

PROSPECTUS SUPPLEMENT
(To Prospectus dated May 17, 2023)



Up to \$20,000,000

Common Stock

We have entered into a Controlled Equity OfferingSM Sales Agreement (the “Sales Agreement”) with Cantor Fitzgerald & Co. (“Cantor” or the “sales agent”), relating to shares of our common stock, par value \$0.0001 per share, offered by this prospectus supplement. In accordance with the terms of the Sales Agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$20,000,000 from time to time through Cantor, acting as our sales agent, pursuant to this prospectus supplement.

Our common stock is traded on The Nasdaq Capital Market under the symbol “SABS” and our warrants are listed on The Nasdaq Capital Market under the symbol “SABSW.” On January 22, 2024, the last reported sale price of our common stock was \$5.81 per share and the closing price of our warrants was \$0.0252 per warrant.

Sales of our common stock, if any, under this prospectus supplement may be made in sales deemed to be “at the market offerings” as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended (the “Securities Act”). Cantor is not required to sell any specific number or dollar amount of securities, but will act as sales agent using commercially reasonable efforts consistent with their normal trading and sales practices, on mutually agreed terms between Cantor and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Cantor will be entitled to compensation under the terms of the Sales Agreement at a commission rate of 3.0% of the gross sales price per share sold. In connection with the sale of the common stock on our behalf, the sales agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of the sales agent will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to the sales agent with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the “Exchange Act”). See “Plan of Distribution” beginning on page S-11 for additional information regarding compensation payable to the sales agent.

As of January 26, 2024, the aggregate market value of our outstanding common stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 was \$60,855,705.00, which is based on 6,260,875 shares of common stock held by non-affiliates as of such date and a price of \$9.72 per share, the closing price of our common stock on November 30, 2023. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on the registration statement of which this prospectus supplement is a part with a value of more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our common stock held by non-affiliates is less than \$75 million. We have not sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to, and including, the date of this prospectus supplement.

Investing in our common stock involves significant risks. You should review carefully the “Risk Factors” on page S-6 of this prospectus supplement, and in the documents incorporated by reference in this prospectus supplement and accompanying base prospectus before investing in our common stock.

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.



The date of this prospectus supplement is January 26, 2024.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time offer shares of our common stock having an aggregate offering price of up to \$20,000,000 under this prospectus supplement at prices and on terms to be determined by market conditions at the time of each such offering.

This prospectus supplement is not complete without, and may not be utilized except in connection with, the accompanying base prospectus dated May 17, 2023, and any amendments to such prospectus. This prospectus supplement provides you with specific information regarding the terms of this offering and our common stock, and also adds to and updates information contained in the accompanying base prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus. The accompanying base prospectus provides more general information, some of which does not apply to this offering of our common stock.

Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus supplement and all of the information incorporated by reference herein, as well as the additional information described under the headings “*Where You Can Find More Information*” and “*Information Incorporated by Reference*.” These documents contain important information that you should consider when making your investment decision.

To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in any document incorporated by reference in this prospectus supplement that was filed with the SEC before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreement, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

We have not, and Cantor has not, authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus supplement and in the accompanying base prospectus or in any related free writing prospectus that we authorize for use in connection with this offering and to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information appearing in this prospectus supplement, the documents incorporated by reference and the accompanying base prospectus or free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

This prospectus supplement does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful.

In this prospectus supplement, unless the context suggests otherwise, references to “SAB Biotherapeutics,” “SAB,” the “Company,” “we,” “us” and “our” refer to SAB Biotherapeutics, Inc.

PROSPECTUS SUPPLEMENT SUMMARY

This prospectus supplement summary highlights certain information about us and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This prospectus supplement summary is not complete and does not contain all of the information that you should consider before making an investment decision. For a more complete understanding of the Company, you should read and consider carefully the more detailed information included or incorporated by reference in this prospectus supplement and any applicable prospectus supplement or amendment, including the factors described under the heading "Risk Factors," beginning on page S-6 of this prospectus supplement, as well as the information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

Business Overview

We are a clinical-stage biopharmaceutical company focused on the development of proprietary fully-human immunotherapeutic antibodies, or fully-human immunoglobulins ("hIgGs"), to treat and prevent immune and autoimmune disorders with a current focus on disease modification of Type-1 Diabetes. We also have clinical stage assets for the treatment of infectious diseases that have significant mortality and morbidity in both the general population and in high-risk patients. To date, we have conducted seven clinical trials, including Phase 1, Phase 2 and Phase 3 totaling more than 700 individuals dosed with our proprietary hIgGs. We recently received Fast Track Designation ("FTD") and Breakthrough Therapy Designation ("BTD") from the Food and Drug Administration for our SAB-176 immunoglobulin targeting multiple strains of influenza based upon positive clinical data from a Phase 2a trial. These antibodies are target-specific and polyclonal, meaning they are made up of many different hIgGs that bind to multiple sites specific to an immunogen as opposed to a monoclonal antibody that binds to only a single site. Polyclonal immunoglobulins are clearly differentiated from monoclonal antibodies because they can address multi-target binding in a single therapeutic and ideally suited to address the complex mechanisms of action associated with immune and autoimmune diseases like Type-1 Diabetes and the complexities of highly mutating infectious diseases like viruses and bacteria. Our development program targets include autoimmune disorders, gastroenterological, and respiratory diseases. Using private resources and more than \$200 million of funds awarded by the U.S. Government for emerging infectious disease and medical countermeasures programs since September 2019, we have developed a novel drug development production system, which we refer to as our DiversitAb™ production system. This production system is based on the natural human immune system and has the unique capability to generate large quantities of specifically targeted, high-potency, human IgG that target multiple epitopes, antigens or binding sites without the need for producing these antibodies from convalescent plasma or human donors. We have refined, optimized, and advanced genetic engineering and antibody science to develop transchromosomal cattle (which we refer to as Tc Bovine) that produce hIgGs and the engineering of the production system that drives IgG1 production primarily. These Tc Bovine form a key component of our versatile DiversitAb™ production system, a fully scalable manufacturing technology for producing immunotherapies for multiple disease indications. Our production system represents the only technology that can produce disease-targeted, fully human IgG in large quantities without the need for human donors.

Recent Milestones

We have recently achieved multiple milestones, including:

- Received Australian approval to commence Phase 1 clinical trial of SAB-142, a potential disease-modifying treatment for type 1 diabetes.
- Completed private placement with proceeds of potentially up to \$110 million to advance development of lead drug candidate for type 1 diabetes.
- Secured Fast Track Designation and Breakthrough Therapy Designation from FDA for SAB-176 for treatment and prophylaxis of influenza virus, providing a potentially accelerated regulatory timeline for this asset. The Company plans to seek a partnership in connection with advancement of SAB-176.

- Reported positive Phase 3 data for SAB-185 for treatment of SARS-CoV-2 infection across multiple tested variants of SARs-CoV-2, including Omicron, where SAB-185 showed a statistically significant lower number of days for high-risk patients for sustained symptoms resolution over the monoclonal antibody comparator.
- Presented positive IND-enabling GLP toxicology study for SAB-142 for type 1 diabetes at FOCIS 2023.
- Since 2017, conducted clinical trials in multiple indications in more than 700 subjects and patients indicating potential of SAB produced, disease targeted immunoglobulins with no serum sickness and no neutralizing anti-drug antibodies.

Corporate Information

We were incorporated in the State of Delaware on November 12, 2020, as a special purpose acquisition company under the name Big Cypress Acquisition Corp. (“BCYP”). On January 14, 2021, BCYP completed its initial public offering. On October 22, 2021, BCYP consummated a business combination with SAB Biotherapeutics, Inc. (the “Business Combination”), which changed its name to SAB Sciences, Inc. In connection with the closing of the business combination, BCYP changed its name to SAB Biotherapeutics, Inc. and SAB Sciences, Inc. became a subsidiary of SAB Biotherapeutics, Inc.

Our principal executive offices are located at 2100 East 54th Street North Sioux Falls, South Dakota 57104, and our telephone number is 605-679-6980. Our website is located at <https://www.sab.bio>. We do not incorporate by reference into this prospectus supplement the information on, or accessible through, our website. Our common stock trades on The Nasdaq Capital Market under the symbol “SABS” and our warrants are listed on The Nasdaq Capital Market under the symbol “SABSW.”

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

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, as amended, and therefore we intend to take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation in this prospectus, our periodic reports and our proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of our common stock that is held by non-affiliates equals or exceeds \$700 million as of the end of that year’s second fiscal quarter, (ii) the last day of the fiscal year in which we have total annual gross revenue of \$1.235 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we have issued more than \$1 billion in non-convertible debt in the prior three-year period or (iv) December 31, 2026.

We are also a “smaller reporting company” as defined under the Securities Act the Exchange Act. We may continue to be a smaller reporting company so long as either (i) the market value of shares of our common stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of shares of our common stock held by non-affiliates is less than \$700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and have reduced disclosure obligations regarding executive compensation, and, similar to emerging growth companies, if we are a smaller reporting company under the requirements of (ii) above, we would not be required to obtain an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

THE OFFERING

Common stock offered by us pursuant to this prospectus supplement

Shares of our common stock having an aggregate offering price of up to \$20,000,000.

Common stock to be outstanding after this offering

Up to 12,667,834 shares, assuming sales of 3,442,340 shares of our common stock in this offering at an offering price of \$5.81 per share, which was the last reported sale price of our common stock on The Nasdaq Capital Market on January 22, 2024. The actual number of shares issued will vary depending on the sales price under this offering.

Plan of Distribution

This is an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act, that may be made from time to time on The Nasdaq Capital Market, the existing trading market for our common stock, through our sales agent, Cantor. See “Plan of Distribution” on page S-11 of this prospectus supplement.

Use of Proceeds

We currently intend to use the net proceeds, if any, from the sale of shares of our common stock to support pipeline development and for working capital and other general corporate purposes. See “Use of Proceeds” on page S-8 of this prospectus supplement.

Risk Factors

Investing in our securities involves a high degree of risk. See the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-6 of this prospectus supplement, and under similar headings in the documents incorporated by reference into this prospectus.

Common Stock Nasdaq Capital Market Symbol “SABS”

The number of shares of our common stock outstanding after this offering is based on 9,225,494 shares of our common stock outstanding as of December 31, 2023 and excludes:

- 26,036,741 shares issuable upon exercise of exercise of outstanding warrants with a weighted average exercise price of \$8.92;
- 1,009,519 shares issuable upon exercise of our issued and outstanding stock options with a weighted-average exercise price of \$15.01 per share;
- 66,887 shares issuable for restricted stock grants outstanding;
- 943,786 shares reserved for issuance, but not subject to outstanding options or restricted stock awards, under our incentive equity plan;
- 100,000 shares reserved for issuance under our employee stock purchase plan; and
- 6,704,127 shares issuable upon conversion of our Series A Preferred Stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, and the documents incorporated by reference herein, contain, or will contain, “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Forward-looking statements can be identified by words such as “intends,” “believes,” “anticipates,” “indicates,” “plans,” “expects,” “suggests,” “may,” “would,” “should,” “potential,” “designed to,” “will,” “ongoing,” “estimate,” “forecast,” “predict,” “could,” and similar references, although not all forward-looking statements contain these words. Forward-looking statements are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Risks that could cause actual results to vary from expected results expressed in our forward-looking statements include, but are not limited to:

- the success, cost and timing of our product development activities and clinical trials, including statements regarding our plans for clinical development of our product candidates, the initiation and completion of clinical trials and related preparatory work and the expected timing of the availability of results of clinical trials;
- our ability to recruit and enroll suitable patients in our clinical trials;
- the potential indications, attributes and benefits of our product candidates;
- our ability to obtain and maintain regulatory approval for our product candidates, and any related restrictions, limitations or warnings in the label of an approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to complete further development, approval and, if approved, commercialization of our product candidates;
- the period over which we anticipate our existing cash and cash equivalents will be sufficient to fund our operating expense and capital expenditure requirements;
- the potential for our business development efforts to maximize the potential value of our portfolio;
- our ability to identify, in-license or acquire additional product candidates;
- our ability to compete with other companies currently marketing or engaged in the development of treatments for the indications that we are pursuing for our product candidates;
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates and the duration of such protection;
- our ability to contract with and rely on third parties to assist in conducting our clinical trials and manufacturing our product candidates;
- our manufacturing capabilities, third-party contractor capabilities and strategy;
- our plans related to manufacturing, supply and other collaborative agreements;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance of our product candidates, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- the impact of laws, regulations, accounting standards, regulatory requirements, judicial decisions and guidance issued by authoritative bodies;
- our ability to attract and retain key scientific, medical, commercial or management personnel;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance;
- our ability to maintain our listing on The Nasdaq Capital Market;

- our ability to continue as a going concern; and
- any other factors discussed under the headings “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our most recent Annual Report on Form 10-K and in our subsequent Quarterly Reports on Form 10-Q for the quarterly periods ended subsequent to our filing of such Annual Report on Form 10-K, as well as any amendments or updates to our risk factors reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus supplement, together with other information in this prospectus supplement, the documents incorporated by reference, any prospectus supplement and any free writing prospectus that we may authorize.

Forward-looking statements speak only as of the date the statements are made. Except as required under the federal securities laws and rules and regulations of the SEC, we undertake no obligation to update or revise forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information. We caution you not to unduly rely on the forward-looking statements when evaluating the information presented herein.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making a decision to invest in our securities, in addition to carefully considering the other information contained in this prospectus supplement, in the accompanying base prospectus and incorporated by reference herein or therein, you should carefully consider the risks described under the caption “Risk Factors” contained in the accompanying base prospectus, and any related free writing prospectus, and the risks discussed under the caption “Risk Factors” contained in our most recent annual report on Form 10-K and in our most recent quarterly reports on Form 10-Q, 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 documents incorporated by reference, and any free writing prospectus that we may authorize for use in connection with a specific offering. See “Where You Can Find More Information” and “Incorporation by Reference.”

Risks Related to this Offering

You may experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

The offering price per share in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate 3,442,340 shares of our common stock are sold in this offering at an assumed offering price of \$5.81 per share, which was the last reported sale price of our common stock on The Nasdaq Capital Market on January 22, 2024, for aggregate gross proceeds of \$20,000,000, and after deducting commissions and estimated aggregate offering expenses payable by us, you would experience immediate dilution of \$1.12 per share, representing the difference between our net tangible book value per share as of September 30, 2023, on an unaudited as adjusted basis after giving effect to this offering. Because the offering price per share will vary based on the market for our common stock and our net tangible book value per share will change over the course of the offering, the actual dilution experienced by you may be more or less than this amount. See “Dilution.”

Issuances by the Company or sales by stockholders of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public markets, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amount of our common stock in the public market, the market price of our common stock could decline significantly.

Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules and Rule 144 and Rule 701 under the Securities Act.

Our management team will have broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return.

Our management team will have broad discretion in the application of the net proceeds from this offering and could spend or invest the proceeds in ways that may not yield a favorable return or enhance the value of our common stock. Accordingly, investors will need to rely on our management team’s judgment with respect to the use of these proceeds. We intend to use the proceeds, if any, from this offering in the manner described in the section titled “Use of Proceeds.” The failure by management to apply these funds effectively could negatively affect our ability to operate and grow our business. We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, and the uses will depend on how much of the maximum \$20,000,000 of shares are actually sold in this offering. In addition, the amount, allocation and timing of our actual expenditures

will depend upon numerous factors. Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

We do not anticipate paying cash dividends and, accordingly, stockholders must rely on share appreciation for any return on their investment.

We have never paid any dividends on our capital stock. We currently intend to retain our future earnings, if any, to fund the development and growth of our businesses and do not anticipate that we will declare or pay any cash dividends on our capital stock in the foreseeable future. As a result, capital appreciation, if any, of our common stock will be your sole source of gain on your investment for the foreseeable future. Investors seeking cash dividends should not invest in our common stock.

Raising additional capital may cause dilution to our stockholders, including purchasers of our common stock in this offering, restrict our operations or require us to relinquish substantial rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve fixed payment obligations or agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through partnerships, collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to delay, scale back or eliminate one or more of our clinical or discovery programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

The common stock offered hereby will be sold in “at the market offerings,” and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand and the terms of the Sales Agreement, to vary the timing, prices and number of shares sold in this offering. In addition, subject to the final determination by our board of directors or any restrictions we may place in any applicable placement notice, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$20,000,000 from time to time. Because there is no minimum offering amount required as a condition to any sales in this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize the Sales Agreement with Cantor as a source of financing.

We intend to use the net proceeds, if any, from the sale of our common stock in this offering to support pipeline development and for working capital and general corporate purposes. We have not identified the amounts we will spend on any specific purpose. The amounts actually expended for any purpose may vary significantly depending upon numerous factors, including assessments of potential market opportunities, the results of clinical trials and regulatory developments. In the event any net proceeds are not immediately applied, we may temporarily deposit them in our bank accounts as cash and cash equivalents or purchase short-term investments.

DILUTION

If you invest in our shares, your ownership interest will be diluted to the extent of the difference between the price you paid per share of common stock in this offering and the net tangible book value per share of our common stock after this offering.

Our net tangible book value as of September 30, 2023, after giving effect to the sale of securities in our October 2023 private placement offering, was approximately \$40.2 million, or approximately \$4.37 per share of our common stock issued and outstanding. Net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding as of September 30, 2023.

Our net tangible book value as of September 30, 2023, after giving effect to the sale of securities in our October 2023 private placement offering, would have been approximately \$59.2 million, or approximately \$4.69 per share of our common stock issued and outstanding, after giving effect to the sale by us of 3,442,340 shares of our common stock in this offering at an assumed offering price of \$5.81 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on January 22, 2024, for aggregate gross proceeds of \$20,000,000, and after deducting commissions and estimated aggregate offering expenses payable by us. This represents an immediate increase in net tangible book value of \$0.32 per share of our common stock to existing stockholders and an immediate dilution of \$1.12 per share of our common stock to new investors purchasing shares of our common stock in this offering at the assumed offering price.

The following table illustrates the dilution on a per share of common stock basis for investors purchasing shares of our common stock in this offering:

Assumed public offering price per share	\$	5.81
Net tangible book value per share as of September 30, 2023 after giving effect to our October 2023 private placement offering	\$	4.37
Increase in net tangible book value attributable to this offering	\$	0.32
As adjusted net tangible book value per share as of September 30, 2023 after giving effect to our October 2023 private placement offering	\$	4.69
Dilution per share to new investors	\$	1.12

These calculations are based on 9,186,588 shares outstanding as of September 30, 2023 after giving effect to our October 2023 private placement offering and excluding, as of that date, the following:

- 1,383,288 shares issuable upon exercise of ~~exercise of~~ outstanding warrants with a weighted average exercise price of \$2.95;
- 982,058 shares issuable upon exercise of our issued and outstanding stock options with a weighted-average exercise price of \$15.66 per share;
- 66,887 shares issuable for restricted stock grants outstanding;
- 972,221 shares reserved for issuance, but not subject to outstanding options or restricted stock awards, under our incentive equity plan; and
- 100,000 shares reserved for issuance under our employee stock purchase plan.

The table above assumes, for illustrative purposes, that an aggregate of 3,442,340 shares of our common stock are sold at an offering price of \$5.81 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on January 22, 2024, for aggregate gross proceeds of \$20,000,000. However, the shares sold in this offering, if any, will be sold from time to time at various prices. Presented below, solely for illustrative purposes only, is the effect of each of an increase and a decrease of the assumed offering price by \$1.00 per share.

Assuming that an aggregate of 2,936,857 shares of our common stock are sold at an offering price of \$6.81 per share, representing an increase of \$1.00 per share from the assumed offering price above, for aggregate gross proceeds of \$20 million, after deducting commissions and estimated aggregate offering expenses payable by us, our net tangible book value per share on an as adjusted basis would be \$4.88 per share and the dilution in net tangible book value per share to new investors would be \$1.93 per share.

Assuming that an aggregate of 4,158,004 shares of our common stock are sold at an offering price of \$4.81 per share, representing a decrease of \$1.00 per share from the assumed offering price above, for aggregate gross proceeds of \$20 million, after deducting commissions and estimated aggregate offering expenses payable by us, our net tangible book value per share on an unaudited as adjusted basis would be \$4.43 per share and the dilution in net tangible book value per share to new investors would be \$0.38 per share.

To the extent that other shares are issued, investors purchasing shares in this offering could 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 those securities could result in further dilution to investors in this offering.

PLAN OF DISTRIBUTION

We have entered into a Controlled Equity OfferingSM Sales Agreement (the “Sales Agreement”), with Cantor Fitzgerald & Co. (“Cantor”). Pursuant to this prospectus supplement, we may offer and sell shares of our common stock having an aggregate gross sales price of up to \$20,000,000 from time to time through Cantor acting as sales agent. A copy of the Sales Agreement will be filed as an exhibit to a Current Report on Form 8-K and will be incorporated by reference into this prospectus supplement.

Upon delivery of a placement notice and subject to the terms and conditions of the Sales Agreement, Cantor may sell shares of our common stock by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act. We may instruct Cantor not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or Cantor may suspend the offering of common stock upon notice and subject to other conditions.

We will pay Cantor commissions, in cash, for its service in acting as agent in the sale of our common stock. Cantor will be entitled to compensation at a commission rate of 3.0% of the sales price per share sold under the Sales Agreement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse Cantor for certain specified expenses, including the fees and disbursements of its legal counsel in an amount not to exceed \$75,000 and certain ongoing expenses. We estimate that the total expenses for the offering under this prospectus supplement, excluding compensation and reimbursements payable to Cantor under the terms of the Sales Agreement, will be approximately \$100,000. In addition, pursuant to an engagement letter, dated January 16, 2024, we granted Cantor a right of first refusal to participate in our future equity financings (the “Right”) for a period of 18 months from the date of such engagement letter. In accordance with FINRA Rule 5110, the Right is deemed underwriting compensation.

Settlement for sales of shares of common stock will occur on the second business day following the date on which any sales are made, or on some other date that is agreed upon by us and Cantor in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Cantor may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Cantor will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase the shares of common stock under the terms and subject to the conditions set forth in the Sales Agreement. In connection with the sale of the shares of common stock on our behalf, Cantor will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cantor will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Cantor against certain civil liabilities, including liabilities under the Securities Act.

The offering of shares of our common stock pursuant to the Sales Agreement will terminate upon the termination of the Sales Agreement as permitted therein. We and Cantor may each terminate the Sales Agreement at any time upon ten days’ prior notice.

Cantor and its affiliates may in the future provide various investment banking, commercial banking and other financial services for us, our subsidiaries and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, Cantor will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus supplement.

This prospectus supplement and the accompanying prospectus may be made available in electronic format on a website maintained by Cantor and Cantor may distribute this prospectus supplement and the accompanying prospectus electronically.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Dentons US LLP, New York, New York. Cantor Fitzgerald & Co. is being represented in connection with this offering by Cooley LLP, New York, New York.

EXPERTS

The consolidated financial statements of SAB Biotherapeutics, Inc. as of and for the years ended December 31, 2022 and 2021, included in our Annual Report on Form 10-K for the year ended December 31, 2022, have been audited by Mayer Hoffman McCann P.C., our former independent registered public accounting firm, as set forth in their report (which report includes an explanatory paragraph regarding the existence of substantial doubt about our ability to continue as a going concern), and have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing, in giving said reports.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from the SEC's Website at www.sec.gov. We make available free of charge its annual, quarterly and current reports, proxy statements and other information upon request. To request such materials, please contact the Corporate Secretary at the following address or telephone number: SAB Biotherapeutics, Inc., 2100 East 54th Street North Sioux Falls, South Dakota 57104, Attn: Corporate Secretary 605-679-6980. Exhibits to the documents will not be sent, unless those exhibits have specifically been incorporated by reference in this prospectus supplement.

We maintain our website at <https://www.sab.bio>. Our website and the information contained therein or connected thereto are not incorporated into this prospectus supplement.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act relating to the securities we are offering by this prospectus supplement and the accompanying base prospectus. This prospectus supplement and the accompanying base prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. Please refer to the registration statement and its exhibits and schedules for further information with respect to the Company and our securities. Statements contained in this prospectus supplement and the accompanying base prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of that contract or document filed as an exhibit to, or incorporated by reference into, the registration statement. You may read and obtain a copy of the registration statement and its exhibits and schedules from the SEC, as described in the preceding paragraph.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement the information contained in other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus supplement, to the extent that a statement contained in or omitted from this prospectus supplement, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement. We incorporate by reference the documents listed below which have been filed by us:

- Our Amendment No. 1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on [April 28, 2023](#);
- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with SEC on [April 14, 2023](#);
- Our Quarterly Reports on Form 10-Q for the fiscal periods ended March 31, 2023, June 30, 2023, and September 30, 2023, filed with the SEC on [May 15, 2023](#), [August 21, 2023](#), and [November 13, 2023](#), respectively;
- Our Current Reports on Form 8-K filed with the SEC on [January 27, 2023](#), [March 24, 2023](#), [March 31, 2023](#), [April 4, 2023](#), [July 3, 2023](#), [July 31, 2023](#), [August 21, 2023](#), [October 2, 2023](#), [October 27, 2023](#), [November 14, 2023](#), [November 20, 2023](#), [November 22, 2023](#), [January 3, 2024](#), and [January 25, 2024](#); and
- The description of our common stock and warrants in our registration statement on [Form 8-A filed with the SEC on January 8, 2021](#), including any amendments or reports filed for the purpose of updating such description.

In addition, all documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this prospectus supplement and prior to the termination of the offering of the securities to which this prospectus supplement relates, shall be deemed to be incorporated by reference in this prospectus supplement and to be a part hereof from the date of filing of such documents. However, any documents or portions thereof, whether specifically listed above or filed in the future, that are not deemed “filed” with the SEC, including without limitation any information furnished pursuant to Item 2.02 or 7.01 of Form 8-K or certain exhibits furnished pursuant to Item 9.01 of Form 8-K, shall not be deemed to be incorporated by reference in this prospectus supplement.

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

You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number.

SAB Biotherapeutics, Inc.
2100 East 54th Street North
Sioux Falls, South Dakota 57104
Attn: Corporate Secretary
605-679-6980
S-13

\$50,000,000



Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Units

From time to time, we may offer and sell up to an aggregate of \$50,000,000 of any combination of the securities described in this prospectus, either individually or in combination. We may also offer common stock or preferred stock upon conversion of debt securities, common stock upon conversion of preferred stock, or common stock, preferred stock or debt securities upon the exercise of warrants. We may also issue units comprised of one or more shares of common stock, shares of preferred stock, debt securities, warrants and/or rights in any combination.

When we decide to sell particular securities, we will provide you with the specific terms and the offering price of the securities we are then offering in one or more prospectus supplements to this prospectus. The prospectus supplement may add to, change or update information contained in this prospectus. The prospectus supplement may also contain important information about U.S. federal income tax consequences. You should carefully read this prospectus, together with any prospectus supplements and information incorporated by reference in this prospectus and any prospectus supplements, before you decide to invest. **This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.**

Our common stock is quoted on The Nasdaq Global Market under the trading symbol “SABS.” Any common stock sold pursuant to this prospectus or any prospectus supplement will be listed on that exchange, subject to official notice of issuance. Each prospectus supplement to this prospectus will contain information, where applicable, as to any other listing on any national securities exchange of the securities covered by the prospectus supplement. On May 5, 2023, the last reported sale price of our common stock was \$0.87 per share.

We may offer and sell the securities described in this prospectus to or through one or more underwriters, dealers or agents, or directly to purchasers on an immediate, continuous or delayed basis. The names of any underwriters, dealers or agents involved in the sale of any securities, the specific manner in which they may be offered and any applicable commissions or discounts will be set forth in an accompanying prospectus supplement covering the sales of those securities. As of May 5, 2023, the aggregate market value of our outstanding common stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 was approximately \$31.1 million, which is based on 35,843,245 shares of common stock held by non-affiliates as of such date and a price of \$0.87 per share, the closing price of our common stock on May 5, 2023. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on the registration statement of which this prospectus is a part with a value of more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our common stock held by non-affiliates is less than \$75 million. We have not sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to, and including, the date of this prospectus.

Investing in our securities involves significant risks. We strongly recommend that you read carefully the risks we describe in this prospectus and in any accompanying prospectus supplement, as well as the risk factors that are incorporated by reference into this prospectus from our filings made with the Securities and Exchange Commission. See “Risk Factors” beginning on page 5 of this prospectus.

We may sell the securities directly or to or through underwriters or dealers, and also to other purchasers or through agents. The names of any underwriters or agents that are included in a sale of securities to you, and any applicable commissions or discounts, will be stated in an accompanying prospectus supplement.

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

The date of this prospectus is May 17, 2023.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, we may, from time to time, offer and sell common stock, preferred stock, debt securities, warrants for debt and equity securities, rights to purchase common stock, preferred stock, or warrants in one or more series, and units consisting of the foregoing in one or more transactions.

This prospectus only provides you with a general description of the securities we may sell in these transactions. Each time we sell any securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement also may 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. This prospectus does not contain all of the information included in the registration statement we filed with the SEC. For further information about us or the securities offered hereby, you should carefully read this prospectus, any applicable prospectus supplement, any related free writing prospectuses, the information and documents incorporated herein by reference and the additional information under the heading “Where You Can Find Additional Information” before making an investment decision.

You should rely only on the information contained or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectuses that we may authorize to be provided to you. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus and the accompanying supplement to this prospectus are not an offer to sell these securities and it is not soliciting an 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 related free writing prospectuses, as well as information we have previously filed with the SEC and incorporated by reference, is accurate only as of the date on the cover of those documents. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus—the statement in the document having the later date modifies or supersedes the earlier statement as our business, financial condition, results of operations and prospects may have changed since the earlier dates.

This prospectus may not be used to consummate sales of any of these securities unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies between any prospectus supplement, this prospectus and/or any documents incorporated by reference, the document with the most recent date will control.

In this prospectus and any prospectus supplement, unless the context suggests otherwise, references to “SAB Biotherapeutics,” “SAB,” the “Company,” “we,” “us” and “our” refer to SAB Biotherapeutics, Inc.

TRADEMARKS

We and our subsidiaries own or have rights to trademarks, trade names and service marks that they use in connection with the operation of their business. In addition, their names, logos and website names and addresses are their trademarks or service marks. Other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, in some cases, the trademarks, trade names and service marks referred to in this prospectus are listed without the applicable ®, ™ and SM symbols, but they will assert, to the fullest extent under applicable law, their rights to these trademarks, trade names and service marks.

PROSPECTUS SUMMARY

This summary highlights selected information appearing elsewhere in this prospectus, or incorporated by reference into this prospectus, and does not contain all of the information that you should consider in making your investment decision. You should carefully read this entire prospectus, the applicable prospectus supplement and any free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” on page 3 of this prospectus and contained in our filings made with the SEC and any applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus.

Business Overview

We are a clinical-stage biopharmaceutical company focused on the development of proprietary immunotherapeutic fully-human antibodies, or fully-human immunoglobulins (hIgGs), to treat and prevent immune and autoimmune disorders as well as infectious diseases that have significant mortality and health impacts on high-risk patients. These antibodies are target-specific and polyclonal, meaning they are made up of many different hIgGs that bind to multiple sites specific to an immunogen as opposed to a monoclonal antibody that binds to only a single site. Our development programs include autoimmune disorders, gastroenterological, and respiratory diseases. Using private resources and more than \$200 million of funds awarded by the U.S. Government emerging infectious disease and medical countermeasures programs since September 2019, we have developed a novel drug development platform, which we refer to as our DiversitAb platform. This platform is based on the natural human immune system and has the unique capability to generate large quantities of specifically targeted, high-potency, hIgG that target multiple epitopes, antigens or binding sites without the need for producing these antibodies from convalescent plasma or human donors. We have refined, optimized, and advanced genetic engineering and antibody science to develop transchromosomal cattle (which we refer to as Tc Bovine) that produce hIgGs and the engineering of the platform drives IgG1 production primarily. These Tc Bovine form a key component of our versatile DiversitAb platform, a fully scalable production system for producing immunotherapies to multiple disease indications. Our platform represents the technology that can produce disease-targeted, fully human IgG without the need for human donors.

We are leveraging our DiversitAb platform to discover and develop product candidates with the potential to be first-in-class against novel targets or best-in-class against known, complex targets that treat diseases with significant unmet medical needs, including immune and autoimmune disorders, infectious gastroenterological and respiratory diseases, and oncology.

Corporate Information

We were incorporated in the State of Delaware on November 12, 2020, as a special purpose acquisition company under the name Big Cypress Acquisition Corp. (BCYP). On January 14, 2021, BCYP completed its initial public offering. On October 22, 2021, BCYP consummated a business combination with SAB Biotherapeutics, Inc. (the “Business Combination”), which changed its name to SAB Sciences, Inc. In connection with the closing of the business combination, BCYP changed its name to SAB Biotherapeutics, Inc. and SAB Sciences, Inc. became a subsidiary of SAB Biotherapeutics, Inc.

Our principal executive offices are located at 2100 East 54th Street North Sioux Falls, South Dakota 57104, and our telephone number is 605-679-6980. Our website is located at <https://www.sab.bio>. We do not incorporate by reference into this prospectus the information on, or accessible through, our website. Our common stock trades on The Nasdaq Global Market under the symbol “SABS”.

Securities We May Offer Under This Prospectus

We may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in combination, up to a total dollar amount of \$50,000,000,

from time to time under this prospectus, together with the applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of any offering. We may also offer common stock, preferred stock and/or debt securities upon the exercise of warrants, and we may offer common stock or preferred stock upon the conversion of preferred stock or debt securities. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation of classification;
- aggregate principal amount or aggregate offering price;
- maturity date, if applicable;
- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exercise, exchange or sinking fund terms, if any
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking;
- restrictive covenants, if any;
- voting or other rights, if any; and
- material or special U.S. federal income tax considerations, if any.

The applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and certain information incorporated herein by reference contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed in the forward-looking statements. The statements contained in this prospectus that are not purely historical are 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 Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements are often identified by the use of words such as, but not limited to, “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “seek,” “should,” “strategy,” “target,” “will,” “would” and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements.

Factors that might cause these differences include the following:

- the success, cost and timing of our product development activities and clinical trials, including statements regarding our plans for clinical development of our product candidates, the initiation and

completion of clinical trials and related preparatory work and the expected timing of the availability of results of clinical trials;

- our ability to recruit and enroll suitable patients in our clinical trials;
- the potential indications, attributes and benefits of our product candidates;
- our ability to obtain and maintain regulatory approval for our product candidates, and any related restrictions, limitations or warnings in the label of an approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to complete further development, approval and, if approved, commercialization of our product candidates;
- the period over which we anticipate our existing cash and cash equivalents will be sufficient to fund our operating expense and capital expenditure requirements;
- the potential for our business development efforts to maximize the potential value of our portfolio;
- our ability to identify, in-license or acquire additional product candidates;
- our ability to compete with other companies currently marketing or engaged in the development of treatments for the indications that we are pursuing for our product candidates;
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates and the duration of such protection;
- our ability to contract with and rely on third parties to assist in conducting our clinical trials and manufacturing our product candidates;
- our manufacturing capabilities, third-party contractor capabilities and strategy;
- our plans related to manufacturing, supply and other collaborative agreements;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance of our product candidates, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- the impact of laws, regulations, accounting standards, regulatory requirements, judicial decisions and guidance issued by authoritative bodies;
- our ability to attract and retain key scientific, medical, commercial or management personnel;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance;
- our ability to maintain our listing on The Nasdaq Global Market;
- our ability to continue as a going concern; and
- the effect of COVID-19 on the foregoing.

RISK FACTORS

Before you invest in any of the company's securities, in addition to the other information in this prospectus and the applicable prospectus supplement, you should carefully consider (i) the risk factors contained in the Company's most recent annual report on Form 10-K, which is incorporated by reference into this prospectus, (ii) all of the other information included or incorporated by reference in this prospectus, and (iii) the applicable prospectus supplement, as the same may be updated from time to time by the Company's future filings under the Exchange Act.

The risks and uncertainties described herein are not the only ones facing the Company. Additional risks and uncertainties not presently known to the Company or that the Company currently deems immaterial may also impair its business or operations. Any adverse effect on the Company's business, financial condition or operating results could result in a decline in the value of the securities and the loss of all or part of your investment. The prospectus

supplement applicable to each series of securities the Company offers may contain a discussion of additional risks applicable to an investment in the Company and the securities the Company is offering under that prospectus supplement.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we will use the net proceeds from the sale of securities offered by this prospectus for development and commercialization of product candidates, working capital, and general corporate purposes. In addition, we believe opportunities may exist from time to time to expand our current business through acquisitions or in-licenses of, or investments in, complementary companies, medicines, intellectual property or technologies. While we have no current agreements or commitments for any specific acquisitions, in-licenses or investments at this time, we may use a portion of the net proceeds for these purposes. As of the date of this prospectus, we have not identified any specific and material proposed uses of the anticipated proceeds.

Our expected use of net proceeds from the sale of any securities offered pursuant to the applicable prospectus supplement for such offering will vary depending on our then current intentions based upon our plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of any offering or the amounts that we will actually spend on any specific uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including the factors described under or referenced under the heading “Risk Factors” in this prospectus. As a result, unless otherwise specified in the prospectus supplement, our management will have broad discretion in its application of the net proceeds, and investors will be relying on our judgment in such application.

Pending use of net proceeds from the sale of securities offered by this prospectus and the applicable prospectus supplement for such sale, we may invest in short-term and intermediate-term interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DESCRIPTION OF CAPITAL STOCK WE MAY OFFER

The following description summarizes important terms of our capital stock. For a complete description, you should refer to our certificate of incorporation, as amended, and bylaws, which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part, as well as the relevant portions of the Delaware General Corporation Law (the “DGCL”).

General

Our authorized capital stock consists of 490,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value per share.

The following description of our common stock and preferred stock, together with the additional information included in any applicable prospectus supplements or related free writing prospectuses, summarizes the material terms and provisions of these types of securities, but it is not complete. For the complete terms of our common stock and preferred stock, please refer to our certificate of incorporation, as amended, and our bylaws that are incorporated by reference into the registration statement which includes this prospectus and, with respect to preferred stock, any certificate of designation that we may file with the SEC for a series of preferred stock we may designate, if any.

We will describe in a prospectus supplement or related free writing prospectuses, the specific terms of any common stock or preferred stock we may offer pursuant to this prospectus. If indicated in a prospectus supplement, the terms of such common stock or preferred stock may differ from the terms described below.

Common Stock

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of common stock possess all voting power for the election of our directors and all other matters requiring stockholder action. Holders of common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of common stock will be entitled to receive such dividends, if any, as may be declared from time to time by our board of directors in its discretion out of funds legally available therefor. In no event will any stock dividends or stock splits or combinations of stock be declared or made on common stock unless the shares of common stock at the time outstanding are treated equally and identically.

Liquidation, Dissolution and Winding Up

In the event of our voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the common stock will be entitled to receive an equal amount per share of all of our assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock have been satisfied.

Preemptive or Other Rights

Our stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to common stock.

Election of Directors

Our board of directors is divided into three classes, Class I, Class II and Class III, with only one class of directors being elected in each year and each class serving a three-year term, except with respect to the election of directors at the special meeting held in connection with the Business Combination, Class I directors are elected to an initial one-year term (and three-year terms subsequently), the Class II directors are elected to an initial two-year term (and three-year terms subsequently) and the Class III directors are elected to an initial three-year term (and three-year terms subsequently). There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors.

Preferred Stock

Our Amended and Restated Certificate of Incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors is authorized to fix the voting rights, if any, designations, powers and preferences, the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. The Board is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of common stock and could have anti-takeover effects. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of the Company or the removal of existing management.

We have no preferred stock outstanding at the date hereof.

Certain Anti-Takeover Provisions of Delaware Law

Special Meetings of Stockholders

Our Amended and Restated Bylaws provide that special meetings of our stockholders may be called only by a majority vote of the board of directors, by the Chairperson of the board of directors, or by the chief executive officer.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our Amended and Restated Bylaws provide that stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely under our Amended and Restated Bylaws, a stockholder's notice will need to be received by the company secretary at our principal executive offices not later than the close of business on the 90th day nor earlier than the open of business on the 120th day prior to the first anniversary of the preceding year's annual meeting. Pursuant to Rule 14a-8 of the Exchange Act, proposals seeking inclusion in our annual proxy statement must comply with the notice periods contained therein. Our Amended and Restated Bylaws also specify certain requirements as to the form and content of a stockholders' meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

Authorized but Unissued Shares

Our authorized but unissued common stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum Selection

The Amended and Restated Certificate of Incorporation provides that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (subject to certain limited exceptions) shall be the sole and exclusive forum for any of the following claims (i) any derivative claim or cause of action brought on our behalf, (ii) any claim or cause of action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or to the Company's stockholders, (iii) any claim or cause of action against us, our directors, officers or employees arising pursuant to any provision of the DGCL, the Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws, and (iv) any claim or cause of action against the Company or any director, officer or other employee of the Company governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. Any person or entity holding, owning or otherwise acquiring any interest in shares of capital stock of the Company shall be deemed to have notice of and to have consented to such provisions. If the claim is brought outside of Delaware, the stockholder asserting such claim will be deemed to have consented to service of process on such stockholder's counsel, except with respect to claims: (A) as to which the Court of Chancery in the State of Delaware determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to personal jurisdiction of the Court of Chancery within ten days following such determination), (B) which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, (C) for which the Court of Chancery does not have subject matter jurisdiction, or (D) any action arising under the Securities Act.

Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law in the types of lawsuits to which they apply, a court may determine that these provisions are unenforceable, and to the extent they are enforceable, the provisions may have the effect of discouraging lawsuits against our directors and officers, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. Additionally, we cannot be certain that a court will decide that these provisions are either applicable or enforceable, and if a court were to find the choice of forum provisions contained in our Amended and Restated Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our Amended and Restated Certificate of Incorporation provides that the exclusive forum provision will be applicable to the fullest extent permitted by applicable law. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, the Amended and Restated Certificate of Incorporation provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Section 203 of the Delaware General Corporation Law

We are subject to provisions of Section 203 of the DGCL regulating corporate takeovers under our Amended and Restated Certificate of Incorporation. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a "business combination" with:

- a stockholder who owns 15% or more of our outstanding voting stock (otherwise known as an “interested stockholder”);
- an affiliate of an interested stockholder; or
- an associate of an interested stockholder, for three years following the date that the stockholder became an interested stockholder.

A “business combination” includes a merger or sale of more than 10% of our assets. However, the above provisions of Section 203 do not apply if:

- our board of directors approves the transaction that made the stockholder an “interested stockholder,” prior to the date of the transaction
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of common stock; or
- on or subsequent to the date of the transaction, our initial business combination is approved by our board of directors and authorized at a meeting of our stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Under certain circumstances, this provision will make it more difficult for a person who would be an “interested stockholder” to effect various business combinations with the Company for a three-year period. This provision may encourage companies interested in acquiring us to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board of directors and may make it more difficult to accomplish transactions which stockholders may otherwise deem to be in their best interests.

Limitation on Liability and Indemnification of Directors and Officers

The Amended and Restated Certificate of Incorporation eliminates directors’ liability for monetary damages to the fullest extent permitted by applicable law. Our Amended and Restated Certificate of Incorporation requires the Company to indemnify and advance expenses to, to the fullest extent permitted by applicable law, its directors, officers and agents and prohibit any retroactive changes to the rights or protections or increase the liability of any director in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification. We believe these provisions in our Amended and Restated Certificate of Incorporation are necessary to attract and retain qualified persons as directors and officers. However, these provisions may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. Furthermore, a stockholder’s investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Transfer Agent

The transfer agent for our securities is Continental Stock Transfer & Trust Company. The transfer agent’s address is One State Street Plaza, 30th Floor New York, New York 10004.

DESCRIPTION OF DEBT SECURITIES WE MAY OFFER

The following description, together with the additional information we include in any applicable prospectus supplements or free writing prospectuses, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. 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, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement 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 and any supplemental indentures 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 and any supplemental indentures applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete 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

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers’ certificate or by a supplemental indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. We will describe in the applicable prospectus supplement 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 U.S. 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, 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;
- provisions for a sinking fund purchase or other analogous fund, if any, including the date, if any, on which, and the price at which we are obligated, pursuant thereto 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;
- provisions relating to modification of the terms of the security or the rights of the security holder;
- whether the indenture will restrict our ability or the ability of our subsidiaries 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, transfer or otherwise dispose of assets;
- enter into sale-leaseback transactions;
- engage in transactions with stockholders or affiliates;
- issue or sell stock of our subsidiaries;
- 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;
- information describing any book-entry features;
- 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.

U.S. federal income tax consequences applicable to debt securities sold at an original issue discount will be described in the applicable prospectus supplement. In addition, U.S. federal income tax or other consequences applicable to any debt securities which are denominated in a currency or currency unit other than U.S. dollars may be described in the applicable prospectus supplement.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms under 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 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 acquiror 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 our other securities 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 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 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 we and the trustee receive notice from the 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 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 arises due to the occurrence of certain specified bankruptcy, insolvency or reorganization events, 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 such waiver shall cure the default or event of default.

Subject to the terms of the applicable indenture, 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 holders 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.

The indentures provide that if an event of default has occurred and is continuing, the trustee will be required in the exercise of its powers to use the degree of care that a prudent person would use in the conduct of its own affairs. The trustee, however, may refuse to follow any direction that conflicts with law or the indenture, or that the trustee determines is unduly prejudicial to the rights of any other holder of the relevant series of debt securities, or that would involve the trustee in personal liability. Prior to taking any action under the indentures, the trustee will be entitled to indemnification against all costs, expenses and liabilities that would be incurred by taking or not taking such action.

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 only 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 a written request and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense 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 60 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.

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

The indentures provide that if a default occurs and is continuing and is actually known to a responsible officer of the trustee, the trustee must mail to each holder notice of the default within 45 days after it occurs, unless such default has been cured. Except in the case of a default in the payment of principal or premium of, or interest on, any debt security or certain other defaults specified in an indenture, the trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee or a trust committee of directors, or responsible officers of the trustee, in good faith determine that withholding notice is in the best interests of holders of the relevant series of debt securities.

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 “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 such 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 “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 in addition to or in place of certificated debt securities and to make all appropriate changes for such purpose;
- to add such new covenants, restrictions, conditions or provisions for the protection of the holders, and 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 any material respect; provided that any amendment made solely to conform the provisions of the indenture to the corresponding description of the debt securities contained in the applicable prospectus or prospectus supplement shall be deemed not to adversely affect the interests of the holders of such debt securities; provided further, that in connection with any such amendment we will provide the trustee with an officers' certificate certifying that such amendment will not adversely affect the rights or interests of the holders of such debt securities.

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, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

- extending the fixed 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 of any debt securities;
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver;
- changing any of our obligations to pay additional amounts;
- reducing the amount of principal of an original issue discount security or any other note payable upon acceleration of the maturity thereof;
- changing the currency in which any note or any premium or interest is payable;
- impairing the right to enforce any payment on or with respect to any note;
- adversely changing the right to convert or exchange, including decreasing the conversion rate or increasing the conversion price of, such note, if applicable;
- in the case of the subordinated indenture, modifying the subordination provisions in a manner adverse to the holders of the subordinated debt securities;
- if the debt securities are secured, changing the terms and conditions pursuant to which the debt securities are secured in a manner adverse to the holders of the secured debt securities;
- reducing the requirements contained in the applicable indenture for quorum or voting;
- changing any of our obligations to maintain an office or agency in the places and for the purposes required by the indentures; or
- modifying any of the above provisions set forth in this paragraph.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement applicable to a particular series of debt securities, we may 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, and 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, 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 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, 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, 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 impose 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 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 and 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. However, 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.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, 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 payment.

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, 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, we will designate the corporate trust office of the trustee in the City of New York as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement 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 Debt Securities

The subordinated debt securities will be unsecured and will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. 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 be unsecured and 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 WE MAY OFFER

As of May 5, 2023, there were 5,958,600 warrants to purchase common stock outstanding, which warrants were issued in connection with our initial public offering, and which warrants consist of 5,750,000 public warrants and 208,600 private placement warrants. Each warrant entitles the registered holder to purchase one share of our common stock at a price of \$11.50 per share at any time commencing on January 14, 2022. The warrants will expire on October 22, 2026 at 5:00 p.m., New York City time, or earlier upon redemption or liquidation.

Additionally, as of May 5, 2023, there were 7,575,290 warrants to purchase common stock outstanding, which warrants were issued in connection with a private placement that the Company closed in December 2022, and which warrants consist of 7,363,377 warrants issued to the investors in the private placement and 210,913 warrants issued to the placement agent in the private placement. Each warrant entitles the registered holder to purchase one share of

our common stock. The warrants issued to the placement agent are exercisable at a price of \$1.35 per share at any time commencing June 7, 2023. The warrants issued to the investors are exercisable at a price of \$1.08 per share at any time commencing June 7, 2023. The warrants will expire five years from the date of issuance.

On March 21, 2023, we entered into an agreement (the “2023 Ladenburg Agreement”) with Ladenburg Thalmann & Co. Inc. (“Ladenburg”), pursuant to which, among other things, on March 24, 2023, we issued to Ladenburg a warrant to purchase up to 300,000 shares of common stock, exercisable for three years from the date of issuance at \$0.5424 per share. The issuance of the warrant under the Ladenburg Agreement has been made pursuant to exemptions provided by Section 4(a)(2) of the Securities Act, as transactions not involving a public offering, and Rule 506 of Regulation D promulgated under the Securities Act. On May 1, 2023, we filed a registration statement on Form S-3 (File No. 333-271-543) to register under the Securities Act, the shares underlying the warrants issued to Ladenburg pursuant to the Ladenburg Agreement.

We typically issue warrants to purchase shares of our common stock to investors as part of a financing transaction, or in connection with services rendered by placement agents and outside consultants.

We may issue warrants to purchase debt securities, preferred stock, common stock or any combination of the foregoing. We may issue warrants independently or together with any other securities we offer under a prospectus supplement. The warrants may be attached to or separate from the securities. We will issue each series of warrants under a separate warrant agreement to be entered into between a warrant agent and us. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligations or relationship of agency or trust for or with holders or beneficial owners of warrants. The following outlines some of the general terms and provisions of the warrants that we may issue from time to time. When we issue warrants, we will provide the specific terms of the warrants and the applicable warrant agreement in a prospectus supplement and any related free writing prospectuses and such terms may differ from those described below. To the extent the information contained in the prospectus supplement differs from this summary description, you should rely on the information in the prospectus supplement. The following description, and any description of the warrants included in a prospectus supplement, may not be complete and is subject to and qualified in its entirety by reference to the terms and provisions of the applicable warrant agreement.

Equity Warrants

We will describe in the applicable prospectus supplement and any related free writing prospectuses the terms of the preferred stock warrants or common stock warrants being offered, the warrant agreement relating to the preferred stock warrants or common stock warrants and the warrant certificates representing the preferred stock warrants or common stock warrants, including, as applicable:

- the title of the warrants;
- the securities for which the warrants are exercisable;
- the price or prices at which the warrants will be issued;
- if applicable, the number of warrants issued with each share of preferred stock or share of common stock;
- if applicable, the date on and after which the warrants and the related preferred stock or common stock will be separately transferable;
- the date on which the right to exercise the warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of warrants which may be exercised at any time;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- information with respect to book-entry procedures, if any;
- a discussion of the material U.S. federal income tax considerations applicable to exercise of the warrants; and

- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Unless otherwise provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses, holders of equity warrants will not be entitled, by virtue of being such holders, to vote, consent, receive dividends, receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter, or to exercise any rights whatsoever as stockholders.

Except as provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses, the exercise price payable and the number of shares of common stock or preferred stock purchasable upon the exercise of each warrant will be subject to adjustment in certain events, including the issuance of a stock dividend to holders of common stock or preferred stock or a stock split, reverse stock split, combination, subdivision or reclassification of common stock or preferred stock. In lieu of adjusting the number of shares of common stock or preferred stock purchasable upon exercise of each warrant, we may elect to adjust the number of warrants. Unless otherwise provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses, no adjustments in the number of shares purchasable upon exercise of the warrants will be required until all cumulative adjustments require an adjustment of at least 1% thereof. No fractional shares will be issued upon exercise of warrants, but we will pay the cash value of any fractional shares otherwise issuable. Notwithstanding the foregoing, except as otherwise provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses, in case of any consolidation, merger, or sale or conveyance of our property as an entirety or substantially as an entirety, the holder of each outstanding warrant will have the right to the kind and amount of shares of stock and other securities and property, including cash, receivable by a holder of the number of shares of common stock or preferred stock into which each warrant was exercisable immediately prior to the particular triggering event.

Debt Warrants

We will describe in the applicable prospectus supplement and any related free writing prospectuses the terms of the debt warrants being offered, the warrant agreement relating to the debt warrants and the debt warrant certificates representing the debt warrants, including, as applicable:

- the title of the debt warrants;
- the aggregate number of the debt warrants;
- the price or prices at which the debt warrants will be issued;
- the designation, aggregate principal amount and terms of the debt securities purchasable upon exercise of the debt warrants, and the procedures and conditions relating to the exercise of the debt warrants;
- the designation and terms of any related debt securities with which the debt warrants are issued, and the number of the debt warrants issued with each security;
- the date, if any, on and after which the debt warrants and the related debt securities will be separately transferable;
- the principal amount of debt securities purchasable upon exercise of each debt warrant, and the price at which the principal amount of the debt securities may be purchased upon exercise;
- the date on which the right to exercise the debt warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of the debt warrants that may be exercised at any time;
- information with respect to book-entry procedures, if any;
- changes to or adjustments in the exercise price of the debt warrants;
- a discussion of the material U.S. federal income tax considerations applicable to the exercise of the debt warrants; and
- any other terms of the debt warrants and terms, procedures and limitations relating to the exercise of the debt warrants.

As may be permitted under the warrant agreement, holders may exchange debt warrant certificates for new debt warrant certificates of different denominations, and may exercise debt warrants at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement and any related free writing prospectuses. Prior to the exercise of their debt warrants, holders of debt warrants will not have any of the rights of holders of the securities purchasable upon the exercise, and will not be entitled to payments of principal, premium or interest on the securities purchasable upon the exercise, of debt warrants.

Exercise of Warrants

Each warrant will entitle the holder of the warrant to purchase for cash at the exercise price provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses the principal amount of debt securities or shares of preferred stock or shares of common stock being offered. Holders may exercise warrants at any time up to the close of business on the expiration date provided in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses. After the close of business on the expiration date, unexercised warrants are void.

Holders may exercise warrants as described in the applicable warrant agreement and corresponding prospectus supplement or any free writing prospectuses relating to the warrants being offered. Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable warrant agreement and corresponding prospectus supplement or any related free writing prospectuses, we will, as soon as practicable, forward the debt securities, shares of preferred stock or shares of common stock purchasable upon the exercise of the warrant. If less than all of the warrants represented by the warrant certificate are exercised, we will issue a new warrant certificate for the remaining warrants.

DESCRIPTION OF RIGHTS WE MAY OFFER

We may issue rights to purchase shares of our common stock, preferred stock, or warrants in one or more series. Rights may be issued independently or together with any other offered security and may or may not be transferable by the person purchasing or receiving the subscription rights. In connection with any rights offering to our stockholders, we may enter into a standby underwriting arrangement with one or more underwriters pursuant to which the underwriters will purchase any of the offered securities remaining unsubscribed after the expiration of the rights offering. In connection with a rights offering to our stockholders, we will distribute certificates evidencing the rights and an applicable prospectus supplement to our stockholders on the record date that we set for receiving rights in the rights offering. An applicable prospectus supplement will describe the following terms of rights in respect of which this prospectus is being delivered:

- the title of the rights;
- the securities for which the rights are exercisable;
- the exercise price for the rights;
- the date of determining the security holders entitled to the rights distribution;
- the number of the rights issued to each security holder;
- the extent to which the rights are transferable
- if applicable, a discussion of the material United States federal income tax considerations applicable to the issuance or exercise of the rights;
- the date on which the right to exercise the rights shall commence, and the date on which the rights shall expire (subject to any extension);
- the conditions to completion of the rights offering;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the rights;
- the extent to which the rights include an over-subscription privilege with respect to unsubscribed securities;

- if applicable, the material terms of any standby underwriting or other purchase arrangement that we may enter into in connection with the rights offering; and
- any other terms of the rights, including terms, procedures and limits relating to the exchange or exercise of the rights.

Each right will entitle the holder to purchase an amount of securities for cash, at the exercise price. Rights may be exercised at any time up to the close of business on the expiration date of the rights. After the close of business on the expiration date, all unexercised rights will become void. The manner in which rights may be exercised will be described in an applicable prospectus supplement. We may, but are not be required to, permit the exercise of rights through the delivery of a notice of guaranteed delivery from a bank, a trust company, or a Nasdaq member guaranteeing delivery of (i) payment of the exercise price for the securities for which the rights are being exercised, and (ii) a properly completed and executed rights certificate. The notice of guaranteed delivery must be received by the rights agent before the expiration of the rights, and the rights agent will not honor a notice of guaranteed delivery unless a properly completed and executed rights certificate and full payment for the securities being purchased are received by the rights agent by the close of business on the third business day after the expiration time of the rights. Upon receipt of payment and the proper completion and due execution of the rights certificate at the designated office of the rights agent or any other office indicated in an applicable prospectus supplement, we or the transfer agent will forward, as soon as practicable, the securities purchased upon the exercise of the rights. We may determine to offer any unsubscribed offered securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of the methods, including pursuant to standby underwriting arrangements, as set forth in an applicable prospectus supplement.

DESCRIPTION OF UNITS WE MAY OFFER

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more shares of common stock, shares of preferred stock, debt securities, warrants and/or rights in any combination. Each unit 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.

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

- 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 that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Preferred Stock,” “Description of Debt Securities,” “Description of Warrants” and “Description of Rights” will apply to each unit and to any common stock, preferred stock, debt security or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so registered, despite any notice to the contrary.

PLAN OF DISTRIBUTION

We may sell the securities being offered by us in this prospectus pursuant to underwritten public offerings, negotiated transactions, block trades, in transactions as further described below, any combination of such methods or any other methods permitted pursuant to applicable law. We may sell the securities to or through underwriters, dealers, agents or directly to one or more purchasers. We and our agents reserve the right to accept and to reject, in whole or in part, any proposed purchase of securities. A prospectus supplement or post-effective amendment, which we will file each time we effect an offering of any securities, will provide the names of any underwriters, dealers or agents, if any, involved in the sale of such securities, and any applicable fees, commissions, or discounts to which such persons shall be entitled to in connection with such offering.

We and our agents, dealers and underwriters, as applicable, may sell the securities being offered by us in this prospectus from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to such prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

We may determine the price or other terms of the securities offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or any other terms, how potential investors may participate in the auction and the nature of the underwriters' obligations, in the applicable prospectus supplement or amendment.

We may solicit directly offers to purchase securities. We may also designate agents from time to time to solicit offers to purchase securities. Any agent that we designate, who may be deemed to be an underwriter as such term is defined in the Securities Act, may then resell such securities to the public at varying prices to be determined by such agent at the time of resale.

We may engage in at the market offerings of the Company's common stock as defined in Rule 415(a)(4) under the Securities Act. An at the market offering is an offering of our common stock at other than a fixed price, and is conducted to or through a market maker. We shall name any underwriter or agent that the Company engages for an at the market offering in a post-effective amendment to the registration statement containing this prospectus. In the related prospectus supplement, we shall also describe any additional details of the Company's arrangement with such underwriter or agent, including commissions or fees paid or discounts offered by the Company, and whether such underwriter is acting as principal or agent.

If we use underwriters to sell securities, we will enter into an underwriting agreement with the underwriters at the time of the sale to them, which agreement shall be filed as an exhibit to the related prospectus supplement. Underwriters may also receive commissions from purchasers of the securities. Underwriters may also use dealers to sell securities. In such an event, the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents.

Under agreements that they may enter into with us, underwriters, dealers, agents and other persons may be entitled to (i) indemnification by the Company against certain civil liabilities, including liabilities under the Securities Act or (ii) contribution with respect to payments which they may be required to make in respect of such liabilities. Underwriters and agents may engage in transactions with, or perform services for, us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we may authorize underwriters, dealers or other persons to solicit offers by certain institutions to purchase the securities offered by us under this prospectus pursuant to contracts providing for payment and delivery on a future date or dates. The obligations of any purchaser under these contracts will be subject only to those conditions described in the applicable prospectus supplement, and the

prospectus supplement will set forth the price to be paid for securities pursuant to those contracts and the commissions payable for solicitation of the contracts.

Any underwriter may engage in over-allotment, stabilizing and syndicate short covering transactions and penalty bids in accordance with Regulation M of the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions involve bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Syndicate short covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit the underwriters to reclaim selling concessions from dealers when the securities originally sold by such dealers are purchased in covering transactions to cover syndicate short positions. These transactions may cause the price of the securities sold in an offering to be higher than it would otherwise be. These transactions, if commenced, may be discontinued by the underwriters at any time without notice.

Our common stock is quoted on The Nasdaq Global Market under the trading symbol “SABS” The other securities are not listed on any securities exchange or other stock market and, unless the Company states otherwise in the applicable prospectus supplement, the Company does not intend to apply for listing of the other securities on any securities exchange or other stock market. Any underwriters to whom we sell securities for public offering and sale may make a market in the securities that they purchase, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. Accordingly, the Company gives you no assurance as to the development or liquidity of any trading market for the securities.

The anticipated date of delivery of the securities offered hereby will be set forth in the applicable prospectus supplement relating to each offering.

In order to comply with certain state securities laws, if applicable, the securities may be sold in such jurisdictions only through registered or licensed brokers or dealers. In certain states, the securities may not be sold unless the securities have been registered or qualified for sale in such state or an exemption from regulation or qualification is available and is complied with. Sales of securities must also be made by the Company in compliance with all other applicable state securities laws and regulations.

We shall pay all expenses of the registration of the securities.

EXPERTS

The consolidated financial statements of SAB Biotherapeutics, Inc. as of and for the years ended December 31, 2022 and 2021, included in our Annual Report on Form 10-K for the year ended December 31, 2022, have been audited by Mayer Hoffman McCann P.C., independent registered public accounting firm, as set forth in their report (which report includes an explanatory paragraph regarding the existence of substantial doubt about our ability to continue as a going concern), and have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing, in giving said reports.

LEGAL MATTERS

If and when the securities being registered hereunder are issued, the validity of such issuance will be passed upon for the Company by Dentons US LLP, New York, New York.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. You may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to the public from the SEC's Website at www.sec.gov. We make available free of charge its annual, quarterly and current reports, proxy statements and other information upon request. To request such materials, please contact the Corporate Secretary at the following address or telephone number: SAB Biotherapeutics, Inc., 2100 East 54th Street North Sioux Falls, South Dakota 57104, Attn: Corporate Secretary 605-679-6980. Exhibits to the documents will not be sent, unless those exhibits have specifically been incorporated by reference in this prospectus.

We maintain our website at <https://www.sab.bio>. Our website and the information contained therein or connected thereto are not incorporated into this Registration Statement.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act relating to the securities we are offering by this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. Please refer to the registration statement and its exhibits and schedules for further information with respect to the Company and our securities. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of that contract or document filed as an exhibit to, or incorporated by reference into, the registration statement. You may read and obtain a copy of the registration statement and its exhibits and schedules from the SEC, as described in the preceding paragraph.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents filed with SEC listed below:

- Our Amendment No. 1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on [April 28, 2023](#); and
- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with SEC on [April 14, 2023](#); and

- Our Current Reports on Form 8-K filed with the SEC on [January 5, 2023](#), [January 9, 2023](#), [January 10, 2023](#), [January 27, 2023](#), [February 7, 2023](#), [March 24, 2023](#), [March 31, 2023](#), [April 4, 2023](#), [April 14, 2023](#), [April 19, 2023](#), and [April 28, 2023](#); and
- The description of our common stock and warrants in our registration statement on [Form 8-A](#) filed with the SEC on January 8, 2021, including any amendments or reports filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

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

You may request a copy of the filings incorporated herein by reference, including exhibits to such documents that are specifically incorporated by reference, at no cost, by writing or calling us at the following address or telephone number:

SAB Biotherapeutics, Inc.
2100 East 54th Street North
Sioux Falls, South Dakota 57104
Attn: Corporate Secretary
605-679-6980

Statements contained in this prospectus as to the contents of any contract or other documents are not necessarily complete, and in each instance investors are referred to the copy of the contract or other document filed as an exhibit to the registration statement or to a document incorporated by reference, each such statement being qualified in all respects by such reference and the exhibits and schedules thereto.



Up to \$20,000,000

Common Stock

PROSPECTUS SUPPLEMENT



January 26, 2024
