192,316)	5.22		
Expired	(277,651)	5.84		
Outstanding at December 31, 2022	11,429,399	4.49	8.4	\$ 2,949
Exercisable at December 31, 2022	3,008,380	\$ 3.03	6.9	\$ 2,058
Vested and expected to vest as of December 31, 2022	11,429,399		8.4	\$ 2,949

The aggregate intrinsic value was calculated based on the estimated fair value of common stock of \$2.10 per share.

The weighted-average grant date fair value of stock options granted during the years ended December 31, 2022 and 2021 was \$3.18 and \$4.28, respectively. The grant date fair value of options vested during the years ended December 31, 2022 and 2021 was \$9.6 million and \$2.4 million, respectively. The intrinsic value of options exercised, which represents the value of the Company's common stock at the time of exercise in excess of the exercise price, was \$2.1 million during the year ended December 31, 2022. As of December 31, 2022, total unrecognized stock-based compensation related to stock options was \$24.9 million, which the Company expects to recognize over a remaining weighted average period of 2.9 years.

Under the 2020 Plan and 2021 Plan, the Company has also granted a limited quantity of cash-settled SARs to certain employees and consultants based outside the United States. As of December 31, 2022, 127,846 of these SARs were outstanding with a weighted average exercise price of \$5.72 per share. The fair value is remeasured at the end of each reporting period based on the Company's stock price, with remeasurements reflected as an adjustment to compensation expense in the consolidated statements of operations and comprehensive loss. As of December 31, 2022 and December 31, 2021, the Company had recognized \$0.0 million and \$0.1 million, respectively, classified within other long-term liabilities on the consolidated balance sheets.

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:

	For the Years Ended December 31,	
	2022	2021
Expected term (in years)	5.5-6.1	3.5-6.1
Volatility	63%-65%	45%-47%
Risk-free interest rate	1.6%-4.2%	0.3%-1.5%
Dividend Yield	-%	-%

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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—As we do not have sufficient trading history for our common stock, 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.

During the periods prior to the IPO, the fair value of its common stock underlying the stock-based awards was determined on each grant date by management and approved by the Board, considering the most recently available third-party valuation of the Company's common stock for those periods. For all grants subsequent to the IPO, the fair value of common stock was determined by using the closing price per share of common stock as reported on the Nasdaq Global Select Market. 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.

During the periods prior to the IPO, 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 Board 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;
- US and global economic conditions;

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- the likelihood of achieving a liquidity event for the holders of the Company's common stock, 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 established the value of an enterprise based on the present value of future cash flows that were reasonably reflective of our future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach was 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 were 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 was inferred by analyzing these options. The probability weighted expected return method ("PWERM") was a scenario-based analysis that estimated the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available, as well as the economic and control rights of each share class.

Until the IPO in July 2021, the Company used a hybrid method to determine the estimated fair value of its common stock, which included both the OPM and PWERM models.

In June 2021, the Company increased the number of shares of common stock reserved for future issuance under the 2020 Plan to 11,980,029. In July 2021, upon the completion of IPO, the Company adopted the 2021 Plan. The number of shares of common stock initially reserved for future issuance under the 2021 Plan was 8,133,750. On January 1, 2022, the number of shares of common stock reserved for future issuance under the 2021 Plan was increased by 4,632,401 shares pursuant to an automatic annual increase. As of December 31, 2022, 8,874,295 shares were available for issuance under the 2021 Plan.

Employee Stock Purchase Plan

In July 2021, the Board adopted the 2021 Employee Stock Purchase Plan ("2021 ESPP"), which was subsequently approved by the Company's stockholders and became effective in connection with the IPO. A total of 903,750 shares of common stock were reserved for issuance under the 2021 ESPP. The ESPP allows eligible employees to purchase shares of the Company's common stock through payroll deductions of up to 15% of their regular compensation at a discount of 85% of the fair market value of the Company's common stock on the first day or last day, whichever is less, of the applicable offering period, subject to any plan limitations.

The first offering period commenced in October 2022, and, as of December 31, 2022, no shares of common stock had been issued under the 2021 ESPP.

13. Fair Value Measurements

The Financial Accounting Standards Board ("FASB") has defined fair value to establish 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.

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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, 2022 and December 31, 2021 (in thousands):

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets:				
<i>Debt Securities:</i>				
Money market funds	\$ 5,050	\$ —	\$ —	\$ 5,050
Certificates of deposit	27,740	—	—	27,740
U.S. treasury bills	76,736	—	—	76,736
<i>Equity Securities:</i>				
Equity securities without RDFV	—	—	1,200	1,200
Total assets	<u>\$ 109,526</u>	<u>\$ —</u>	<u>\$ 1,200</u>	<u>\$ 110,726</u>
Liabilities:				
Contingent consideration	\$ —	\$ —	\$ 12,750	\$ 12,750
Total liabilities	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 12,750</u>	<u>\$ 12,750</u>

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Assets				
<i>Equity securities without RDFV</i>				
Equity securities without RDFV	\$ —	\$ —	\$ 1,200	\$ 1,200
Total assets	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,200</u>	<u>\$ 1,200</u>
Liabilities:				
Contingent consideration	\$ —	\$ —	\$ 12,000	\$ 12,000
Total liabilities	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 12,000</u>	<u>\$ 12,000</u>

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ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table provides reconciliation for all liabilities measured at fair value using significant unobservable inputs (Level 3) for the year ended December 31, 2022 (in thousands):

	Contingent consideration	Total liabilities
Balance at December 31, 2021	\$ 12,000	\$ 12,000
Change in fair value during 2022	750	750
Balance at December 31, 2022	<u>\$ 12,750</u>	<u>\$ 12,750</u>

We review trading activity and pricing for our available-for-sale securities as of the measurement date.

The fair value of equity securities without readily determinable fair market values ("RDFV") is determined based on cost, less any impairment, plus or minus changes in fair value resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. These securities are classified as Level 3 in the fair value hierarchy outlined above.

The contingent consideration liability is related to the Totient acquisition and is included in accrued expenses on the consolidated balance sheet as of December 31, 2022. The change in fair value of the contingent consideration liability is included within research and development expense on the consolidated statement of operations for the year ended December 31, 2022. Refer to Note 4: Acquisitions for further information.

There are significant judgments, assumptions and estimates inherent in the determination of the fair value of each of the instruments described above. 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.

14. 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 \$1.0 million and \$0.6 million for the years ended December 31, 2022 and 2021, respectively.

15. Related Party Transactions

During the year ended December 31, 2021, Phoenix Venture Partners II, L.P. exercised a warrant to purchase 307,211 shares of the Company's common stock at an exercise price of \$0.3027 per share, resulting in total cash proceeds to the Company of \$0.1 million. Zachariah Jonasson, a member of the Board, is a principal of Phoenix Venture Partners II, L.P.

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ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

16. Net loss per share attributable to common stockholders

Basic net loss per share is computed by dividing net loss by the weighted-average number of shares of common stock outstanding during the period.

The following table sets forth the computation of the Company's basic and diluted net loss per share attributable to common stockholders (in thousands, except share and per share amounts):

	For the Years Ended December 31,	
	2022	2021
Numerator:		
Net loss	\$ (104,904)	\$ (100,960)
Cumulative undeclared preferred stock dividends	—	(2,284)
Net loss available to common stockholder	<u>\$ (104,904)</u>	<u>\$ (103,244)</u>
Denominator:		
Weighted-average common shares outstanding	90,845,629	49,685,194
Net loss per share, basic and diluted	<u>\$ (1.15)</u>	<u>\$ (2.08)</u>

The common stock issuable upon the conversion or exercise of the following dilutive securities has been excluded from the diluted net loss per share calculation because their effect would have been anti-dilutive. Diluted net loss per share, therefore, does not differ from basic net loss per share for the periods presented.

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):

	For the Years Ended December 31,	
	2022	2021
Redeemable convertible preferred stock	—	25,489,573
Redeemable convertible preferred stock warrants	—	189,377
Stock options	10,751,992	6,379,236
Restricted stock units	47,086	—
Unvested restricted stock	1,859,446	2,616,641

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ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

17. Income Taxes

Provision for Income Taxes:

The Company was classified as a partnership, and was therefore a pass-through entity, for US income tax purposes through the LLC Conversion on October 15, 2020. The Company incurred net losses for the years ended December 31, 2022 and 2021.

The significant components of income tax benefit are as follows (in thousands):

	Years Ended December 31,	
	2022	2021
Current		
Federal	\$ —	\$ —
State	3	2
Foreign	41	—
Total current	44	2
Deferred expense/(benefit)		
Federal	(505)	(7,254)
State	—	(1,647)
Total deferred	(505)	(8,901)
Total	\$ (461)	\$ (8,899)

The income tax benefit for the years ended December 31, 2022 and 2021 primarily relate to change in valuation allowance offset by state taxes and taxes in foreign jurisdictions.

The provision for income taxes results in effective tax rates which are different than the federal income tax statutory rate. The following include the nature of the differences for the years ended December 31, 2022 and 2021:

	2022	2021
Statutory federal income tax rate	21.0 %	21.0 %
State income taxes, net of federal benefits	5.9	4.8
Tax contingencies, net of reversals	(0.6)	—
Section 162(m) limitation	(0.2)	—
Stock-based compensation	(0.5)	(0.9)
Research and development credits	2.4	0.6
Return-to-provision	0.6	—
Change in valuation allowance	(27.1)	(9.1)
Change in fair value of convertible promissory notes	—	(6.6)
Tax-effect of change in entity status	—	0.3
Revaluation of warrant liability	—	(1.0)
Other	(1.1)	(1.0)
Effective tax rate	0.4 %	8.1 %

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ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 as of December 31, 2022 and 2021 are as follows (in thousands):

	2022	2021
Deferred tax assets:		
Net operating losses	\$ 32,588	\$ 22,508
Research and development credits	3,835	698
Capitalized research and development expenses	13,350	—
Stock-based compensation	3,498	1,342
Lease liability	2,424	2,651
Accrued expenses	970	300
Gross deferred tax assets	56,665	27,499
Less valuation allowance	(39,007)	(10,481)
Total deferred tax assets	17,658	17,018
 Deferred tax liabilities:		
Property and equipment	(1,971)	(1,054)
Intangibles	(13,800)	(14,167)
Right-of-use lease asset	(2,125)	(2,540)
Gross deferred tax liabilities	(17,896)	(17,761)
Deferred tax liabilities, net	\$ (238)	\$ (743)

As of December 31, 2022, the Company has remaining federal net operating losses of \$126.9 million and has state net operating loss carryforwards of approximately \$103.4 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 incurred in 2018 and future years may be carried forward indefinitely, but the deductibility of such federal NOLs is subject to an annual limitation. NOLs generated prior to 2018 are eligible to be carried forward up to 20 years. State net operating losses can be carried forward for 5 to 20 years depending on the jurisdiction and will begin to expire in years 2035-2042. The company also has Federal research credit carryforwards of approximately \$3.8 million that will begin to expire in 2039.

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, 2022, 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 \$28.5 million during the year ended December 31, 2022 and \$10.0 million during the year ended December 31, 2021.

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, 2022.

The Company has not recognized withholding tax accrual for the undistributed earnings of its foreign operations as the Company considers these earnings to be indefinitely reinvested.

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ABSCI CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. The Company had unrecognized tax benefits of \$1.4 million as of December 31, 2022 and \$0.7 million unrecognized tax benefits as of December 31, 2021.

The Company recognizes penalties and interest related to unrecognized tax benefits as a component of income tax expense. As of December 31, 2022 and December 31, 2021, there are no accrued penalties or interest recorded in the financial statements. All unrecognized tax benefits would currently not have an impact on the effective rate if recognized.

The following is a reconciliation of the Company's unrecognized tax benefits (in thousands):

	2022	2021
Balance at January 1	\$ 698	\$ —
Additions Based On Tax Positions Related to Current Year	641	698
Additions Based On Prior Tax Positions	51	—
Reductions For Tax Positions In Prior Years	—	—
Settlements	—	—
Balance at December 31	\$ 1,390	\$ 698

The Company does not anticipate any significant increases or decreases in its uncertain tax positions within the next twelve months.

As of December 31, 2022 the Company's statutes of limitations are open for all federal and state years filed after the years ended December 31, 2019 and 2018, respectively. Net operating loss and credit carryforwards from all years are subject to examination and adjustments for the three years following the year in which the carryforwards are utilized. The Company is not currently under Internal Revenue Service or state examination.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosures

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act), are designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act).

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2022 based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the results of its evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Changes in Internal Control over Financial Reporting

We remediated the material weakness relating to our internal control over financial reporting, as described below. Except as otherwise described herein, there was no change in our internal control over financial reporting that occurred during the fourth quarter of 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Remediation of Material Weakness in Internal Control over Financial Reporting

We strengthened our internal control over financial reporting through hiring of additional finance and accounting personnel with the requisite technical knowledge and skills, implementation of appropriate segregation of duties, and formalization of accounting policies and controls. Management believes that significant progress has been made in enhancing internal controls as of December 31, 2022 and has concluded that the enhanced controls are operating effectively. The material weakness described in Part II, Item 9A, “Controls and Procedures” in our [Annual Report on Form 10-K](#) for the year ended December 31, 2021 has been fully remediated.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

Part III.

Item 10. Directors, Executive Officers and Corporate Governance

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller or, persons performing similar functions. A current copy of the code is posted on the Corporate Governance section of our investor relations website, which is located at investors.absci.com. We intend to disclose future amendments to such code, or any waivers of a provision of the code, applicable to any principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions, or our directors on our website or in a Current Report on Form 8-K. Information contained on the website is not incorporated by reference into this Annual Report on Form 10-K.

The remaining information required under this item is incorporated herein by reference to our definitive proxy statement with respect to our 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 11. Executive Compensation

Information responsive to this item is incorporated herein by reference to our definitive proxy statement with respect to our 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information responsive to this item is incorporated herein by reference to our definitive proxy statement with respect to our 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information responsive to this item is incorporated herein by reference to our definitive proxy statement with respect to our 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 14. Principal Accounting Fees and Services

Our independent public accounting firm is Ernst & Young, LLP, Seattle, WA, PCAOB Auditor ID 42.

Information responsive to this item is incorporated herein by reference to our definitive proxy statement with respect to our 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Part IV.

Item 15. Exhibits, Financial Statement Schedules

(a) 1. Financial Statements.

The following financial statements are filed as a part of this report:

	Page
Report of Independent Registered Public Accounting Firm	<u>84</u>
Consolidated Financial Statements:	
Consolidated Balance Sheet as of December 31, 2022 and 2021	<u>85</u>
Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2022 and 2021	<u>86</u>
Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit) for the years ended December 31, 2022 and 2021	<u>87</u>
Consolidated Statement of Cash Flows for the years ended December 31, 2022 and 2021	<u>88</u>
Notes to the Consolidated Financial Statements	<u>89</u>

(a) 2. Financial Statement Schedules.

All schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission have been omitted because they are inapplicable or the required information is shown in the consolidated financial statements, or notes thereto, included herein.

(b) Exhibits.

The following exhibits are filed with this Annual Report on Form 10-K:

Exhibit Index

Exhibit No.	Description
2.1	Agreement and Plan of Merger by and among Absci Corporation, Target Discovery Merger Sub I, Inc., Target Discovery Merger Sub II, LLC and Totient, Inc., dated June 4, 2021 (filed as Exhibit 2.1 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 8, 2021 and incorporated herein by reference).
3.1	Amended and Restated Certificate of Incorporation of Absci Corporation (filed as Exhibit 3.1 to the Form 8-K, File No. 001-40646, filed by Absci Corporation on July 26, 2021 and incorporated herein by reference).
3.2	Amended and Restated Bylaws of the Absci Corporation (filed as Exhibit 3.1 to the Form 8-K, File No. 001-40646, filed by Absci Corporation on December 15, 2022 and incorporated herein by reference).
4.1	Specimen Common Stock Certificate (filed as Exhibit 4.1 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 19, 2021).
4.2	Investors' Rights Agreement by and among the Registrant and certain of its stockholders dated October 19, 2020 (filed as Exhibit 4.2 to the Form S-1, File No. 333-257553, filed by Absci Corporation on June 30, 2021 and incorporated herein by reference).
4.3	Description of the Registrant's Securities (filed as Exhibit 4.3 to the Annual Report on Form 10-K for the year ended December 31, 2021 filed by Absci Corporation on March 22, 2022).
10.1#	2020 Stock Option and Grant Plan and forms of award agreements thereunder (filed as Exhibit 10.1 to the Form S-1, File No. 333-257553, filed by Absci Corporation on June 30, 2021 and incorporated herein by reference).
10.2#	2021 Stock Option and Incentive Plan and forms of award agreements thereunder (filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed by Absci Corporation on November 9, 2022 and incorporated herein by reference).
10.3#	2021 Employee Stock Purchase Plan (filed as Exhibit 10.3 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 15, 2021 and incorporated herein by reference).

10.4#	Senior Executive Cash Incentive Bonus Plan (filed as Exhibit 10.4 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 15, 2021 and incorporated herein by reference).
10.5#	Amended and Restated Non-Employee Director Compensation Policy (filed as Exhibit 4.2 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, filed by Absci Corporation on August 11, 2022 and incorporated herein by reference).
10.6#	Form of Indemnification Agreement by and between the Registrant and each of its directors and officers (filed as Exhibit 10.8 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 19, 2021 and incorporated herein by reference).
10.7#	Employment Agreement, by and between the Registrant and Sean McClain, dated as of July 26, 2021 (filed as Exhibit 10.13 to the Form S-1, File No. 333-257553, filed by Absci Corporation on July 15, 2021 and incorporated herein by reference).
10.8#	Employment Agreement, by and between the Registrant and Gregory Schiffman, dated as of July 26, 2021 (filed as Exhibit 10.7 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2021, filed by Absci Corporation on September 7, 2021 and incorporated herein by reference).
10.9#	Employment Agreement, by and between the Registrant and Sarah Korman, dated as of July 26, 2021. (filed as Exhibit 10.10 to the Annual Report on Form 10-K for the year ended December 31, 2021, filed by Absci Corporation on March, 2022 and incorporated herein by reference).
10.10#	Separation Agreement by and between the Company and Matthew Weinstock dated September 30, 2022 (filed as Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed by Absci Corporation on November 9, 2022 and incorporated herein by reference).
10.11#	Consulting Agreement by and between the Company and Matthew Weinstock dated October 4, 2022 (filed as Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed by Absci Corporation on November 9, 2022 and incorporated herein by reference).
10.12	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 (filed as Exhibit 10.11 to the Form S-1, File No. 333-257553, filed by Absci Corporation on June 30, 2021 and incorporated herein by reference).
23.1	Consent of Independent Registered Accounting Firm.
24.1	Power of Attorney.(reference is made to the signature page hereto).
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1†	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2†	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

Represents management compensation plan, contract or arrangement.

† The certifications attached as Exhibit 32.1 and Exhibit 32.2 that accompany this Annual Report on Form 10-K are not deemed filed with the SEC and are not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-K, irrespective of any general incorporation language contained in such filing.

Item 16. 10-K Summary

None.

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ABSCI CORPORATION

Date: March 30, 2023

By: /s/ Sean McClain
Sean McClain
Founder, CEO (Principal Executive Officer)
and Director

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Sean McClain and Gregory Schiffman, as their true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to the Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date: March 30, 2023

By: /s/ Gregory Schiffman
Gregory Schiffman
Chief Financial Officer (Principal Financial Officer)

Date: March 30, 2023

By: /s/ Todd Bedrick
Todd Bedrick
Chief Accounting Officer (Principal Accounting Officer)

Date: March 30, 2023

By: /s/ Zachariah Jonasson
Zachariah Jonasson, Ph.D.
Director

Date: March 30, 2023

By: /s/ Ivana Magovcevic-Liebisch
Ivana Magovcevic-Liebisch, Ph.D.
Director

Date: March 30, 2023

By: /s/ Karen McGinnis
Karen McGinnis, C.P.A.
Director

Date: March 30, 2023

By: /s/ Amrit Nagpal
Amrit Nagpal
Director

Date: March 30, 2023

By: /s/ Daniel Rabinovitsj
Daniel Rabinovitsj
Director

Date: March 30, 2023

By: /s/ Joseph Sirosh
Joseph Sirosh, PhD
Director