Filed pursuant to Rule 424(b)(5)
Registration No. 333-267043

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission and is effective. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 27, 2024

PRELIMINARY PROSPECTUS SUPPLEMENT

(to Prospectus dated September 2, 2022)

$75,000,000

Absci Corporation

Common Stock

We are offering shares of our common stock, par value $0.0001 per share (the "common stock").

Our common stock is listed on The Nasdaq Global Select Market under the symbol "ABSI". On February 26, 2024, the last reported sale price of shares of our common stock on The Nasdaq Global Select Market was $4.90 per share.

We are a "smaller reporting company" as defined under the federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements for this prospectus supplement and may elect to do so in future filings.

Investing in our securities involves a high degree of risk. See the section entitled "Risk Factors" beginning on page S-10 of this prospectus supplement and elsewhere in this prospectus supplement and the accompanying base prospectus for a discussion of information that should be considered in connection with an investment in our securities.

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

	Per Share	Total
Public Offering Price	$	$
Underwriting Discount and Commissions(1)	$	$
Proceeds, Before Expenses, to us	$	$

(1) See the section titled "Underwriting" beginning on page S-26 of this prospectus supplement for additional information.

For a period of 30 days following the date of this prospectus supplement, the underwriters have the option to purchase up to an additional shares of common stock at the public offering price, less underwriting discounts and commissions. See the section titled "Underwriting." If the underwriters exercise the option to purchase additional securities in full, the total underwriting discounts and commissions will be $, and the total proceeds to us, before expenses, will be $.

The underwriters expect to deliver the shares to purchasers on or about on or about , 2024.

Book-Running Managers

Morgan Stanley **TD Cowen**

The date of this prospectus supplement is , 2024.

TABLE OF CONTENTS

Prospectus Supplement

Prospectus

Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained or incorporated by reference in this prospectus supplement or the accompanying base prospectus. Neither we nor the underwriters takes any responsibility for, or provides any assurance as to the reliability of, any other information that others may give you. You should assume that the information appearing or incorporated by reference in this prospectus supplement, the accompanying prospectus or any free writing prospectus prepared by us is accurate only as of their respective dates or on the date or dates which are specified in such documents, and that any information in documents that we have incorporated by reference is accurate only as of the date of such document incorporated by reference. Our business, financial condition, liquidity, results of operations and prospects may have changed since those dates. Neither we nor the underwriters are making an offer of these securities in any state or jurisdiction where the offer is not permitted.

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement on Form S-3 (Registration No. 333-267043) that we filed with the Securities and Exchange Commission (the "SEC") using a "shelf" registration process. The accompanying base prospectus provides you with a general description of Absci and the securities that may be offered. Each time we sell securities under the registration statement through an underwriter, dealer, or agent, a prospectus supplement will be provided that contains specific information about the terms of that offering. A prospectus supplement may also add, update, or change information contained in the accompanying base prospectus.

This prospectus supplement provides specific details regarding this offering of shares of common stock, including the purchase price per share. To the extent there is a conflict between the information contained in this prospectus supplement and the accompanying base prospectus, you should rely on the information in this prospectus supplement. This prospectus supplement, the accompanying base prospectus, and the documents incorporated by reference herein and therein include important information about us and our common stock and other information you should know before investing. You should read both this prospectus supplement and the accompanying base prospectus, together with the additional information described below under the heading "Where You Can Find More Information."

You should not assume that the information appearing in this prospectus supplement or the accompanying base prospectus is accurate as of any date other than the date on the front cover of the respective documents. You should not assume that the information contained in the documents incorporated by reference in this prospectus supplement or the accompanying base prospectus is accurate as of any date other than the respective dates of those documents. Our business, financial condition, results of operations, and prospects may have changed since the dates set forth in the respective documents.

We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus or any free writing prospectus and the offering of the securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus or any free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus supplement and the accompanying prospectus or any free writing prospectus outside the United States.

Unless otherwise indicated or the context otherwise requires, references in this prospectus to "Absci," the "Company," "we," "us" and "our" refer, collectively, to Absci Corporation and its subsidiaries.

We use various trademarks and tradenames in our business. Absci's stylized A logo, Absci®, SoluPro®, Bionic SoluPro® and SoluPure® are our registered trademarks with the U.S. Patent and Trademark Office. All other trademarks or trade names referred to in this prospectus supplement or the accompanying base prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus supplement or the accompanying base prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies' trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

MARKET, INDUSTRY AND OTHER DATA

We obtained the industry, market and competitive position data included or incorporated by reference in this prospectus supplement, the accompanying base prospectus and the documents incorporated herein and therein by reference from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. 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 this data is 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 or incorporated by reference in this prospectus supplement is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the third parties or by us.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained elsewhere, or incorporated by reference, in this prospectus supplement or the accompanying base prospectus and does not contain all of the information you should consider in making your investment decision. Before deciding to purchase any of our shares of common stock in this offering, you should read this summary together with the more detailed information included elsewhere, or incorporated by reference, in this prospectus supplement or the accompanying base prospectus. You should carefully consider, among other things, (i) the matters discussed in "Risk Factors" and "Cautionary Statement Regarding Forward-Looking Statements," in each case, included elsewhere, or incorporated by reference, in this prospectus supplement or the accompanying base prospectus, and (ii) our consolidated financial statements and related notes and the matters discussed in "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case, included in our most recent Annual Report on Form 10-K for the year ended December 31, 2022, as amended, as updated by our subsequent annual, quarterly and other reports and documents that are incorporated by reference into this prospectus supplement and the accompanying base prospectus.

Overview

Absci is a data-first 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 Integrated Drug Creation platform aims to engineer better biologics with design-in functionality and best-in-class properties.

Antibody-based therapeutics represent an extraordinary medical and economic opportunity, yet the biopharmaceutical industry faces significant challenges in bringing these life-changing medicines to patients. Our Integrated Drug Creation platform is designed to improve upon traditional biologic drug discovery by using AI to simultaneously optimize multiple drug characteristics that may be important to development and therapeutic benefit. This has the potential to significantly shorten time to clinic and increase the probability of success. Our approach expands the possibilities in biopharmaceuticals — shifting from a paradigm of drug discovery to drug creation — with the goal of bringing best-in-class and first-in-class antibody therapeutics to the patients who need them.

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 discovery and development life cycle: We create drug candidates with partners, including pharmaceutical and biotechnology companies who are responsible for preclinical and clinical testing of biologic candidates generated through our platform. Our partnerships will provide us with the opportunity to participate in the future success of the biologic candidates generated utilizing our platform, including 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 partnered pipeline assets of biologics across multiple indications.

Developing our own proprietary asset pipeline: We aim to create therapeutic assets comprising our own internal program pipeline. With the ability to find targets and develop potential best-in-class assets, we intend to develop promising assets to value inflection points, anywhere from preclinical validation through clinical trials, before partnering or selling them. Accordingly, we may enter into clinical trials and/or manufacturing partnerships to advance specific therapeutic assets to target such value inflection points. We believe that by developing our own pipeline, we will create optionality for enhanced monetization and validation of our platform.

Our evolving business model is underpinned by a strategic shift towards diversifying our program portfolio through both partnered drug creation programs and internal asset development programs. Our approach is to balance the portfolio between partnered programs that broaden our reach into various indications and provide R&D and upfront funding, and internal programs for which we have more control and the potential for partnerships or asset sales that provide more significant economic returns. The cornerstone of this business model evolution lies in the diversification of risk and potential return on investment. Engaging in drug creation partnerships may enable us to reach broader indications and markets, whereas internal asset development may be more advantageous in terms of greater control over program selection, development timeline, and return on investment. Our dual-faceted model not only secures a focused set of indications but also gives us greater optionality, enhancing our ability to pivot and adapt as the programs progress. We believe we will grow and diversify our portfolio of programs through our model, ultimately driving innovation and delivering value for all stakeholders.

Our Partnerships

We structure our partnerships as drug creation agreements with options for our partners to license intellectual property rights to the biological assets we create after completion of the drug creation phase. The primary goal of the drug creation phase includes target creation, lead or candidate creation, and development or optimization of a lead candidate or set of lead candidates. For the drug creation phase, partners may request a scope that includes, but is not limited to, a specified disease area, a target for creation of a new biologic, or supply a specified lead candidate for AI-driven optimization. For most partnerships, we expect to negotiate and agree to downstream economic terms of any license to our intellectual property rights before initiating the drug creation phase. We anticipate that these drug creation 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 drug creation 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 drug creation 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 drug creation phase in a timely manner, or at all.

As of December 31, 2023, our Active Programs are as follows:

Partner	Contract Date	Active Programs	Therapeutic Area
PrecisionLife	December 2023	5	Undisclosed
Almirall	November 2023	2	Dermatology
AstraZeneca	November 2023	1	Oncology
Undisclosed	July 2023	1	Undisclosed
Undisclosed	March 2023	1	Undisclosed
Merck	January 2022	3	Undisclosed
Merck	December 2019	1	Undisclosed
Alpha Cancer Technologies	August 2019	1	Oncology
SFJ Pharmaceuticals	April 2019	1	Hematology
Active Programs		16	

Our Integrated Drug Creation platform is primarily utilized in our partnerships for drug creation across indications using AI to simultaneously optimize multiple drug characteristics that may be important to development and therapeutic benefit. One of our Active Programs with an undisclosed partner is leveraging our platform capabilities to optimize pharmacokinetic properties for a Phase II candidate and one of our Active Programs with an undisclosed partner is leveraging our platform capabilities including our antibody library. We also have three Active Programs focused on our legacy model of developing production cell lines for drug candidates that our partners are developing. Two of these legacy cell line development Active Programs are preclinical and one is in Phase 3 clinical development (PhaseBio Pharmaceuticals' drug candidate, bentracimab, assumed by SFJ Pharmaceuticals, Inc. in January 2023).

We have negotiated license agreements, or expected to negotiate license agreements upon completion of certain drug creation activities, with potential downstream milestone payments and royalties for all Active Programs. We have not negotiated terms for a sufficient number of royalty- and milestone-bearing licenses, however, to enable us to make accurate predictions regarding our potential revenue and financial performance.

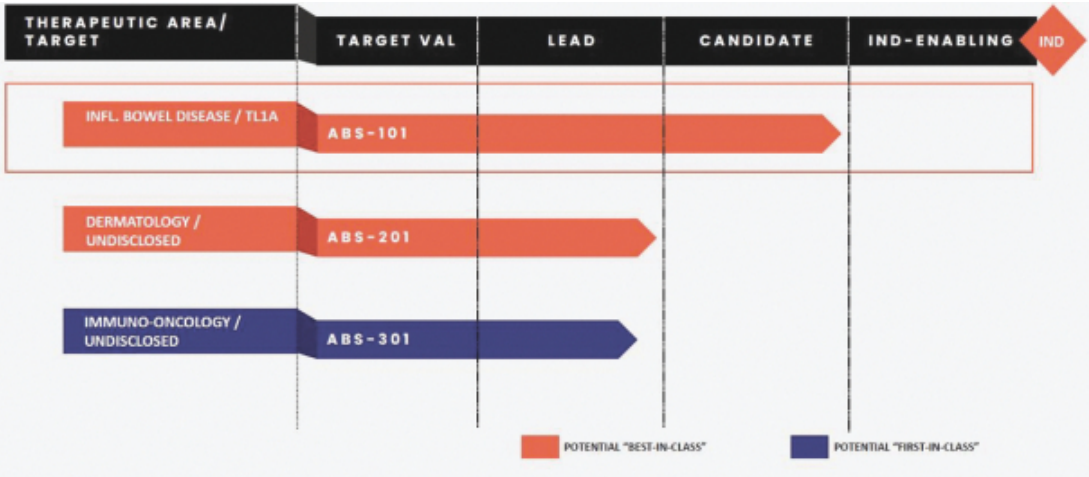
Internal Pipeline

Our biologics pipeline reflects our differentiated capabilities in *de novo* antibody creation, multi-parameteric lead optimization, and reverse immunology. We're developing a diversified portfolio of internal programs with a focus on cytokine biology as we scale our Integrated Drug Creation platform and strive to impact millions of lives.

Internal Asset Programs

As of December 31, 2023, we have identified three wholly-owned internal asset programs focusing on cytokine biology as well as several undisclosed internal pipeline programs under evaluation.

Program Name	Target Description
ABS-101	Candidate targeting TL1A in inflammatory bowel disease
ABS-201	Lead and optimization stage for an undisclosed therapeutic target in dermatology
ABS-301	Lead and optimization stage for an undisclosed therapeutic target in immuno-oncology



We are aware of clinical stage assets targeting TL1A that are being developed by Merck, Roche and Sanofi. For purposes of comparing the anticipated attributes of ABS-101 to these competitive product candidates, we generated putative clinical competitor molecules and performed a head to head comparison against several potential ABS-101 molecules. In these preclinical studies, ABS-101 potential candidates exhibited properties consistent with a potentially superior product profile by demonstrating equal or superior potency data from multiple biophysical and cellular assays, in addition to improved developability properties. We believe these attributes support the program's potential to create an efficacious candidate conducive to subcutaneous dosing. Furthermore, in vitro and preliminary in vivo PK studies confirm the potential for extended half-life, supporting the objective for significantly improved dosing intervals. While we are encouraged by these preclinical results, we cannot assure you that similar results will be obtained in clinical studies of ABS-101. Additionally, while we endeavored to create molecules with the same attributes as those of competitive product candidates under development, we cannot assure you that the molecules we created are similar or better than those being developed by our competitors, nor can we assure you that direct comparisons of our clinical product candidate to those of our competitors will produce similar results.

In February 2024 we initiated IND-enabling studies for ABS-101 to further evaluate certain properties of ABS-101. Based on these IND-enabling studies, we plan to submit a IND in the first quarter of 2025 and potentially initiate a Phase 1 clinical trial in the first half of 2025.

Government Regulation

Biologics License Application (BLA) Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, preclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product candidate for one or more indications. The BLA must include all relevant data available from preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product candidate's chemistry, manufacturing, controls, and proposed labeling, among other things. Under the Prescription Drug User Fee Act (PDUFA), as amended, each BLA must be accompanied by a significant application user fee to the FDA, unless a waiver or exemption applies, which is adjusted on an annual basis. The FDA has sixty days from the applicant's submission of a BLA to either issue a refusal to file letter or accept the BLA for filing, indicating that it is sufficiently complete to permit substantive review. The FDA has substantial discretion in the approval process and may refuse to accept any application or decide that the data is insufficient for approval, and may require additional preclinical, clinical or other studies before it accepts the filing.

Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may be significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product candidate is safe, pure and potent for its intended use, and whether the facility in which it is manufactured, processed, packed or held meets standards designed to assure and preserve the product's identity, safety, strength, quality, and purity. The FDA may convene an advisory committee, typically a panel that includes clinicians and other experts, to provide clinical insight on applications which present difficult questions of safety or efficacy and to review, evaluate and recommend whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will conduct a pre-approval inspection of the facility or facilities where the product is manufactured to determine whether the facilities comply with cGMPs. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically audit data from clinical trials to ensure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be manufactured, the FDA may issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response Letter usually describes all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response Letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response Letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification, which may include the potential requirement for additional clinical studies and/or other significant and time-consuming requirements related to preclinical studies and manufacturing. If a Complete Response Letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, withdraw the application or request a hearing. Even if such data and information is submitted, the FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for a particular indication(s) and may entail limitations on the indicated uses for which such product may be marketed. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling or may condition the approval of the BLA on other changes to the proposed labeling, development of adequate controls and specifications, or a commitment to conduct post-market testing or clinical trials and surveillance to monitor the effects of approved products. The FDA may also place other conditions on approvals including the requirement of a Risk Evaluation and Mitigation Strategy (REMS), to assure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Once approved, the FDA may withdraw the product approval if compliance with pre-and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product’s safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Preliminary Unaudited Financial Information

Based upon preliminary estimates and information available to us as of the date of this prospectus supplement:

- As of December 31, 2023, we had approximately $97.7 million in unrestricted cash and cash equivalents and short-term investments.
- For the three months and year ended December 31, 2023, we expect revenue to be approximately $0.3 million and $5.7 million, respectively.
- For the three months and year ended December 31, 2023, we expect operating expenses to be approximately $24 million to $26 million and $120 million to $122 million, respectively, inclusive of a $21.3 million goodwill impairment that was recorded within operating expenses in the three months ended June 30, 2023.

The foregoing estimates as of and for the three months and year ended December 31, 2023, in each case, are preliminary. We are in the process of finalizing the actual results of operations for the three months and year ended December 31, 2023 and therefore final results are not yet available. These preliminary estimates are based solely upon information available to us as of the date of this prospectus supplement and our actual results may differ from these estimates due to the completion of our quarter-and year-end closing procedures, final adjustments, and developments that may arise between now and the time our financial results for the three months and year ended December 31, 2023 are finalized. Additionally, our independent registered public accounting firm has not yet completed its audit of our consolidated financial statements for the year ended December 31, 2023. Additional information and disclosure would be required for a more complete understanding of our financial position and results of operations as of and for the three months and year ended December 31, 2023. Investors should refer to the actual results included in our unaudited condensed consolidated financial statements for the three months ended December 31, 2023 and the audited consolidated financial statements for the year ended December 31, 2023 once they become available upon filing of our Annual Report on Form 10-K.

Our independent registered public accounting firm has not audited, reviewed or performed any procedures with respect to these preliminary estimates and, accordingly, does not express an opinion or any other form of assurance about them.

Company Information

We were formed as AbSci, LLC in August 2011 as a limited liability company under the Oregon Limited Liability Act and subsequently converted into a Delaware limited liability company under the laws of the State of Delaware in April 2016. In October 2020, we completed a reorganization whereby we converted from a Delaware limited liability company to a Delaware corporation under the name Absci Corporation. We have four direct wholly-owned subsidiaries, Absci GmbH, AbSci, LLC, De Novo Design, LLC and Target Discovery Merger Sub II, LLC, and two indirect wholly-owned subsidiaries, Absci Ltd. and Absci d.o.o. Beograd.

Our principal executive office is located at 18105 SE Mill Plain Blvd, Vancouver, WA 98683, and our telephone number is (360) 949-1041. Our website address is *www.absci.com*. We do not incorporate the information on, or accessible through, our website into this prospectus supplement, and you should not consider any information on, or accessible through, our website as part of this prospectus supplement. You should not rely on any such information in making your decision whether to purchase our securities.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") are available, free of charge, on or through our website as soon as reasonably practicable after such reports and amendments are electronically filed with or furnished to the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings at *www.sec.gov*.

For additional information about our Company, please refer to other documents we have filed with the SEC and that are incorporated by reference into this prospectus supplement and the accompanying base prospectus, as listed under the heading "Incorporation of Certain Information by Reference."

Implications of Being a Smaller Reporting Company

We are a "smaller reporting company," as defined by the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder. For as long as we continue to be a smaller reporting company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies that are not smaller reporting companies, including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements.

We will remain a smaller reporting company so long as, as of June 30 of the preceding year: (i) the market value of our shares of common stock held by non-affiliates, or our public float, is less than $250 million; or (ii) we have annual revenues less than $100 million and either we have no public float or our public float is less than $700 million.

THE OFFERING

The following summary contains basic information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus supplement.

Common Stock Offered by Us	shares of our common stock.
Option to Purchase Additional Shares of Common Stock	We have granted the underwriters an option for 30 days from the date of this prospectus supplement to purchase up to an additional shares of our common stock.
Common Stock to be Outstanding Immediately after This Offering[(1)]	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Use of Proceeds	We estimate that the net proceeds to us in this offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares), after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering to fund the development of our internal asset programs, continued investment in our Integrated Drug Creation platform, including related AI and wet-lab technologies, and for working capital and other general corporate purposes. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments, or agreements with respect to any such material investments or acquisitions as of the date of this prospectus supplement. These intentions are subject to change. See the section titled “Use of Proceeds” for additional information.
Risk Factors	See the section entitled “Risk Factors” beginning on page S-10 for a discussion of factors you should consider carefully before deciding to invest in our common stock.

The Nasdaq Global Select Market Symbol for our Common Stock“ABSI”

Unless otherwise indicated, the number of shares of our common stock outstanding before and after this offering is based on 92,936,980 shares of common stock outstanding as of September 30, 2023, and excludes:

- 18,193,051 shares of our common stock issuable upon the exercise of options with a weighted-average exercise price of approximately $3.18 per share as of September 30, 2023;
- 263,796 shares of our common stock issuable upon the vesting and settlement of outstanding restricted stock unit awards as of September 30, 2023;
- 6,077,827 shares of our common stock reserved for issuance under our 2021 Stock Option and Incentive Plan, or 2021 Plan, as of September 30, 2023, as well as (i) an automatic increase of 4,654,384 shares of our common stock reserved for issuance under the 2021 Plan that became effective on January 1, 2024 in accordance with the terms of the 2021 Plan and (ii) 1,591,223 shares of our common stock underlying stock awards granted under the 2021 Plan and our 2020 Stock Option and Grant Plan, or 2020 Plan, that expired or were repurchased, forfeited, cancelled or withheld subsequent to September 30, 2023 through the date of this prospectus supplement;
- 1,626,658 shares of our common stock reserved for issuance under our 2021 Employee Stock Purchase Plan, or 2021 ESPP, as of September 30, 2023, as well as an automatic increase of 930,877 shares of our common stock reserved for issuance under the 2021 ESPP that became effective on January 1, 2024 in accordance with the terms of the 2021 ESPP; and
- 2,500,000 shares of common stock reserved for future issuance under our 2023 Inducement Plan, or Inducement Plan, which became effective as of January 1, 2024.

Unless otherwise indicated, all information in this prospectus supplement assumes that the underwriters of this offering do not exercise their option to purchase up to an additional shares of our common stock.

RISK FACTORS

An investment in our common stock involves significant risks. Prior to making a decision about investing in our common stock, and in consultation with your own financial and legal advisors, you should carefully consider, among other matters, the following risk factors, the risks described under the heading "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2022, as amended, and our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, as well as any amendments thereto, which are incorporated by reference into this prospectus supplement in their entirety, together with other information in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein, and any free writing prospectus that we may file with the SEC. Any of these risks could have a material adverse effect on our business, operating results and financial condition, which could cause you to lose all or part of your investment. Additional risks and uncertainties not currently known to us or that we currently deem immaterial also may affect our business and operations. As such, you should not consider this list to be a complete statement of all potential risks or uncertainties.

Risks Related to the Offering

Sales of a substantial number of shares of our common stock in the public market in, concurrently with or following this offering could cause the market price of our common stock to decline.

Sales of a substantial number of shares of our common stock in the public market in, concurrently with or following this offering or the perception that these sales might occur could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock. In addition, the sale of substantial amounts of our common stock could adversely impact its price. The sale or the availability for sale of a large number of shares of our common stock in the public market could cause the price of our common stock to decline.

In addition, certain of our employees, executive officers, and directors may enter into Rule 10b5-1 trading plans providing for sales of shares of our common stock from time to time. Under a Rule 10b5-1 trading plan, a broker executes trades pursuant to parameters established by the employee, director, or officer when entering into the plan, without further direction from the employee, officer, or director. A Rule 10b5-1 trading plan may be amended or terminated in some circumstances. Our employees, executive officers, and directors also may buy or sell additional shares outside of a Rule 10b5-1 trading plan when they are not in possession of material, nonpublic information, subject to the limitations of the lock-up agreements, if applicable, described in the section titled "Underwriting."

The lock-up agreements include an exception for shares sold by our executive officers and directors to cover tax obligations upon the exercise of stock options or the vesting of restricted stock units. Such sales of shares into the market, including during the lock-up period, could adversely affect the market price of shares of our common stock. See the section titled "Underwriting" in this prospectus supplement for more information.

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

Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the as adjusted net tangible book value per share. As a result, investors purchasing common stock in this offering will incur immediate dilution of $ per share (or $ per share if the underwriters exercise their option to purchase additional shares in full), representing the difference

between the public offering price of $ and our as adjusted net tangible book value as of September 30, 2023. To the extent outstanding options to purchase shares of our common stock are exercised, new investors may incur further dilution. For more information on the dilution you may suffer as a result of investing in this offering, see the section of this prospectus supplement titled “Dilution.”

We have broad discretion in the use of our existing cash, cash equivalents and marketable securities and the net proceeds from this offering and may not use them effectively.

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

Risks Related to Our Business Model and Partnerships

We are substantially dependent on the successful application of our Integrated Drug Creation platform to initiate and advance partnered programs and to develop our internal asset programs that can be further developed by our current or future partners.

The biologic drug development business is capital intensive. Our success significantly depends on our ability to apply our platform for partnered programs, develop promising internal asset programs, and enter into agreements with our current and future partners to further develop these programs. We have only recently expanded our platform into biologic drug discovery, both for programs that we develop with our partners and those that we internally develop. In order to attempt to realize the full benefits of our Integrated Drug Creation platform, we must continue to advance our platform technology and market our expanded capabilities to existing and potential new partners and develop our internal asset programs.

Our future revenue growth and market potential will depend on our ability to continue leveraging our Integrated Drug Creation platform, together with our custom libraries, data sets and other proprietary tools, for biologics drug creation and other areas of biopharmaceutical drug development. 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 creation or that our platform will enable us to create promising biologic candidates for further development.

Our inability to continue these initiatives and initiate new drug creation efforts could result in a failure to develop our platform, improve upon existing technologies, partner internal assets for clinical development, and expand our addressable market, each of which could have a material and adverse impact on our business development, business, financial position and results of operations.

We do not expect to generate significant recurring revenue unless and until such time as we enter into further agreements that, in the aggregate, result in regular and continuous fees for our performance of drug creation 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, whether those programs were developed collaboratively with a partner or internally developed. 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 created using our platform, which may be outside of our control. Because of these factors, our operating results could vary materially from quarter to quarter.

We rely and expect to continue to rely on third parties to conduct our preclinical studies and any eventual clinical trials. If those third parties do not perform as contractually required, fail to satisfy legal or regulatory requirements, miss expected deadlines or the relationship terminates prematurely, the development of our internal asset programs could be delayed, more costly or unsuccessful, and the programs may never obtain regulatory approval or commercialization.

We have relied and intend to rely in the future on third-party clinical investigators, CROs, and clinical data management organizations to conduct, supervise and monitor preclinical studies and any eventual clinical trials of our current or future internal asset programs. Because we currently rely and intend to continue to rely on these third parties, we will have less control over the timing, quality and other aspects of preclinical studies and any eventual clinical trials than if we conducted them independently. These parties are not, and will not be, our employees and we will have limited control over the amount of time and resources that they dedicate to our programs. Additionally, such parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs.

Our reliance on these third parties for development activities will reduce our control over these activities. Nevertheless, we will remain responsible for ensuring that each of our preclinical studies are conducted in accordance with good laboratory practices and that any eventual clinical trials are conducted in accordance with GCPs. Moreover, our business may be significantly impacted if our CROs, clinical investigators or other third parties violate federal or state healthcare fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

In the event we are required to repeat, extend, delay or terminate our preclinical or any eventual clinical development activities due to one or more third parties not successfully carrying out its contractual duties, meeting expected deadlines, or conducting development activities in accordance with regulatory requirements or our stated protocols, we may not be able to achieve, or may be delayed in achieving, product development milestones, including our internal timelines or certain regulatory requirements. As a result, our results of operations and the commercial prospects for our internal asset programs would be harmed, our costs could increase, and our ability to generate revenue and platform validation could be delayed. To the extent we are unable to successfully identify and manage the performance of third-party service providers in the future, our business may be materially and adversely affected.

If any of our relationships with these third parties terminate for any reason, including due to involuntary termination, regulatory or other compliance requirements, or strategic reprioritization, we may not be able to enter into alternative arrangements or do so on commercially reasonable terms. Switching or adding additional contractors requires additional resources and demands management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays could occur, which could compromise our ability to meet our internal development timelines. In addition, if an agreement with any of our partners terminates, our access to technology and intellectual property licensed to us by that partner may be restricted or terminate

entirely, which may delay our continued development of our internal asset programs utilizing the partner's technology or intellectual property or require us to stop development of those internal asset programs completely.

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

If we do not achieve our projected development goals in the timeframes we announce and expect, the commercialization of our programs and validation of our platform technology may be delayed and our expenses may increase and, as a result, our stock price may decline.

From time to time, we estimate the timing of the anticipated accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of preclinical studies and clinical trials, as well as the submission of regulatory filings. From time to time, we may publicly announce the expected timing of achieving certain of these milestones. All of these milestones are and will be based on numerous assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in some cases for reasons beyond our control. If we do not meet these milestones as publicly announced, or at all, the commercialization of our programs or the validation of our platform technologies based on anticipated achievement of these milestones, may be delayed or never achieved and, as a result, our stock price may decline. Additionally, delays relative to our projected timelines are likely to cause overall expenses to increase, which may require us to raise additional capital sooner than expected and prior to achieving targeted development milestones.

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 created 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 create biologic drug candidates for partners that 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 drug creation activities and successfully completing technical program deliverables and milestones for our partners for many of our programs, 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 generated utilizing our Integrated Drug Creation platform and royalties on net sales if such product candidates are approved for marketing and successfully commercialized. These include internally generated asset programs that we may partner with during later stages of drug development. As a result, our future growth is dependent on the ability of our partners to successfully develop and commercialize therapies based on product candidates 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, whether the asset program was generated pursuant to a drug creation agreement or our own internal development efforts. 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 biologic product candidates that we create. 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. Moreover, the results of preclinical studies and any clinical trials of our partnered or any internally developed product candidates may not be predictive of the results of later-stage clinical trials. In addition, results in one indication may not be predictive of results to be expected for the same product candidate in another indication. Differences in trial design between early-stage clinical trials and later-stage clinical trials make it difficult to extrapolate the results of earlier clinical trials to later clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in clinical trials due to lack of efficacy or unfavorable safety profiles, notwithstanding promising results in preclinical development or earlier trials. We or our partners may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful. Most product candidates that commence clinical trials are never approved as products and there can be no assurance that any of our partnered product candidates or any internally developed product candidates will ultimately be successful.

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. In addition, regulatory authorities may approve any of the product candidates that we may develop for fewer or more limited indications than requested. 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, our efforts to successfully advance internal asset programs through preclinical or later validation, and license or co-develop such proprietary drug candidates with a partner for clinical development, depends 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 are working to advance certain of our drug candidates through some or all clinical-stage development activities and regulatory filings for approval to commercialize such proprietary drug candidates on our own. As a result of the development of our internal pipeline, we are becoming subject to all of the risks of biologic drug development described in this “Risk Factors” section whether our internal asset program development is explicitly referenced, 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.

Preclinical development is uncertain. To date we have not initiated any clinical trials for any product candidates. We cannot guarantee that any clinical trials will be initiated or conducted as planned or completed on schedule, if at all. We also cannot be sure that submission of an IND or a clinical trial application (CTA) will result in the FDA or other regulatory authority, as applicable, allowing clinical trials to begin in a timely manner, if at all. Moreover, even if these trials begin, issues may arise that could suspend or terminate such clinical trials. A failure of one or more clinical trials can occur at any stage of testing, and our future clinical trials may not be successful. If our preclinical product candidates experience delays or never advance to clinical trials, it would have an adverse effect on our business.

In order to obtain FDA approval to market a new biological product we or our partners must demonstrate proof of safety, purity and potency or efficacy in humans. To meet these requirements we or our partners will have to conduct adequate and well-controlled clinical trials. Before we or our partners can commence clinical trials for a product candidate, we or our partners must complete extensive preclinical testing and studies that support our planned INDs in the United States. All of our internal asset programs are in preclinical development. We cannot be certain of the timely completion or outcome of our or our partners’ preclinical testing and studies and cannot predict if the FDA will accept our or our partners’ proposed clinical programs or if the outcome of our or our partners’ preclinical testing and studies will ultimately support the further development of our product candidates. As a result, we cannot be sure that we or our partners will be able to submit INDs or similar applications for our preclinical product candidates on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the FDA or other regulatory authorities allowing clinical trials to begin.

Conducting preclinical testing is a lengthy, time-consuming and expensive process. The length of time may vary substantially according to the type, complexity and novelty of the program, and often can be several years or more per program. Delays associated with programs for which we are directly conducting preclinical testing and studies may cause us or our partners to incur additional operating expenses. The commencement and rate of completion of preclinical studies and clinical trials for a product candidate may be delayed by many factors, including, for example:

- inability to generate sufficient preclinical or other in vivo or in vitro data to support the initiation of clinical studies;
- delays in reaching a consensus with regulatory agencies on study design;
- the FDA not allowing us to rely on previous findings of safety and efficacy for other similar but approved products and published scientific literature; and
- use of our product candidates could be associated with adverse side effects, adverse events or other properties or safety risks, which could delay or preclude approval, cause us or our

partners to suspend or discontinue preclinical or clinical trials, abandon a product candidate, limit the commercial profile of an approved product or result in other significant negative consequences.

Moreover, even if clinical trials do begin for our preclinical product candidates, our or our partners' development efforts may not be successful, and clinical trials that we or our partners conduct or that third parties conduct on our or our partners' behalf may not demonstrate sufficient safety, purity and potency or efficacy to obtain the requisite regulatory approvals for any of product candidates we develop. Even if we or our partners obtain positive results from preclinical studies or initial clinical trials, we or our partners may not achieve the same success in future trials.

We face competition from entities that have made substantial investments into the rapid development of novel treatments for the therapeutic indications in which we are engaged in drug creation partnerships and internal asset programs, including large and specialty pharmaceutical and biotechnology companies.

The discovery and development of therapies is highly competitive. Many of our competitors have significantly greater resources and experience than we do and we or our partners may not be able to successfully compete in therapeutic development. We will likely face substantial competition from multiple sources, including large and specialty pharmaceutical and biotechnology companies, hospitals and clinics, academic research institutions and governmental agencies and public and private research institutions, some of which have more advanced product candidates. We anticipate that we will continue to face increasing competition as new therapies and combinations thereof, and related data, emerge.

To compete successfully, our partners must demonstrate that the relative cost, method of administration, safety, tolerability or efficacy of the related product candidates provides a better alternative to existing and future therapies and, we must do the same with respect to any future internally developed product candidates. Our commercial opportunity and likelihood of success will be reduced or eliminated if these product candidates are not ultimately demonstrated to be safer, more effective, more conveniently administered, or less expensive than the then current standard of care. Furthermore, even if these product candidates demonstrate meaningful improvements in these attributes, acceptance of our products may be inhibited by the reluctance of physicians to switch from existing therapies to our products, or if physicians choose to reserve our products for use in limited circumstances.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying base prospectus, including the documents incorporated by reference herein and therein, contains forward- looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Exchange Act. All statements contained or incorporated by reference in this prospectus supplement or the accompanying base prospectus, other than statements of historical fact, including, without limitation, statements regarding our strategy, future operations, future operating expenses, future financial position, future revenue, projected costs, prospects, plans, intentions, expectations, goals and objectives and our anticipated use of proceeds from this offering are forward-looking statements. The words "anticipates," "approximately," "believes," "could," "designed," "estimates," "expects," "goal," "intends," "may," "objective," "plans," "potential," "predicts," "projects," "pursuing," "seeks," "should, ' "will," "would" and similar expressions (including the negatives thereof) are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The forward-looking statements contained or incorporated by reference in this prospectus supplement or the accompanying base prospectus include, but are not limited to, statements about:

- our expectations regarding our further development of, successful application of, and the rate and degree of market acceptance of, our Integrated Drug Creation platform, 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 drug creation 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 commercial license agreements for our existing Active Programs with those partners who do not currently have 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 pipeline efforts;
- the success, cost and timing of our development activities, preclinical studies and clinical trials;
- the translation of our preclinical results and data into future clinical trials in humans;
- the timing of any manufacturing runs for materials to be used in patient trials;
- the number, size and design of our planned clinical trials, and what regulatory authorities may require to obtain marketing approval;
- the timing or likelihood of regulatory filings and approvals;
- the effects of the organizational realignment that we announced in September 2023;
- our expectations regarding our current and future partners' continued development of, and ability to commercialize, biologic drugs generated utilizing our platform;
- our plans and expectations regarding our internal discovery and development of programs using 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, cash equivalents and short-term investments;

- our calculations and estimates related to the valuation of our intangible assets;
- our ability to establish, maintain or expand collaborations, partnerships or strategic relationships;
- our ability to provide our partners with a full biologic drug creation solution from target to Investigational New Drug application, or 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, cash equivalents and short-term investments;
- our financial performance and that of companies in our industry and the financial markets generally;
- 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);
- global economic conditions, including market volatility, including as a result of acts of war and civil and political unrest, such as Hamas' attack against Israel and the ensuing war and the ongoing conflict in Ukraine, and our expectations about market trends and effects from inflation; and
- our anticipated use of net proceeds from this offering and how long the net proceeds, plus existing cash and cash equivalents and restricted cash and short-term investments, will fund our operations based on our current operating plans.

We may not actually achieve the plans, intentions, expectations or objectives disclosed in our forward- looking statements and the assumptions underlying our forward-looking statements may prove incorrect. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Therefore, you should not place undue reliance on our forward-looking statements, and you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. Actual results or events could differ materially from the plans, intentions, expectations and objectives disclosed in the forward-looking statements that we make. Important factors that we believe could cause actual results or events to differ materially from our forward-looking statements include, but are not limited to, the risks more fully discussed in the "Risk Factors" section in this prospectus supplement and the accompanying base prospectus, and the risk factors and cautionary statements described in other documents that we file from time to time with the SEC, specifically, those listed under "Item 1A. Risk Factors" and elsewhere in our most recent Annual Report on Form 10-K for the year ended December 31, 2022 and our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, as updated by our subsequent annual, quarterly and other reports and documents that are incorporated by reference herein. Our forward-looking statements contained or incorporated by reference in this prospectus supplement or the accompanying base prospectus are based on current expectations as of the date hereof and we do not assume any obligation to update any forward-looking statements on account of new information, future events or otherwise, except as required by law.

USE OF PROCEEDS

We estimate that the net proceeds to us in this offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares), after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering to fund the development of our internal asset programs, continued investment in our Integrated Drug Creation platform, including related AI and wet-lab technologies, and for working capital and other general corporate purposes. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any such material investments or acquisitions as of the date of this prospectus supplement. These intentions are subject to change. Accordingly, we will have broad discretion over the uses of the net proceeds from this offering.

Pending our use of the proceeds as described above, we intend to invest the proceeds in short term, interest bearing, investment grade securities in a manner that permits us to maintain our exemption from registration under the Investment Company Act of 1940, as amended.

Based on our current plans, we believe our existing cash and cash equivalents and restricted cash and short-term investments, together with the net proceeds from this offering, will be sufficient to fund our operations into . We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect.

DILUTION

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

Our net tangible book value as of September 30, 2023 was $147.3 million, or $1.59 per outstanding share of common stock as of that date. Net tangible book value represents our total tangible assets less our total liabilities. As adjusted net tangible book value per share of common stock is calculated after giving effect to the issuance of common stock by us in this offering. Dilution is determined by subtracting as adjusted net tangible book value per share of common stock from the amount per share paid by purchasers of common stock in this offering.

Without taking into account any other changes in net tangible book value after September 30, 2023, other than to give effect to the issuance and sale by us of shares of common stock in this offering at a price per share of $, after deducting estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2023 would have been $, or $ per outstanding share of common stock. This represents an immediate increase in net tangible book value of $ per share of common stock to the existing stockholders and an immediate dilution in net tangible book value of $ per share of common stock to new investors purchasing shares of common stock in this offering. The following table illustrates this dilution:

	Per Share
Public offering price per share	$
Net tangible book value per share as of September 30, 2023	$ 1.59
Increase in net tangible book value per share attributable to new investors	$
As adjusted net tangible book value per share after this offering	$
Dilution per share to investors participating in this offering	$

If the underwriters exercise in full their option to purchase additional shares of our common stock at the public offering price, our as adjusted net tangible book value per share would be approximately $ per share, and the dilution in net tangible book value per share to new investors purchasing shares of common stock in this offering would be $ per share.

The above discussion and tables are based on 92,936,980 shares of common stock outstanding as of September 30, 2023, and excludes, as of September 30, 2023:

- 18,193,051 shares of our common stock issuable upon the exercise of options with a weighted-average exercise price of approximately $3.18 per share as of September 30, 2023;
- 263,796 shares of our common stock issuable upon the vesting and settlement of outstanding restricted stock unit awards as of September 30, 2023;
- 6,077,827 shares of our common stock reserved for issuance under our 2021 Plan as of September 30, 2023, as well as (i) an automatic increase of 4,654,384 shares of our common stock reserved for issuance under the 2021 Plan that became effective on January 1, 2024 in accordance with the terms of the 2021 Plan and (ii) 1,591,223 shares of our common stock underlying stock awards granted under the 2021 Plan and 2020 Plan that expired or were repurchased, forfeited, cancelled or withheld subsequent to September 30, 2023 through the date of this prospectus supplement;
- 1,626,658 shares of our common stock reserved for issuance under our 2021 ESPP as of September 30, 2023, as well as an automatic increase of 930,877 shares of our common stock reserved for issuance under the 2021 ESPP that became effective on January 1, 2024 in accordance with the terms of the 2021 ESPP; and

- 2,500,000 shares of common stock reserved for future issuance under our Inducement Plan, which became effective as of January 1, 2024.

Unless otherwise indicated, all information in this prospectus supplement assumes that the underwriters of this offering do not exercise their option to purchase up to an additional shares of our common stock.

To the extent that outstanding options are exercised or restricted stock units vest, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities may result in further dilution to our stockholders.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons subject to the alternative minimum tax;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- brokers, dealers or traders in securities;
- persons who have elected to mark securities to market;
- "controlled foreign corporations," "passive foreign investment companies" and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and all substantial decisions of which are subject to the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

If we make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or other taxable disposition."

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation for U.S. federal income tax purposes also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or other taxable disposition

Subject to the discussion below regarding backup withholding and Foreign Account Tax Compliance Act, or FATCA, a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation for U.S. federal income tax purposes also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our common stock, which gain may be offset by certain U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Information reporting and backup withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid

IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional withholding tax on payments made to foreign accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, and (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While, beginning on January 1, 2019, withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our common stock, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. Morgan Stanley & Co. LLC and Cowen and Company, LLC are acting as joint book running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Cowen and Company, LLC	
Total	

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares.

The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of $ per share. After the public offering of the shares, the offering price and the other selling terms may be changed by the underwriters. Sales of any shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus supplement to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $ per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per Share	$	$
Total	**$**	**$**

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $. We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to $25,000.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Securities and Exchange Commission a registration statement under the Securities Act of 1933, or the Securities Act, relating to, any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, loan, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of Morgan Stanley & Co. LLC and Cowen and Company, LLC for a period of 90 days after the date of this prospectus, other than the shares of our common stock to be sold in this offering and subject to certain other exceptions.

Our directors and executive officers (such persons, the lock-up parties) have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 90 days after the date of this prospectus (such period, the restricted period), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of Morgan Stanley & Co. LLC and Cowen and Company, LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such lock-up parties in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the lock-up securities)), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for, or exercise any right with respect to, the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Such persons or entities have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by any person or entity, whether or not a signatory to such agreement) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise. The lock-up party further confirms that it has furnished Morgan

Stanley & Co. LLC and Cowen and Company, LLC with the details of any transaction that the lock-up party, or any of its affiliates, is a party to as of the date of this prospectus, which transaction would have been restricted by the lock-up agreement if it had been entered into by the lock-up party during the restricted period.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to certain transactions, including transfers of lock-up securities: (i) as bona fide gifts, or for bona fide estate planning purposes, (ii) by will, other testamentary document or intestacy, (iii) to any trust or other entity for the direct or indirect benefit of the lock-up party or any immediate family member, or if the lock-up party is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) to a corporation, partnership, limited liability company, trust or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests or are under common control with the undersigned, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), and in each such case, subject to the same conditions (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates (including, for the avoidance of doubt, where the lock-up party is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership) or (B) as part of a distribution to members, partners or equity holders of the lock-up party, (vii) by operation of law, (viii) to us from an employee, independent contractor or other service provider upon death, disability or termination of employment or cessation of services, in each case, of such employee, independent contractor or service provider, (ix) as part of a sale of lock-up securities acquired from the underwriters in this offering or in open market transactions after the date of this prospectus, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of our common stock (including, in each case, by way of “net” or “cashless” exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of our common stock received upon such exercise, vesting or settlement shall be subject to the terms of the lock-up agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the lock-up party pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in this prospectus, or (xi) pursuant to a bona fide third party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all stockholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph.

Subject to certain limitations, the restrictions described above do not prevent any person from: (1) exercising an option or other equity award to purchase shares of common stock or exercise warrants, provided that the shares of common stock issued upon such exercise shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement; (2) establishing or amending a trading plan that complies with Rule 10b5-1 under Exchange Act so long as there are no sales of common stock during the lock-up period; or (3) selling common stock pursuant to the terms of the underwriting agreement.

Morgan Stanley & Co. LLC and Cowen and Company, LLC, in their sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “ABSI”.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be “covered” shorts, which are short positions in an amount not greater than the underwriters’ option to purchase additional shares referred to above, or may be “naked” shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the Nasdaq Global Select Market, in the over the counter market or otherwise.

Other Relationships

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling Restrictions

General

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where

action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

European Economic Area

In relation to each Member State of the European Economic Area, each a Member State, no shares of common stock have been offered or will be offered pursuant to the offering to the public in that Member State prior to the publication of a prospectus supplement in relation to the shares of common stock which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation, except that offers of common stock shares may be made to the public in that Member State at any time under the following exemptions under the Prospectus Regulation:

a. to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

b. to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters; or

c. in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares of common stock shall require us or any underwriter to publish a prospectus supplement pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus supplement pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and us that it is a “qualified investor” within the meaning of Article 2(e) of the Prospectus Regulation. In the case of any shares of common stock being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares of common stock acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares of common stock to the public other than their offer or resale in a Member State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer to the public” in relation to shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

United Kingdom

No shares of common stock have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus supplement in relation to the common stock which has been approved by the Financial Conduct Authority, except that the common stock may be offered to the public in the United Kingdom at any time:

a. to any legal entity which is a qualified investor as defined under Article 2 of the U.K. Prospectus Regulation;

b. to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the U.K. Prospectus Regulation), subject to obtaining the prior consent of the representatives of the underwriters for any such offer; or

c. in any other circumstances falling within Section 86 of the FSMA,

provided that no such offer of the common stock shall require our company or any underwriter to publish a prospectus supplement pursuant to Section 85 of the FSMA or supplement a prospectus supplement pursuant to Article 23 of the U.K. Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the common stock in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of common stock and the expression "U.K. Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order, or, all such persons together being referred to as relevant persons, or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus supplement requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus supplement within the meaning of, and has been prepared without regard to the disclosure standards for issuing prospectus supplements under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectus supplements under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or the SFO, of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong, or the CO, or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made thereunder.

Singapore

Each underwriter has acknowledged that this prospectus supplement and the accompanying prospectus has not been registered as a prospectus supplement with the Monetary Authority of Singapore. Accordingly, each underwriter has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus supplement and the accompanying prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

a. to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time, or the SFA) pursuant to Section 274 of the SFA;

b. to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or

c. otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a. a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; o;

b. a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 276(4)(i)(B) of the SFA;
(ii) where no consideration is or will be given for the transfer;
(iii) where the transfer is by operation of law;
(iv) as specified in Section 276(7) of the SFA; or
(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares, we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Notice to Prospective Investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any "resident" of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

LEGAL MATTERS

The validity of the shares of common stock being offered hereby will be passed upon for us by Goodwin Procter LLP, San Francisco, California. Certain legal matters will be passed upon for the underwriters by Latham & Watkins LLP, San Francisco, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2022, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement and the accompanying base prospectus are part of a registration statement that we have filed with the SEC. Certain information in the registration statement has been omitted from this prospectus supplement and the accompanying base prospectus in accordance with the rules of the SEC. We are subject to the information requirements of the Exchange Act and, in accordance therewith, file annual, quarterly and special reports, proxy statements and other information with the SEC. These documents may be accessed without charge through the SEC's electronic data gathering, analysis and retrieval system, or EDGAR, via electronic means, including the SEC's home page on the Internet (*www.sec.gov*). You may also inspect the registration statement, this prospectus supplement and the accompanying base prospectus on this website.

Those filings are also available to the public on, or accessible through, our website at *www.absci.com*. Information contained on our website is not incorporated by reference into this prospectus supplement or the accompanying base prospectus, and, except for the documents incorporated by reference as noted below, you should not consider any information on, or that can be accessed from, our website as part of this prospectus supplement or the registration statement of which this prospectus supplement and the accompanying base prospectus are a part.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file after the date hereof with the SEC prior to the termination of this offering that is incorporated by reference herein will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below, which we have already filed with the SEC, and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any future report or document that is not deemed filed under such provisions, after the date of this prospectus supplement and prior to the termination of this offering:

- our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 30, 2023 as amended by Amendment No. 1 on Form 10-K/A filed on May 30, 2023;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2022 from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 28, 2023;
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2023, filed with the SEC on May 15, 2023, for the quarter ended June 30, 2023, filed with the SEC on August 14, 2023, and for the quarter ended September 30, 2023, filed with the SEC on November 14, 2023;
- our Current Reports on Form 8-K filed with the SEC on June 6, 2023, June 16, 2023, August 14, 2023 (with respect to Item 5.02 only), August 17, 2023, September 5, 2023, November 14, 2023 (with respect to Item 8.01 only), December 4, 2023, December 7, 2023, December 20, 2023 and January 8, 2024 (in each case, other than information furnished rather than filed); and
- the description of our common stock contained in our Registration Statement on Form 8-A, dated July 21, 2021, and as set forth by the description of our common stock set forth in Exhibit 4.3 to our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 22, 2022, including any other amendments or reports filed for the purpose of updating such description.

Pursuant to Rule 412 under the Securities Act, any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus supplement or the accompanying base prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus supplement is delivered, a copy of the documents incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus supplement, at no cost by writing us at the following address: Absci Corporation, 18105 SE Mill Plain Blvd, Vancouver, Washington, 98683. Our website is located at *www.absci.com*. The reference to our website is intended to be an inactive textual reference and, except for the documents incorporated by reference as noted above, the information on, or accessible through, our website is not intended to be part of this prospectus supplement.

You should rely only on the information incorporated by reference or provided in this prospectus supplement. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus supplement or in the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus supplement or those documents.

This prospectus supplement and the accompanying base prospectus are part of a registration statement we filed with the SEC. We have incorporated exhibits into such registration statement. You should read the exhibits carefully for provisions that may be important to you.

Table of Contents

PROSPECTUS

$250,000,000

Common Stock
Preferred Stock
Debt Securities
Warrants
Units

From time to time, we may offer and sell up to $250,000,000 in aggregate principal amount of our common stock, preferred stock, debt securities, warrants or units, in each case in one or more issuances and at prices and on terms that we will determine at the time of the offering.

This prospectus describes the general manner in which any of these securities may be offered using this prospectus. We will specify in an accompanying prospectus supplement the terms of the securities offered and other details regarding the offering thereof. The supplement may also add, update or change information contained in this prospectus with respect to that offering.

Our common stock is listed on The Nasdaq Global Select Market under the symbol "ABSI". On August 23, 2022, the closing price of our common stock, as reported on The Nasdaq Global Select Market, was $4.25 per share.

Investing in our securities involves risks. You should review carefully the risks and uncertainties described under the heading "*Risk Factors*" on page 11 of this prospectus and under any similar heading in the documents that are incorporated by reference into this prospectus, as well as "*Special Note Regarding Forward-Looking Statements*" on page 5 of this prospectus. You should read the entire prospectus and any applicable prospectus supplement carefully before you make your investment decision.

The securities covered by this prospectus may be sold directly by us to investors, through agents designated by us from time to time or through underwriters or dealers at prices and on terms to be determined at the time of offering. We will include in an applicable prospectus supplement the names of any underwriters or agents and any applicable commissions or discounts. Additional information on the methods of sale appears under "*Plan of Distribution*" in this prospectus. We will also describe in an applicable prospectus supplement the way(s) in which we expect to use the net proceeds we receive from any sale.

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

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

The date of this prospectus is September 2, 2022.

Table of Contents

You should rely only on the information contained or incorporated by reference in this prospectus and in an applicable prospectus supplement to this prospectus. We have not authorized any other person to provide you with different or additional information. If anyone provides you with different, additional or inconsistent information, you should not rely on it. We do not take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities or soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any applicable prospectus supplement or any free writing prospectus we authorize to be delivered to you is accurate only as of the date of that document or any other date set forth in that document. Additionally, any information we have incorporated by reference in this prospectus or in any applicable prospectus supplement is accurate only as of the date of the document incorporated by reference or other date set forth in that document, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any sale of securities. Our business, financial condition, results of operations, cash flow and prospects may have changed since that date.

This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

When used in this prospectus, the terms "the Company," "Absci," "we," "our" and "us" refer to Absci Corporation, a Delaware corporation, and its subsidiaries, unless otherwise specified or the context otherwise requires.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we have filed with the Securities and Exchange Commission, or the SEC, using a "shelf" registration process.

Under this process, we may sell the securities described in this prospectus in one or more offerings for an aggregate offering amount of up to $250,000,000. This prospectus describes the general manner in which we may offer the securities described in this prospectus. Each time we sell securities pursuant to this registration statement, we will provide a prospectus supplement that will contain specific information about the offering and the securities offered, and may also add, update or change information contained in this prospectus. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. If there is any inconsistency between information in this prospectus and any accompanying prospectus supplement or free writing prospectus, you should rely on the information in the most recent applicable prospectus supplement or free writing prospectus and documents incorporated by reference herein and therein. This prospectus may not be used to offer to sell, solicit an offer to buy or consummate a sale of our securities unless it is accompanied by a prospectus supplement.

This prospectus, together with any accompanying prospectus supplement, contains important information you should know before investing in our securities, including important information about us and the securities being offered. You should carefully read both documents, as well as the additional information contained in the documents described under "*Where You Can Find More Information"* and "*Incorporation of Certain Information by Reference*" in both this prospectus and the applicable prospectus supplement, and in particular the annual, quarterly and current reports and other documents we file with the SEC. Neither this prospectus nor any accompanying prospectus supplement is an offer to sell these securities or is soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus and any prospectus supplement are part of a registration statement on Form S-3 that we filed with the SEC. This prospectus and the applicable prospectus supplement do not contain all of the information set forth in the registration statement and its exhibits and schedules in accordance with SEC rules and regulations. For further information with respect to us and the securities being offered by this prospectus and the applicable prospectus supplement, you should read the registration statement, including its exhibits and schedules. Statements contained in this prospectus and the applicable prospectus supplement, including documents that we have incorporated by reference, as to the contents of any contract or other document referred to are not necessarily complete, and, with respect to any contract or other document filed as an exhibit to the registration statement or any other such document, each such statement is qualified in all respects by reference to the corresponding exhibit. You should review the complete contract or other document to evaluate these statements. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database or our investor relations website.

We file annual, quarterly and current reports, proxy statements and other documents with the SEC under the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including us, that file electronically with the SEC. You may obtain documents that we file with the SEC at *www.sec.gov*.

We also make these documents available on our investor relations website at *investors.absci.com*. Our investor relations website, corporate website at *www.absci.com*, and the information contained or connected to these websites is not incorporated by reference in this prospectus or any prospectus supplement, and you should not consider it part of this prospectus or any prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules permit us to incorporate information by reference in this prospectus and the applicable prospectus supplement. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and the applicable prospectus supplement, except for information superseded by information contained in this prospectus or the applicable prospectus supplement itself or in any subsequently filed incorporated document. This prospectus and any applicable prospectus supplement incorporate by reference the documents set forth below that we have previously filed with the SEC, other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about us and our business and financial condition.

- Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 22, 2022;
- Quarterly Reports on Form 10-Q for the period ended March 31, 2022, filed with the SEC on May 11, 2022 and the period ended June 30, 2022, filed with the SEC on August 11, 2022;
- Current Reports on Form 8-K filed with the SEC on January 7, 2022, January 10, 2022, March 21, 2022, March 22, 2022 (Item 8.01 only), June 10, 2022 and July 14, 2022;
- Definitive Proxy Statement on Schedule 14A filed with the SEC on April 26, 2022, to the extent incorporated by reference into Part III of the Annual Report on Form 10-K for the fiscal year ended December 31, 2021; and
- The description of our Common Stock contained in our Registration Statement on Form 8-A, dated July 21, 2021, and as set forth by the description of the Registrant's common stock set forth in Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 22, 2022, including any other amendments or reports filed for the purpose of updating such description.

All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, and any previously filed documents. All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and prior to the termination of the offering of any of the securities covered under this prospectus shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, the applicable prospectus supplement and any previously filed documents.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference in this prospectus or the applicable prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus and such applicable prospectus supplement to the extent that a statement contained in this prospectus or such applicable prospectus supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus and such applicable prospectus supplement, modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or such applicable prospectus supplement.

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus and the applicable prospectus supplement.

Prospective investors may obtain documents incorporated by reference in this prospectus and the applicable prospectus supplement at no cost by requesting them in writing or by telephone from us at our executive offices at:

Absci Corporation
18105 SE Mill Plain Blvd
Vancouver, WA 98683
(360) 949-1041

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, together with any accompanying prospectus supplement, includes and incorporates by reference "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and releases issued by the SEC and within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. 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. You can identify these forward-looking statements 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 the markets for our services and technologies, including the growth rate of the biologics and next-generation biologics markets;
- our ability to attract new partners and enter into technology development agreements that contain milestone and royalty obligations in favor of us;
- 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;
- 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 any revenue;
- our estimates of the sufficiency of our cash and cash equivalents;
- 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, including the proceeds from our initial public offering;
- our financial performance and that of companies in our industry and the financial markets generally;
- the volatility of the trading price of our common stock;

- our competitive position and the development of and projections relating to our competitors or our industry;
- the potential impact of the ongoing COVID-19 pandemic, including supply chain issues arising from the pandemic and the emergence of new variants and sub variants of the virus on our business or operations;
- the impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act; and
- our expectations about market trends and effects from inflation.

These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these 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 prospectus or any applicable prospectus supplement. 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.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus or any applicable prospectus supplement or free writing prospectus, 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.

In evaluating such forward-looking statements, you should specifically consider various factors that may cause actual results to differ materially from current expectations, including the risks outlined under the heading "*Risk Factors*" contained in this prospectus and any related prospectus supplement or free writing prospectus, and in any other documents incorporated herein or therein (including in our most recent annual report on Form 10-K, subsequent quarterly reports on Form 10-Q and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act). Any forward-looking statement in this prospectus or any related prospectus supplement or free writing prospectus reflects our current view with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, industry and future growth. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Market and Industry Data and Estimates

This prospectus, together with any accompanying prospectus supplement and the information incorporated herein or therein by reference, also contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates, including data regarding the estimated size of those markets, their projected growth rates and the incidence of certain medical conditions. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained these industry, business, market and other data from reports, research

surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources. We have not independently verified the accuracy and completeness of such data, and in some cases, we do not expressly refer to the sources from which these data are derived.

Trademarks

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

ABOUT THE COMPANY

The following highlights information about the Registrant and our business contained elsewhere or incorporated by reference in this prospectus. It is not complete and does not contain all of the information that you should consider before investing in any of our securities. You should carefully read this prospectus together with the more detailed information incorporated by reference in this prospectus.

Overview

We are a drug and target discovery company harnessing deep learning and synthetic biology to expand the therapeutic potential of proteins. We built our Integrated Drug Creation Platform to identify novel drug targets, discover optimal biotherapeutic candidates, and generate the cell lines to manufacture them in a single efficient process. We believe our approach delivers disruptive efficiency, but more importantly enables our partners to create novel and human/AI-designed new-to-nature biologics (next-generation biologics).

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 cells, each expressing drug variants, for target binding affinity 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. In addition, with our "Totient Target" technology, we use 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-antigen recognition elements expand our AI models' training sets and may improve predictive capabilities for future discovery campaigns.

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

Our goal is to become the partner of choice for biologic drug discovery and cell line development. As a technology development company, we generate biologic drug candidates and production cell lines for our partners to develop. Our business model is to establish partnerships with biopharmaceutical companies and use our platform for rapid creation of next-generation biologic drug candidates and production cell lines. We classify our applications into two key categories: Discovery and Cell Line Development, or CLD. We define "Discovery" as any projects for which we are evaluating variants of the protein-of-interest, which includes generation of the production cell line, and we define CLD as a program for which the production cell line alone is the goal of the partnership. Our partners are responsible for preclinical and clinical testing of biologics generated using our platform. We structure our partnerships to provide us with the opportunity to participate in the future success of the biologics generated utilizing our platform. Such partnerships may include milestone payments and/or royalties on sales by our partners of any approved products. We aim to assemble economic interests in a diversified portfolio of partners' next-generation biologic drug candidates across multiple indications.

Corporate History and Information

We were formed as AbSci, LLC in August 2011 as a limited liability company under the Oregon Limited Liability Act and subsequently converted into a Delaware limited liability company under the laws of the State of

Delaware in April 2016. In October 2020, we completed a reorganization whereby we converted from a Delaware limited liability company to a Delaware corporation under the name Absci Corporation. We have three direct wholly-owned subsidiaries, AbSci, LLC, De Novo Design, LLC and Target Discovery Merger Sub II, LLC, and two indirect wholly-owned subsidiaries, Totient UK Ltd. and Totient d.o.o. Beograd.

Our principal executive office is located at 18105 SE Mill Plain Blvd, Vancouver, WA 98683, and our telephone number is (360) 949-1041. Our website address is *www.absci.com*. Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on any such information in making your decision whether to purchase our securities.

For additional information about our Company, please refer to other documents we have filed with the SEC and that are incorporated by reference into this prospectus, as listed under the heading "*Incorporation of Certain Information by Reference*."

Implications of Being an Emerging Growth Company

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

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

We may take advantage of these exemptions until such time that we are no longer an emerging growth company. We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have total annual gross revenues of $1.07 billion or more; (ii) December 31, 2026; (iii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the SEC, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

We have elected to utilize the exemption for the delayed adoption of certain accounting standards, and, therefore, we will adopt new or revised accounting standards at the time private companies adopt the new or revised accounting standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. We may choose to early adopt any new or revised accounting standards whenever such early adoption is permitted for private companies. As a result of this election, the information that we provide in this prospectus or any applicable prospectus supplement or free writing prospectus may be different than the information you may receive from other public companies in which you hold equity interests.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We

may continue to be a smaller reporting company after any offering under this prospectus and any accompanying prospectus supplement if either (i) the market value of our shares held by non-affiliates is less than $250 million as measured on the last business day of our second fiscal quarter or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by non-affiliates is less than $700 million as measured on the last business day of our second fiscal quarter. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and have reduced disclosure obligations regarding executive compensation. Further, if we are a smaller reporting company with less than $100 million in annual revenue, we would not be required to obtain an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

RISK FACTORS

Investing in our securities involves certain risks. Before you invest in any of our common stock, preferred stock, debt securities, warrants or units, in addition to the other information included in, or incorporated by reference into, this prospectus, you should carefully consider the risk factors contained in Item 1A under the caption "*Risk Factors*" and elsewhere in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which is incorporated into this prospectus by reference, as updated by our annual or quarterly reports for subsequent fiscal years or fiscal quarters that we file with the SEC and that are so incorporated. See "*Where You Can Find More Information*" for information about how to obtain a copy of these documents. You should also carefully consider the risks and other information that may be contained in, or incorporated by reference into, any prospectus supplement relating to specific offerings of securities.

USE OF PROCEEDS

Unless otherwise described in the applicable prospectus supplement, we intend to use the net proceeds from the sale of any securities described in this prospectus for general corporate purposes. General corporate purposes may include research and development costs, including costs to expand the capabilities of our Integrated Drug Creation platform, potential strategic acquisitions or licensing of complementary businesses, services or technologies, expansion of our technology infrastructure and capabilities, working capital, capital expenditures and other general corporate purposes. We may temporarily invest the net proceeds in a variety of capital preservation instruments, including investment grade, interest bearing instruments and U.S. government securities, until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

We may set forth additional information concerning our expected use of net proceeds from sales of securities in the applicable prospectus supplement relating to the specific offering. Pending use of net proceeds as described above, we may temporarily invest the net proceeds in a variety of capital preservation instruments, including short- term, interest-bearing obligations, investment grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government, or may hold such proceeds as cash, until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Any future determination to declare dividends will be subject to the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, financial condition, future prospects and any other factors deemed relevant by our board of directors. Investors should not purchase our common stock with the expectation of receiving cash dividends.

GENERAL DESCRIPTION OF SECURITIES

We may offer shares of common or preferred stock, various series of senior or subordinated debt securities, warrants, or units consisting of combinations of the foregoing, in each case from time to time under this prospectus, together with the applicable prospectus supplement, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. At the time we offer a particular type or series of securities, we will provide an applicable prospectus supplement describing the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- voting or other rights;
- rates and times of payment of interest, dividends or other payments;
- liquidation preference;
- original issue discount;
- maturity;
- ranking;
- restrictive covenants;
- redemption, conversion, exercise, exchange, settlement or sinking fund terms, including prices or rates, and any provisions for changes to or adjustments in such prices or rates and in the securities or other property receivable upon conversion, exercise, exchange or settlement;
- any securities exchange or market listing arrangements; and
- important U.S. federal income tax considerations.

This prospectus may not be used to offer or sell securities unless accompanied by an applicable prospectus supplement. The applicable prospectus supplement may add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. You should read the applicable prospectus supplement related to any securities being offered.

We may sell the securities directly to or through underwriters, dealers or agents. We and our underwriters, dealers or agents reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement (i) the names of the underwriters or agents and applicable fees, discounts and commissions to be paid to them, (ii) details regarding over-allotment options, if any, and (iii) net proceeds to us.

The following descriptions are not complete and may not contain all the information you should consider before investing in any securities we may offer hereunder; they are summarized from, and qualified by reference to, our amended and restated certificate of incorporation, amended and restated bylaws and the other documents referred to in the descriptions, all of which are or will be publicly filed with the SEC, as applicable. See "*Where You Can Find More Information*."

DESCRIPTION OF CAPITAL STOCK

The following summary description of our common stock and preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our capital stock. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus forms a part, and by applicable law. The terms of our common stock and preferred stock may also be affected by Delaware law.

Authorized Capital Stock

We have authorized capital stock consisting of 500,000,000 shares of common stock, par value $0.0001 per share, and 10,000,000 shares of preferred stock, par value $0.0001 per share, all of which are currently undesignated. Except as otherwise provided in the certificate of designation of any series of preferred stock we may issue, the number of authorized shares of common stock or preferred stock may from time to time be increased or decreased (but not below the number of shares of such class outstanding) by the affirmative vote of the holders of a majority in voting power of the outstanding shares of our capital stock.

As of June 30, 2022, we had 92,780,988 shares of common stock issued and outstanding, and no shares of preferred stock issued and outstanding. Unless stated otherwise, the following discussion summarizes the term and provisions of our amended and restated certificate of incorporation and our amended and restated bylaws.

Common Stock

The holders of our common stock are entitled to one vote for each share of common stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Except as described under “Anti-Takeover Effects of Delaware Law and Provisions of Our Amended and Restated Certificate of Incorporation and Bylaws” below, a majority vote of the holders of common stock is generally required to take action under our amended and restated certificate of incorporation and bylaws. Holders of our common stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any preferred stock then outstanding. Upon our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any preferred stock then outstanding. Holders of our common stock have no preemptive, subscription, redemption or conversion rights and no sinking fund provisions are applicable to our common stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Our board of directors has the authority, without action by the stockholders, to designate and issue up to an aggregate of 10,000,000 shares of preferred stock in one or more series. Our board of directors can designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of restricting dividends on our common stock, diluting the voting power of our common stock, impairing the liquidation rights of our common stock, or delaying, deferring or preventing a change in control of our Company, which might harm the market price of our common stock. See also “Anti-Takeover Effects of Delaware Law and Provisions of Our Amended and Restated Certificate of Incorporation and Bylaws” below. Our board of directors will make any determination

to issue such shares based on its judgment as to our Company's best interests and the best interests of our stockholders. No shares of preferred stock are currently outstanding, and we have no current plans to issue any shares of preferred stock.

Registration Rights

Pursuant to the terms of our investors' rights agreement, dated as of October 19, 2020, with certain of our stockholders, or the investors' rights agreement, certain of our stockholders are entitled to rights with respect to the registration of their shares (which we refer to herein as "registrable securities") under the Securities Act of 1933, as amended. The investors' rights agreement includes demand registration rights, short-form registration rights and piggyback registration rights.

All fees, costs and expenses incurred in connection with registrations under the investors' rights agreement will be borne by us, and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

Demand Registration Rights

The holders of our registrable securities are entitled to demand registration rights. Under the terms of our investors' rights agreement, we will be required, upon the request of holders of at least a majority of our outstanding registrable securities, to file a registration statement and use commercially reasonable efforts to effect the registration of these shares for public resale. We are required to effect up to two registrations pursuant to this provision of the investors' rights agreement.

Short-Form Registration Rights

The holders of our registrable securities are also entitled to short form registration rights. Pursuant to our investors' rights agreement, if we are eligible to file a registration statement on Form S-3, upon the request of holders of at least 20% of our outstanding registrable securities to sell registrable securities with an anticipated aggregate offering amount of at least $5.0 million net of certain expenses related to the offering, we will be required to use our commercially reasonable efforts to effect a registration of such shares. We are required to effect up to two registrations in any twelve-month period pursuant to this provision of the investors' rights agreement.

Piggyback Registration Rights

The holders of our registrable securities are entitled to piggyback registration rights. If we register any of our securities either for our own account or for the account of other security holders, the holders of our outstanding registrable securities are entitled to include their shares in the registration. Subject to certain exceptions contained in the investors' rights agreement, we and the underwriters may limit the number of shares included in the underwritten offering if the underwriters determine that marketing factors require a limitation of the number of shares to be underwritten.

Indemnification

Our investors' rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expenses of Registration

We will pay the registration expenses, subject to certain limited exceptions contained in the investors' rights agreement, of the holders of the shares registered pursuant to the demand, short form and piggyback registration rights described above, including the expenses of one counsel for the selling holders.

Expiration of Registration Rights

The registration rights granted under the investors' rights agreement will terminate upon the earlier of (i) a deemed liquidation event, as defined in our amended and restated certificate of incorporation or certain other events constituting a sale of the Company, (ii) at such time after our initial public offering when all registrable securities could be sold under Rule 144 of the Securities Act of 1933, as amended, or a similar exemption without limitation during a three-month period without registration or (iii) the fifth anniversary of our initial public offering.

Anti-Takeover Effects of Delaware Law and Provisions of Our Amended and Restated Certificate of Incorporation and Bylaws

Certain provisions of the DGCL and of our amended and restated certificate of incorporation and bylaws may have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, may discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our board of directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Delaware Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge, exchange, mortgage or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Provisions of Our Amended and Restated Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation and bylaws include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies. In accordance with our amended and restated certificate of incorporation, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of at least 75% of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No written consent of stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our amended and restated bylaws or removal of directors by our stockholder without holding a meeting of stockholders.

Meetings of stockholders. Our amended and restated bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements. Our amended and restated bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our amended and restated bylaws.

Amendment to amended and restated certificate of incorporation and bylaws. As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate

of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability and the amendment of our amended and restated certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in our amended and restated bylaws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated preferred stock. Our amended and restated certificate of incorporation provides for authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult, or to discourage, an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors' broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Exclusive forum. Our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims for: (i) any derivative action or proceeding brought on behalf of our Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to the Company or our stockholders, (iii) any action asserting a claim against our Company arising pursuant to any provision of the DGCL or amended and restated certificate of incorporation or bylaws, (iv) any action to interpret, apply, enforce, or determine the validity of our amended and restated certificate of incorporation or bylaws, or (v) any action asserting a claim against our Company governed by the internal affairs doctrine. In addition, unless we consent in writing to the selection of an alternate forum, the U.S. federal district courts shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. The exclusive forum provisions described above will not apply to any causes of action arising under the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction. Although our amended and restated bylaws contain the choice of forum provisions described above, it is possible that a court could rule that such provisions are inapplicable for a particular claim or action or that such provisions are unenforceable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. Our transfer agent and registrar's address is 150 Royall Street, Canton, MA 02021.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "ABSI".

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of our debt securities that we may issue from time to time. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, the applicable prospectus supplement or free writing prospectus will describe the specific terms of any debt securities offered through that prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the terms we describe below. Unless the context requires otherwise, whenever we refer to the "indentures," we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term "trustee" to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability to:
  - incur additional indebtedness;
  - issue additional securities;
  - create liens;
  - pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;
  - redeem capital stock;
  - place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
  - make investments or other restricted payments;
  - sell or otherwise dispose of assets;
  - enter into sale-leaseback transactions;
  - engage in transactions with stockholders or affiliates;
  - issue or sell stock of our subsidiaries; or
  - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of $1,000 and any integral multiple thereof;

- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;
- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and

payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “Description of Debt Securities-Consolidation, Merger or Sale;”

- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under "Description of Debt Securities-General," to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or as otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement or free writing prospectus, in denominations of $1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement or free writing prospectus with respect to that series. At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement or free writing prospectus, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement or free writing prospectus, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement or free writing prospectus the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series. If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt
securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement or free writing prospectus any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking of Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement or free writing prospectus. The subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

The senior debt securities will rank equally in right of payment to all our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under "*Description of Capital Stock*," "*Description of Debt Securities"* and "*Description of Warrants*" will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

Issuance in Series

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement.

Unit Agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

Modification without Consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Modification with Consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit Agreements Will Not Be Qualified under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or

sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing Law

The unit agreements and the units will be governed by New York law.

Form, Exchange and Transfer

We will issue each unit in global-i.e., book-entry-form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the offered securities in and outside the United States (1) through underwriters or dealers, (2) directly to one or more purchasers, including to a limited number of institutional purchasers, to a single purchaser or to our affiliates and stockholders, (3) through agents or (4) through a combination of any of these methods.

If underwriters or dealers are used in the sale, the securities will be acquired by the underwriters or dealers for their own account and may be resold from time to time in one or more transactions, including:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- in "at-the-market offerings," within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- through a market maker or into an existing trading market on an exchange or otherwise;
- at prices related to those prevailing market prices; or
- at negotiated prices.

The applicable prospectus supplement will set forth the following information to the extent applicable:

- the terms of the offering;
- the names of any underwriters, dealers or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any commissions paid to agents.

Sale through Underwriters or Dealers

If any securities are offered through underwriters, the underwriters will acquire the securities for their own account and may resell them from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer and sell securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise provided in the applicable prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all of the offered securities if they purchase any of them. In connection with the sale of securities, underwriters may be deemed to have received compensation from us in the form of underwriting discounts or commissions and dealers may receive compensation from the underwriters in the form of discounts or concessions. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

In order to facilitate the offering of securities, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. Specifically, the underwriters may overallot in connection with the offering, creating a short position in the securities for their account. In addition, to cover overallotments or to stabilize the price of the shares, the underwriters may bid for, and purchase, shares in the open market.

Finally, an underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed shares in transactions to cover syndicate short positions, in stabilization transactions, or otherwise. Any of these activities may stabilize or maintain the market price of the offered securities above independent market levels. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities offered pursuant to this prospectus.

If any securities are offered through dealers, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale.

Direct Sales and Sales through Agents

We may sell the securities directly to purchasers. If the securities are sold directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities, we will describe the terms of any such sales in the applicable prospectus supplement. We may also sell the securities through agents designated from time to time. Sales may be made by means of ordinary brokers' transactions on The Nasdaq Global Select Market at market prices, in block transactions and such other transactions as agreed by us and any agent. In the applicable prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless otherwise provided in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

At-the-Market Offerings

To the extent that we make sales through one or more underwriters or agents in at-the-market offerings, we will do so pursuant to the terms of a sales agency financing agreement or other at-the-market offering arrangement between us, on one hand, and the underwriters or agents, on the other. If we engage in at-the-market sales pursuant to any such agreement, we will issue and sell our securities through one or more underwriters or agents, which may act on an agency basis or a principal basis. During the term of any such agreement, we may sell securities on a daily basis in exchange transactions or otherwise as we agree with the underwriters or agents. Any such agreement will provide that any securities sold will be sold at prices related to the then prevailing market prices for our securities. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined at this time. Pursuant to the terms of the agreement, we may agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase blocks of our common stock or other securities. The terms of any such agreement will be set forth in more detail in the applicable prospectus supplement.

Remarketing Arrangements

Offered securities may also be offered and sold, if we so indicate in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as our agents. Any remarketing firm will be identified and the terms of its agreements, if any, with us and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters of the offered securities under the Securities Act.

Delayed Delivery Contracts

If we so indicate in the applicable prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers by certain institutions to purchase securities from us pursuant to contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement will describe the conditions to those contracts and the commission payable for solicitation of those contracts.

General Information

We may have agreements with the agents, dealers, underwriters and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers or underwriters may be required to make. Agents, dealers, underwriters and remarketing firms may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

Each underwriter, dealer and agent participating in the distribution of any of the securities that are issuable in bearer form will agree that it will not offer, sell or deliver, directly or indirectly, securities in bearer form in the United States or to United States persons, other than qualifying financial institutions, during the restricted period, as defined in United States Treasury Regulations Section 1.163-5(c)(2)(i)(D)(7).

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Goodwin Procter LLP, San Francisco, California. Additional legal matters may be passed on for us, or any underwriters, dealers or agents by counsel we will name in the applicable prospectus supplement.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

Table of Contents

$75,000,000

Absci Corporation

Common Stock

PROSPECTUS SUPPLEMENT

Book-Running Managers

Morgan Stanley **TD Cowen**

, 2024