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

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

Baudax Bio, Inc.

(Exact name of Registrant as specified in its charter)

Pennsylvania
(State or other jurisdiction of
incorporation or organization)

8090
(Primary Standard Industrial
Classification Code Number)

47-4639500
(I.R.S. Employer
Identification No.)

**490 Lapp Road
Malvern, PA 19355
(484) 395-2440**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Gerri A. Henwood
President and Chief Executive Officer
Baudax Bio, Inc.
490 Lapp Road
Malvern, PA 19355
(484) 395-2440**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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

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

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, anon-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐
Non-accelerated filer ☒

Accelerated filer ☐
Smaller reporting company ☒
Emerging growth company ☒

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

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated September 5, 2023

PRELIMINARY PROSPECTUS

Baudax BIO

Up to 15,000,000 Shares of Common Stock

This prospectus relates to the offering and resale by Alumni Capital LP (“Alumni Capital” or the “Selling Shareholder”) of up to 15,000,000 shares of our common stock, par value \$0.001 per share, which includes _____ shares of our common stock issued to the Selling Shareholder as commitment shares (the “Commitment Shares”).

The shares of common stock being offered by the Selling Shareholder have been or may be issued and sold to the Selling Shareholder pursuant to the purchase agreement, dated August 23, 2023, that we entered into with Alumni Capital (the “Purchase Agreement”). See “The Alumni Capital Transaction” for a description of the Purchase Agreement and “Selling Shareholder” for additional information regarding Alumni Capital. The prices at which Alumni Capital may resell the shares offered hereby will be determined by the prevailing market price for the shares or in negotiated transactions. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares of common stock by the Selling Shareholder. However, we may receive proceeds of up to \$50 million from the sale of our common stock to the Selling Shareholder pursuant to the Purchase Agreement, once the registration statement that includes this prospectus is declared effective.

The Selling Shareholder may sell or otherwise dispose of the shares of common stock described in this prospectus in a number of different ways and at varying prices. See “Plan of Distribution” for more information about how the Selling Shareholder may sell or otherwise dispose of the shares of common stock being registered pursuant to this prospectus. The Selling Shareholder is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended.

The Selling Shareholder will pay all brokerage fees and commissions and similar expenses. We will pay the expenses (except brokerage fees and commissions and similar expenses) incurred in registering the shares of common stock, including legal and accounting fees. See “Plan of Distribution.”

Our common stock is listed on the Nasdaq Capital Market under the symbol “BXR.” On September 1, 2023, the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.43 per share.

We have received deficiency letters from The Nasdaq Stock Market LLC (“Nasdaq”) that we are not in compliance with Nasdaq’s (i) minimum bid price requirement of at least \$1.00 per share and (ii) the requirement to have at least \$2,500,000 in shareholders’ equity. To maintain listing on the Nasdaq Capital Market, we must demonstrate compliance with the Nasdaq initial listing requirements by or before November 13, 2023, or our common stock will become subject to delisting. See “Risk Factors — “If we are unable to meet the initial listing standards of Nasdaq by November 13, 2023, or otherwise regain compliance with the listing standards of Nasdaq, our common stock may become delisted, which could have a material adverse effect on the liquidity of our common stock and our ability to raise capital.”

You should read this prospectus, together with additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” carefully before you invest in any of our securities.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE “[RISK FACTORS](#)” ON PAGE 11 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN ANY DOCUMENT INCORPORATED BY REFERENCE HEREIN CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

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.

Prospectus dated _____, 2023

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ABOUT THIS PROSPECTUS

The registration statement we filed with the Securities and Exchange Commission (the “SEC”) includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus, the related exhibits filed with the SEC, and the documents incorporated by reference herein before making your investment decision. You should rely only on the information provided in this prospectus and the documents incorporated by reference herein or any amendment thereto. You should not assume that the information contained in this prospectus or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference herein is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus or any related free writing prospectus is delivered, or securities are sold, on a later date. This prospectus contains or incorporates by reference summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed or have been incorporated by reference as exhibits to the registration statement of which this prospectus forms a part, and you may obtain copies of those documents as described in this prospectus under the heading “Where You Can Find More Information.”

You should rely only on the information that we have included or incorporated by reference in this prospectus and any related free writing prospectus that we may authorize to be provided to you. Neither we, nor the Selling Shareholder, have authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus or any related free writing prospectus that we may authorize to be provided to you. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any related free writing prospectus. This prospectus and any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

When we refer to “Baudax,” “we,” “our,” “us” and the “Company” in this prospectus, we mean Baudax Bio, Inc., and its consolidated subsidiaries unless otherwise specified. When we refer to “you,” we mean the potential holders of the applicable series of securities.

Solely for convenience, tradenames referred to in this prospectus appear without the® and™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these tradenames.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this prospectus or the documents incorporated herein by reference regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will,” “would,” “could,” “should,” “potential,” “seek,” “evaluate,” “pursue,” “continue,” “design,” “impact,” “affect,” “forecast,” “target,” “outlook,” “initiative,” “objective,” “designed,” “priorities,” “goal,” or the negative of such terms and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are based on assumptions and expectations that may not be realized and are inherently subject to risks, uncertainties and other factors, many of which cannot be predicted with accuracy and some of which might not even be anticipated.

The forward-looking statements in this prospectus and the documents incorporated herein by reference include, among other things, statements about:

- our estimates regarding expenses, revenue, capital requirements and timing and availability of and the need for additional financing;
- our ability to continue as a going concern for the next twelve months;
- whether our cash resources will be sufficient to fund our continuing operations;
- our ability to operate under significant indebtedness and our ability to obtain a waiver or amendment to our credit agreement;
- our ability to regain compliance with the listing requirements of the Nasdaq Capital Market;
- our ability to obtain regulatory approval for any product candidates that we may develop, and any related restrictions, limitations, or warnings in the label of any approved product candidates;
- our ability to successfully market, commercialize and achieve broad market acceptance for any of our product candidates once approved;
- our ability and that of our third-party manufacturers to successfully scale-up our clinical and commercial manufacturing process for our product candidates;
- the results, timing and outcome of our clinical trials of our product candidates, and any future clinical trials and preclinical studies;
- our ability to source materials needed for our product candidates, optimize formulations for stability and other characteristics;
- our relationships with licensors, collaborators, other third parties and our employees;
- our ability to successfully integrate the operations of our recent acquisition, TeraImmune, Inc. (“TeraImmune”) and realize anticipated benefits of the acquisition of TeraImmune;
- our ability to obtain shareholder approval of the conversion of our Series X Non-Voting Convertible Preferred Stock (“Series X Preferred Stock”), and the required cash payment of the then-current fair value of the Series X Preferred Stock if such approval is not obtained;
- our ability to obtain shareholder approval for the issuance of all of the Purchase Notice Shares and Commitment Shares, which together are in excess the Exchange Cap under the Purchase Agreement;
- the effects of changes in our effective tax rate due to changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, tax impacts and net operating loss utilization related to the separation from Societal CDMO’s acute care business and transfer of such assets to us (the “Separation”), and changes in the tax laws;

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- our ability to comply with the regulatory schemes applicable to our business and other regulatory developments in the United States and foreign countries;
- the performance of third-parties upon which we depend, including third-parties involved with clinical trial execution, and third-party suppliers, manufacturers, supply chain and logistics providers;
- our ability to obtain and maintain patent protection and defend our intellectual property rights against third-parties;
- our ability to develop relationships with potential collaborators and development partners;
- our ability to defend any material litigation filed against us and avoid liabilities resulting from any material litigation;
- our ability to recruit or retain key scientific, technical, and management personnel or to retain our executive officers;
- our ability to raise future financing for continued development of our business and our product candidates and to meet any required debt payments, and any milestone payments we may owe;
- the volatility of capital markets and other macroeconomic factors, including inflationary pressures, banking instability issues, geopolitical tensions or the outbreak of hostilities or war;
- our ability to operate under leverage and comply with associated lending covenants; to pay existing required interest and principal amortization payments when due; and/or to obtain acceptable refinancing alternatives;
- our expectations regarding continuing effects of the COVID-19 pandemic, including manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy, and the overall impact of the COVID-19 pandemic on our business, financial condition and results of operations; and
- other risks and uncertainties, including those described or incorporated by reference under the caption “Risk Factors” in this prospectus.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, particularly under “Risk Factors,” that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations or investments we may make.

You should read this prospectus and the documents that we incorporate by reference herein completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus and in the documents we incorporate by reference herein. Because it is only a summary, it does not contain all of the information that you should consider before investing in our securities and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus, any applicable free writing prospectus and the documents incorporated by reference herein. You should read all such documents carefully, especially the risk factors and our consolidated financial statements and the related notes included or incorporated by reference herein, before deciding to buy our securities. Unless the context requires otherwise, references in this prospectus to “Baudax,” “we,” “us” and “our” refer to Baudax Bio, Inc. and our subsidiaries.

Overview

Baudax Bio, Inc. is a biotechnology company focused on developing T cell receptor (“TCR”) therapies utilizing human regulatory T cells (“Tregs”), as well as a portfolio of clinical stage Neuromuscular Blocking Agents (“NMBs”) and an associated reversal agent. Our TCR Treg programs primarily focus on immune modulating therapies for orphan diseases or complications associated with such diseases, as well as the treatment of autoimmune disorders. We believe that our TCR Treg programs have the potential to provide valuable therapeutic options to patients suffering from diseases for which there are limited treatment options and significant unmet need, as well as to prescribers and payers in these markets.

On June 29, 2023, we acquired TeraImmune, a Delaware corporation. TeraImmune was a privately-held biotechnology company focused on discovery and development of novel Treg-based cell therapies for autoimmune diseases. TeraImmune’s proprietary and patented technology platforms include a method for expansion of the Treg without losing its function and stability, as well as a method to target specific receptors including TCRs, Chimeric Antigen Receptors (“CARs”) and B cell Antigen Receptors (“BARs”). TeraImmune has also in-licensed through an exclusive, sublicensable, royalty-bearing license, a patent family covering methods of producing T cell populations enriched for regulatory T cells and cell culture compositions from U.S. Department of Health and Human Services, as represented by National Institute of Allergy and Infectious Diseases of the National Institutes of Health. In addition, TeraImmune has developed Treg manufacturing procedures in accordance with regulatory guidance from the U.S. Food and Drug Administration (“FDA”).

In June 2022, TeraImmune’s Investigational New Drug (“IND”) application to commence clinical trials of a Factor VIII (“FVIII”)TCR-Treg treatment for Hemophilia A with inhibitors was cleared by the FDA.

Tregs are designed to recognize and target certain cells through the engagement of target-specific receptors by peptide antigens presented on the surface of the target cell by the major histocompatibility complex. Our proprietary and patented technology platform consists of two approaches: (1) TREGable™, which involves the isolation of natural Tregs, and (2) TREGing™, which involves engineering effector T (“Teff”) cells into antigen-specific Tregs. Each approach is intended to recognize and attack pathogens while avoiding an attack on healthy cells and tissues. The lead product candidate we acquired in the acquisition with TeraImmune, TI-168, is being developed for the treatment of Hemophilia A with inhibitors, which received IND clearance in 2022. We have in-licensed two patent families relating to TI-168, nucleic acids constructs encoding TCRs, methods of producing TI-168, immunosuppressive induced regulatory T cells from the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. (“HJF”) under two worldwide, exclusive, sublicensable royalty-bearing licenses. We also exclusively license a family of pending U.S. and foreign patent applications directed to immunosuppressive induced regulatory T cells and methods of producing these cells, which if issued would expire in 2041 subject to any applicable disclaimer or extensions.

We also hold exclusive global rights to two new molecular entities, which are centrally acting NMBs, BX1000, an intermediate duration of action NMB that recently completed a successful Phase II clinical trial, and BX2000, an ultra-short acting NMB currently undergoing a Phase I clinical trial. A proprietary blockade reversal agent, BX3000, is currently being evaluated in preclinical studies intended to support an IND filing in 2023. BX3000 is an agent that is expected to rapidly reverse BX1000 and BX2000 blockade. All three agents are licensed from Cornell University. We believe these agents, when an NMB and BX3000 are administered in succession, allow for a rapid onset of centrally acting neuromuscular blockade, followed by a rapid reversal of the neuromuscular blockade with BX3000. These novel agents have the potential to meaningfully reduce time to onset and reversal of blockade and improve the reliability of onset and offset of neuromuscular blockade. This can potentially reduce time in operating rooms or post operative units, resulting in potential clinical and cost advantages, as well as valuable cost savings for hospitals and ambulatory surgical centers and has the potential for an improved clinical profile in terms of safety. Our pipeline also includes other early-stage product candidates, including two novel NMBs and a related proprietary chemical reversal agent and Dex-IN, a proprietary intranasal formulation of dexmedetomidine (“Dex”), an alpha-4 adrenergic agonist that we are evaluating for possible partnering.

In mid-2020, we launched our first commercial product, ANJESO, in the United States. ANJESO was the first and only 24-hour, intravenous, analgesia agent. ANJESO is a cyclooxygenase-2 preferential, non-steroidal anti-inflammatory drug (“NSAID”) for the management of moderate to severe pain, which could be administered alone or in combination with other non-NSAID analgesics. We discontinued commercial sales of ANJESO in December 2022 and further withdrew its New Drug Application (“NDA”) related to ANJESO in late March 2023.

We believe that we can bring valuable therapeutic options for patients suffering from certain orphan diseases and autoimmune disorders for which there are limited treatment options and significant unmet need, and prescribers and payers in these markets, as well as to the acute care and related markets. We believe we can create value for our shareholders through the development, and potential approval and commercialization of TI-168 for treatment of Hemophilia A with inhibitors, as well as our other pipeline product candidates we develop for the treatment of autoimmune disorders utilizing Treg-based therapies. In addition to our Treg pipeline, we continue to modestly progress the NMB and related assets, and will consider select acquisitions, especially those that could contribute revenue and cash flow.

Corporate Information

We were incorporated in Pennsylvania in 2019 and our office headquarters is located at 490 Lapp Road, Malvern, Pennsylvania 19355.

Available Information

Our website address is www.baudaxbio.com. Any information contained on, or that can be accessed through, our website is not incorporated by reference into, nor is it in any way part of this prospectus and should not be relied upon in connection with making any decision with respect to an investment in our securities. We are required to file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (the “SEC”). You may obtain any of the documents filed by us with the SEC, at no cost from the SEC’s website at www.sec.gov.

Implications of Being an Emerging Growth Company

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the “JOBS Act”). We will remain an emerging growth company until December 31, 2024, unless our gross revenue exceeds \$1.07 billion in any fiscal year before that date, we issue more than \$1.0 billion of

non-convertible debt in any three-year period before that date or the market value of our common stock held by non-affiliates exceeds \$700.0 million as of the last business day of the second fiscal quarter of any fiscal year before that date. We have elected to take advantage of certain of the scaled disclosure available for emerging growth companies in this prospectus as well as our filings under the Exchange Act of 1934 (“the Exchange Act”), including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation and financial statements in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote to approve executive compensation and shareholder approval of any golden parachute payments not previously approved. We will take advantage of these reporting exemptions until we are no longer an “emerging growth company.” The JOBS Act provides that an “emerging growth company” can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we are subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

Risks Associated with this Offering

This offering is subject to numerous risks and uncertainties, including those highlighted in the section entitled “Risk Factors” immediately following this prospectus summary and the similarly titled sections in the documents incorporated by reference into this prospectus. These risks include, but are not limited to, the following:

Risks Related to this Offering

- It is not possible to predict the actual number of shares we will sell under the Purchase Agreement to the Selling Shareholder, or the actual gross proceeds resulting from those sales.
- Investors who buy shares in this offering at different times will likely pay different prices.
- The issuance of common stock to the Selling Shareholder may cause substantial dilution to our existing shareholders and the sale of such shares acquired by the Selling Shareholder could cause the price of our common stock to decline.
- Future sales of our common stock could cause the market price for our common stock to decline.
- Our management will have broad discretion over the use of the net proceeds from our sale of shares of common stock to Alumni Capital, you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Risks Related to Our Finances and Capital Requirements

- Our losses, negative cash flows from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern absent obtaining adequate new debt or equity financings.
- If we are unable to meet the initial listing standards of Nasdaq by November 13, 2023, or otherwise regain compliance with the listing standards of Nasdaq, our common stock may become delisted, which could have a material adverse effect on the liquidity of our common stock and our ability to raise capital.

THE ALUMNI CAPITAL TRANSACTION

On August 23, 2023, we entered into the Purchase Agreement with Alumni Capital. Pursuant to the Purchase Agreement, we may sell to Alumni Capital up to \$50,000,000 (the “Investment Amount”), of shares (the “Purchase Notice Shares”) of common stock, from time to time during the term of the Purchase Agreement. The Purchase Agreement contains customary representations, warranties, conditions and indemnification obligations of the parties. Pursuant to the Purchase Agreement, we also agreed to file a registration statement with the SEC, covering the resale of shares of common stock issued or sold to Alumni Capital under the Purchase Agreement under the Securities Act of 1933, as amended (the “Securities Act”) (the “Registration Statement”).

In consideration for Alumni Capital’s execution and delivery of the Purchase Agreement, and subject to applicable rules of the Nasdaq Stock Market LLC (“Nasdaq”), we are obligated to issue to Alumni Capital shares of our Common Stock (the “Commitment Shares”) in a total amount equal to 2% of the Investment Amount (the “Commitment Amount”) as follows: (i) 10% of the Commitment Amount divided by the closing price of our common stock on September 21, 2023 (“Commitment Date”), on the Commitment Date, (ii) 10% of the Commitment Amount divided by the closing price of the common stock on the Commitment Date, after the later of (a) the effectiveness of the Registration Statement or (b) the Commitment Date and (iii) 80% of the Commitment Amount divided by the closing price of the common stock on the Commitment Date, immediately following shareholder approval of the issuance of all of the Purchase Notice Shares and Commitment Shares, which together are in excess of 19.99% of the shares of the common stock outstanding immediately prior to the execution of the Purchase Agreement.

We cannot sell any additional shares to Alumni Capital until the date that the Registration Statement is declared effective by the SEC and a final prospectus in connection therewith is filed and all of the other conditions set forth in the Purchase Agreement are satisfied (such date, the “Commencement Date”).

Under the applicable rules of Nasdaq, in no event may we issue more than 1,794,170 shares of common stock (including the Commitment Shares), which represents 19.99% of the shares of the common stock outstanding immediately prior to the execution of the Purchase Agreement (the “Exchange Cap”), to Alumni Capital under the Purchase Agreement, unless we obtain shareholder approval to issue shares of common stock in excess of the Exchange Cap, provided further that the Exchange Cap does not apply to the extent the purchase price is equal to or exceeds \$0.4515 (the “Minimum Price”). We intend to seek shareholder approval to issue shares of common stock in excess of the Exchange Cap.

Beginning on the Commencement Date and until December 31, 2024, under the terms and subject to the conditions of the Purchase Agreement, from time to time, at our discretion, we have the right, but not the obligation, to issue to Alumni Capital, and Alumni Capital is obligated to purchase, the Purchase Notice Shares, subject to certain limitations set forth in the Purchase Agreement. Specifically, from time to time, from and after the Commencement Date, we may, at its discretion, direct Alumni Capital to purchase the Purchase Notice Shares on any single business day on which the closing price of its common stock on The Nasdaq Capital Market is equal to or greater than \$0.25 for no amount less than \$100,000 in shares of common stock and no greater than \$1,000,000 in shares of common stock (\$2,000,000 for the initial purchase thereunder), unless waived upon mutual discretion between us and Alumni Capital, up to an amount no greater than \$5,000,000. The purchase price in respect of any purchase notice shall equal the lowest traded price of the common stock during the five business days prior to the closing of any purchase thereunder, multiplied by 90%.

The Purchase Agreement also prohibits us from directing Alumni Capital to purchase any shares of common stock if those shares, when aggregated with all other shares of common stock then beneficially owned by Alumni Capital and its affiliates, would result in Alumni Capital and its affiliates having beneficial ownership, at any single point in time, of more than 9.99% of the then total outstanding shares of common stock.

We may terminate the Purchase Agreement at any time, without any cost or penalty, upon written notice to Alumni Capital. The Purchase Agreement does not include any of the following: (i) limitations on our use of amounts we receive as the purchase price for shares of common stock sold to Alumni Capital; (ii) financial or business covenants; (iii) restrictions on future financings (other than restrictions on its ability to enter into other equity line of credit transactions or transactions that are similar thereto); (iv) rights of first refusal; or (v) participation rights or penalties.

As of August 23, 2023, immediately prior to the entry into the Purchase Agreement, there were 8,975,340 shares of our common stock outstanding. Although the Purchase Agreement provides that we may sell up to an aggregate of \$50,000,000 of shares of our common stock to Alumni Capital, only 15,000,000 shares of our common stock are being registered for resale under this prospectus, which represents (i) the Commitment Shares we will issue to Alumni Capital, excluding Commitment Shares that only become issuable upon approval by our shareholders of issuances of our common stock in excess of the Exchange Cap, (ii) shares of our common stock that we may issue and sell to Alumni Capital in the future under the Purchase Agreement in accordance with the Exchange Cap, if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement, (iii) additional Commitment Shares that only become issuable upon approval by our shareholders of issuances in excess of the Exchange Cap, and (iv) shares in excess of the Exchange Cap to the extent such shares are sold above the Minimum Price or our shareholders approve us issuing shares in excess of the Exchange Cap, if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell shares of our common stock to Alumni Capital under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our common stock in order to receive aggregate gross proceeds equal to the \$50,000,000 total commitment available to us under the Purchase Agreement. If all of such 15,000,000 shares of our common stock offered hereby were issued and outstanding as of the date of this prospectus, such shares would represent approximately % of the total number of outstanding shares of common stock, and approximately % of the total number of outstanding shares of common stock held by non-affiliates, in each case as of the date of this prospectus. If we elect to issue and sell to Alumni Capital under the Purchase Agreement more than the 15,000,000 shares of our common stock being registered for resale by Alumni Capital under this prospectus (assuming we have the right to do so under Nasdaq rules), which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares of our common stock, which could cause additional substantial dilution to our shareholders. The number of shares of our common stock ultimately offered for sale by Alumni Capital is dependent upon the number of shares purchased by Alumni Capital under the Purchase Agreement.

Issuances of our common stock to Alumni Capital under the Purchase Agreement will not affect the rights or privileges of our existing shareholders, except that the economic and voting interests of each of our existing shareholders will be diluted as a result of any such issuance. Although the number of shares of our common stock that our existing shareholders own will not decrease, the shares of our common stock owned by our existing shareholders will represent a smaller percentage of our total outstanding shares of our common stock after any such issuance of shares of our common stock to Alumni Capital under the Purchase Agreement. There are substantial risks to our shareholders as a result of the sale and issuance of common stock to Alumni Capital under the Purchase Agreement. See “Risk Factors.”

THE OFFERING

Common stock offered by the Selling Shareholder	<p>This prospectus covers the resale of a total of up to 15,000,000 shares of our common stock, consisting of:</p> <ul style="list-style-type: none"> • shares of common stock, which represent the Commitment Shares; and • additional shares of common stock that we may sell to Alumni Capital pursuant to the Purchase Agreement from time to time after the registration statement that includes this prospectus is declared effective.
Offering price	The Selling Shareholder will sell the shares at the prevailing market prices or privately negotiated prices.
Common stock outstanding immediately before this offering	9,177,340 shares of common stock
Common stock outstanding after this offering:	24,177,340 shares of common stock.
Use of proceeds	<p>The Selling Shareholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the Selling Shareholder. However, we may receive proceeds of up to \$50.0 million from the sale of our common stock to the Selling Shareholder under the Purchase Agreement described above. Any proceeds from the Selling Shareholder that we receive under the Purchase Agreement are expected to be used for general corporate purposes, including working capital. See “Use of Proceeds” on page 23 of this prospectus.</p>
Risk factors	See “Risk Factors” beginning on page 12 and the similarly titled sections in the documents incorporated by reference into this prospectus.
Nasdaq Capital Market Symbol	Our common stock is listed on the Nasdaq Capital Market under the symbol “BXR.X.”
<p>Except as otherwise indicated herein, the number of shares of our common stock to be outstanding after this offering is based on 9,177,340 shares of common stock outstanding as of September 1, 2023, which excludes:</p> <ul style="list-style-type: none"> • 974,824 shares of our common stock issuable upon the exercise of stock options outstanding, at a weighted-average exercise price of \$7.78 per share; • 2,667 shares of our common stock issuable upon the vesting and settlement of restricted stock units outstanding; • 19,220 shares of our common stock available for future issuance under our 2019 Equity Incentive Plan; 	

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- 13,239,805 shares of our common stock issuable upon the exercise of warrants outstanding as of September 1, 2023, with a weighted-average exercise price of \$ 2.46 per share;
- 1,193,243 shares of our common stock issuable upon the exercise of pre-funded warrants outstanding as of September 1, 2023, with a weighted-average exercise price of \$0.01 per share;
- 27,089,719 shares of our common stock issuable upon conversion of our Series X Preferred Stock, subject to shareholder approval of such conversion; and
- 314,282 shares of our common stock held in escrow in connection with the acquisition of TeraImmune.

Unless otherwise indicated, all information contained in this prospectus assumes no exercise of the outstanding options or warrants, and no settlement of the restricted stock units described in the bullets above.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risks described below and those discussed under the Section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2022, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K, each as filed with the SEC and which are incorporated by reference in this prospectus, together with other information in this prospectus, the information and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section above entitled "Forward-Looking Statements."

Risks Related to This Offering

It is not possible to predict the actual number of shares we will sell under the Purchase Agreement to the Selling Shareholder, or the actual gross proceeds resulting from those sales.

Subject to certain limitations in the Purchase Agreement and compliance with applicable law, we have the discretion to deliver notices to the Selling Shareholder at any time throughout the term of the Purchase Agreement. The actual number of shares of common stock that are sold to the Selling Shareholder may depend based on a number of factors, including the market price of our common stock during the sales period. Actual gross proceeds may be less than \$50.0 million, which may impact our future liquidity. Because the price per share of each share sold to the Selling Shareholder will fluctuate during the sales period, it is not currently possible to predict the number of shares that will be sold or the actual gross proceeds to be raised in connection with those sales.

Investors who buy shares in this offering at different times will likely pay different prices.

Investors who purchase shares of common stock in this offering at different times will likely pay different prices, and so may experience different levels of dilution and different outcomes in their investment results. In connection with the Alumni Capital Transaction, we will have discretion, subject to market demand, to vary the timing, prices, and numbers of Shares sold to Alumni Capital. Similarly, Alumni Capital may sell such shares at different times and at different prices. Investors may experience a decline in the value of the shares they purchase from the Selling Shareholder in this offering as a result of sales made by us in future transactions to Alumni Capital at prices lower than the prices they paid.

The issuance of common stock to the Selling Shareholder may cause substantial dilution to our existing shareholders and the sale of such shares acquired by the Selling Shareholder could cause the price of our common stock to decline.

We are registering for resale by the Selling Shareholder up to 15,000,000 shares of common stock. The number of shares of our common stock ultimately offered for resale by the Selling Shareholder under this prospectus is dependent upon the number of shares of common stock issued to the Selling Shareholder pursuant to the Purchase Agreement. Depending on a variety of factors, including market liquidity of our common stock, the issuance of shares to the Selling Shareholder may cause the trading price of our common stock to decline.

The sale of a substantial number of shares of our common stock by the Selling Shareholder in this offering, or anticipation of such sales, could cause the trading price of our common stock to decline or make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire.

The market price for our common stock has been volatile and may continue to fluctuate or may decline significantly in the future.

An active, liquid and orderly market for our common stock may not be sustained, which could depress the trading price of our common stock or cause it to continue to be highly volatile or subject to wide fluctuations.

Some of the factors that could negatively affect our share price or result in fluctuations in the price or trading volume of our common stock include, among other things:

- if we are unable to obtain shareholder approval for the conversion of our Series X Preferred Stock by December 29, 2023, then the holders of our Series X Preferred Stock may demand cash settlement upon attempted conversions. And then we may not have sufficient capital to funds our operations;
- there is no guarantee that the acquisition TeraImmune by us will increase shareholder value or that TeraImmune will be successfully integrated into our operations or achieve its desired benefits;
- we may be unsuccessful in obtaining a waiver or amendment to our credit agreement with respect to any existing events of default thereunder;
- the commencement, enrollment, or results of our current and future preclinical studies and clinical trials, and the results of trials of our competitors or those of other companies in our market sector;
- regulatory approval of our product candidates, or limitations to specific label indications or patient populations for its use, or changes or delays in the regulatory review process;
- manufacturing, supply or distribution delays or shortages;
- our ability to identify and successfully acquire orin-license new product candidates on acceptable terms;
- FDA, state or international regulatory actions, including actions on regulatory applications any of our product candidates;
- legislative or regulatory changes;
- judicial pronouncements interpreting laws and regulations;
- changes in government programs;
- announcements of new products, services or technologies, commercial relationships, acquisitions or other events by us or our competitors;
- market conditions in the pharmaceutical and biotechnology sectors;
- fluctuations in stock market prices and trading volumes of similar companies;
- changes in accounting principles;
- litigation or public concern about the safety of our product candidates or similar product candidates;
- sales of large blocks of our common stock, including sales by our executive officers, directors and significant shareholders;
- our ability to obtain additional financing to advance our development operations;
- our announcement of financing transactions, including debt, convertible notes, warrant exchanges, etc.;
- our ability to regain and maintain compliance with the listing standard of the Nasdaq;
- the continued negative effects of the COVID-19 pandemic on the global economy; and
- actions by institutional shareholders.

These broad market and industry factors may decrease the market price of our common stock, regardless of our actual operating performance. The stock market in general has from time to time experienced extreme price and volume fluctuations, including recently. For example, on March 10, 2023, the Federal Deposit Insurance Corporation took control and was appointed receiver of Silicon Valley Bank (“SVB”). The financing uncertainty pharmaceutical, biotechnology and medical technology companies may now face as a result of SVB’s entry into receivership may cause significant volatility with respect to pharmaceutical, biotechnology, and medical technology company stocks, which in turn could negatively impact the trading price of our common stock. In addition, in the past, following periods of volatility in the overall market and decreases in the market price of a company’s securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management’s attention and resources.

Our management will have broad discretion over the use of the net proceeds from our sale of shares of common stock to Alumni Capital, and you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management will have broad discretion with respect to the use of proceeds from the sale of any shares of our common stock to Alumni Capital, including for any of the purposes described in the section of this prospectus entitled “Use of Proceeds.” You will be relying on the judgment of our management regarding the application of the proceeds from the sale of any shares of our common stock to Alumni Capital. The results and effectiveness of the use of proceeds are uncertain, and we could spend the proceeds in ways that you do not agree with or that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could harm our business, delay the development of our pipeline product candidates and cause the price of our common stock to decline.

Risks Related to Our Finances and Capital Requirements

Our losses, negative cash flows from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern absent obtaining adequate new debt or equity financings.

Management has concluded that substantial doubt exists about our ability to continue as a going concern for the next twelve months from the date hereof. As of June 30, 2023, we had an accumulated deficit of \$187 million, cash and cash equivalents of \$1.4 million and current liabilities of \$20.5 million. In addition, on August 21, 2023, we raised an additional \$1.6 million in cash in connection with the completion of our public offering of shares of our common stock, or pre-funded warrants in lieu thereof, and concurrent private placement of Series A-7 Warrants. Based on available resources, we believe that, our cash and cash equivalents on hand would be sufficient to fund our currently anticipated operating and capital requirements through the third quarter of 2023, however, our current capital resources are not sufficient to support our planned operations for the next twelve months from the date hereof.

We expect to continue to incur losses for the foreseeable future as we continue our efforts to develop our current and future product candidates. We have also incurred significant indebtedness. As of June 30, 2023, we had an outstanding balance of \$4.3 million under our credit facility with MAM Eagle Lender, LLC. These factors, individually and collectively, raise substantial doubt about our ability to continue as a going concern, and therefore, could materially limit our ability to raise additional funds through an issuance of debt or equity securities or otherwise.

There can be no assurance that we will be able to raise sufficient additional capital on acceptable terms or at all. Additionally, if we are unable to regain compliance with the listing standards of Nasdaq, our common stock may become delisted, which could have a material adverse effect on the liquidity of our common stock and our ability to raise funding. If such additional financing is not available on satisfactory terms, or is not available in sufficient amounts, we may be required to delay, limit or eliminate the development of business opportunities and our

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ability to achieve our business objectives, our competitiveness, and our business, financial condition and results of operations will be materially adversely affected. In addition, the perception that we may not be able to continue as a going concern may cause others to choose not to deal with us due to concerns about our ability to meet our contractual obligations.

Our forecast of the period of time through which our financial resources will be adequate to support our operating requirements is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this “Risk Factors” section and Part I, Item 1A “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on February 23, 2023 and in our Quarterly Reports for the period ended March 31, 2023 and June 30, 2023 filed with the SEC on May 11, 2023 and August 16, 2023, respectively. We have based this estimate on a number of assumptions that may prove to be wrong and changing circumstances beyond our control may cause us to consume capital more rapidly than we currently anticipate. Our inability to obtain additional funding when we need it could seriously harm our business.

If we are unable to meet the initial listing standards of Nasdaq by November 13, 2023, or otherwise regain compliance with the listing standards of Nasdaq, our common stock may become delisted, which could have a material adverse effect on the liquidity of our common stock and our ability to raise capital.

The listing standards of Nasdaq provide, among other things, that a company, in order to qualify for continued listing, must (i) maintain shareholders’ equity of at least \$2,500,000 pursuant to Nasdaq Listing Rule 5550(b)(1) (“Rule 5550(b)(1)”), and (ii) maintain a minimum bid price of at least \$1.00 per share pursuant to Nasdaq Listing Rule 5550(a)(2) (“Rule 5550(a)(2)”).

On November 18, 2022, the Nasdaq Listing Qualifications Department (the “Staff”), informed us that we did not comply with Rule 5550(b)(1). The Staff granted our request for an extension until May 15, 2023, to comply with Rule 5550(b)(1). On May 17, 2023, we received a delist determination letter from the Staff advising us that the Staff had determined that we did not meet the terms of such extension. We requested an appeal of the Staff’s determination and submitted a hearing request to the Nasdaq Hearings Panel (the “Panel”), which request stayed any delisting action by the Staff at least until the hearing process concludes and any extension granted by the Panel expires.

On June 9, 2023, we received a deficiency letter from the Staff notifying us that we are not in compliance with Rule 5550(a)(2) and because we effected two reverse stock splits over the previous two-year period with a cumulative ratio of 250 shares or more to one, we are not eligible for any compliance period specified in Nasdaq Listing Rule 5810(c)(3)(A). Our noncompliance with Rule 5550(a)(2) serves as an additional basis for delisting of our securities from the Nasdaq and the Panel will consider this matter in rendering a determination regarding the our continued listing on the Nasdaq. On June 29, 2023, our hearing with the Panel was held and we submitted our plan for compliance to the Panel. On July 24, 2023, we received a letter from the Staff (the “Hearing Decision”), notifying us of its decision to grant our request to continue our listing on Nasdaq on a conditional basis, subject to, among other things, our ability to demonstrate compliance with the Nasdaq initial listing requirements by or before November 13, 2023. There can be no assurance that we will meet the conditions set forth by the Staff in the Hearing Decision, or that we will be able to regain compliance with such applicable Nasdaq listing requirements.

Furthermore, we believe that our acquisition of TeraImmune will, upon shareholder approval of the conversion of the Series X Preferred Stock into shares of common stock in accordance with Nasdaq Listing Rule 5635(a), be considered a “change of control” transaction under Nasdaq rules. As such, we must meet Nasdaq’s initial listing requirements. Accordingly, we must meet all the requirements set forth in Nasdaq Listing Rule 5505(a) and at least one of the standards set forth in Nasdaq Listing Rule 5505(b).

The listing standards of Nasdaq Listing Rule 5505(a) require us to have, among other things:

- a minimum bid price that is greater than or equal to \$4.00 per share;

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- at least 1,000,000 unrestricted publicly held shares;
- at least 300 round-lot holders, and at least 50% of such round lot holders must each hold unrestricted securities with a market value of at least \$2,500;
- at least three registered and active market makers; and
- a minimum average daily trading volume of 2,000 shares over the 30 trading day period prior to listing, with trading occurring on more than half of those 30 days, unless such security is listed on Nasdaq in connection with a firm commitment underwritten public offering of at least \$4 million.

We must also satisfy at least one of the following Nasdaq Listing Rule 5505(b) requirements:

- shareholders' equity of at least \$5 million, a market value of unrestricted publicly held shares of at least \$15 million, and two years of operating history;
- a market value of listed securities of at least \$50 million, shareholders' equity of at least \$4 million, and a market value of unrestricted publicly held shares of at least \$15 million; or
- net income from continuing operations of \$750,000 in the most recently completed fiscal year or in two of the three most recently completed fiscal years, shareholders' equity of at least \$4 million, and a market value of unrestricted publicly held shares of at least \$5 million.

There is no assurance that we will be able to meet Nasdaq's initial listing requirements or comply with the requisite Nasdaq requirements to maintain our listing of common stock on Nasdaq. If Nasdaq delists our securities from trading on its exchange and we are not able to list our securities on Nasdaq or any other national securities exchange, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our common stock;
- reduced liquidity for our common stock;
- a determination that our common stock is a "penny stock," which will require brokers trading in our common stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for its securities;
- a limited amount of news and analyst coverage for us;
- a decreased ability to issue additional securities or obtain additional financing in the future; and
- the incurring of additional costs under state blue sky laws in connection with any sales of our securities.

If our common stock is delisted by Nasdaq, our common stock may be eligible to trade on an over-the-counter quotation system, such as the OTCQB Market, where an investor may find it more difficult to sell our stock or obtain accurate quotations as to the market value of our common stock. In the event our common stock is delisted from Nasdaq, we may not be able to list our common stock on another national securities exchange or obtain quotation on an over-the counter quotation system.

THE ALUMNI CAPITAL TRANSACTION

On August 23, 2023, we entered into the Purchase Agreement with Alumni Capital. Pursuant to the Purchase Agreement, we may sell to Alumni Capital up to \$50,000,000 (the “Investment Amount”), of shares (the “Purchase Notice Shares”) of common stock, from time to time during the term of the Purchase Agreement. The Purchase Agreement contains customary representations, warranties, conditions and indemnification obligations of the parties. Pursuant to the Purchase Agreement, we also agreed to file a registration statement with the SEC, covering the resale of shares of common stock issued or sold to Alumni Capital under the Purchase Agreement under the Securities Act (the “Registration Statement”).

In consideration for Alumni Capital’s execution and delivery of the Purchase Agreement, and subject to applicable rules of the Nasdaq Stock Market LLC (“Nasdaq”), we are obligated to issue to Alumni Capital shares of our Common Stock (the “Commitment Shares”) in a total amount equal to 2% of the Investment Amount (the “Commitment Amount”) as follows: (i) 10% of the Commitment Amount divided by the closing price of our common stock on September 21, 2023 (“Commitment Date”), on the Commitment Date, (ii) 10% of the Commitment Amount divided by the closing price of the common stock on the Commitment Date, after the later of (a) the effectiveness of the Registration Statement or (b) the Commitment Date and (iii) 80% of the Commitment Amount divided by the closing price of the common stock on the Commitment Date, immediately following shareholder approval of the issuance of all of the Purchase Notice Shares and Commitment Shares, which together are in excess of 19.99% of the shares of the common stock outstanding immediately prior to the execution of the Purchase Agreement.

We cannot sell any additional shares to Alumni Capital until the date that the Registration Statement is declared effective by the SEC and a final prospectus in connection therewith is filed and all of the other conditions set forth in the Purchase Agreement are satisfied (such date, the “Commencement Date”).

Under the applicable rules of Nasdaq, in no event may we issue more than 1,794,170 shares of common stock (including the Commitment Shares), which represents 19.99% of the shares of the common stock outstanding immediately prior to the execution of the Purchase Agreement (the “Exchange Cap”), to Alumni Capital under the Purchase Agreement, unless we obtain shareholder approval to issue shares of common stock in excess of the Exchange Cap, provided further that the Exchange Cap does not apply to the extent the purchase price is equal to or exceeds \$0.4515 (the “Minimum Price”). We intend to seek shareholder approval to issue shares of common stock in excess of the Exchange Cap.

Beginning on the Commencement Date and until December 31, 2024, under the terms and subject to the conditions of the Purchase Agreement, from time to time, at our discretion, we have the right, but not the obligation, to issue to Alumni Capital, and Alumni Capital is obligated to purchase, the Purchase Notice Shares, subject to certain limitations set forth in the Purchase Agreement. Specifically, from time to time, from and after the Commencement Date, we may, at its discretion, direct Alumni Capital to purchase the Purchase Notice Shares on any single business day on which the closing price of its common stock on The Nasdaq Capital Market is equal to or greater than \$0.25 for no amount less than \$100,000 in shares of common stock and no greater than \$1,000,000 in shares of common stock (\$2,000,000 for the initial purchase thereunder), unless waived upon mutual discretion between us and Alumni Capital, up to an amount no greater than \$5,000,000. The purchase price in respect of any purchase notice shall equal the lowest traded price of the common stock during the five business days prior to the closing of any purchase thereunder, multiplied by 90%.

The Purchase Agreement also prohibits us from directing Alumni Capital to purchase any shares of common stock if those shares, when aggregated with all other shares of common stock then beneficially owned by Alumni Capital and its affiliates, would result in Alumni Capital and its affiliates having beneficial ownership, at any single point in time, of more than 9.99% of the then total outstanding shares of common stock.

We may terminate the Purchase Agreement at any time, without any cost or penalty, upon written notice to Alumni Capital. The Purchase Agreement does not include any of the following: (i) limitations on our use of

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amounts we receive as the purchase price for shares of common stock sold to Alumni Capital; (ii) financial or business covenants; (iii) restrictions on future financings (other than restrictions on its ability to enter into other equity line of credit transactions or transactions that are similar thereto); (iv) rights of first refusal; or (v) participation rights or penalties.

As of August 23, 2023, immediately prior to the entry into the Purchase Agreement, there were 8,975,340 shares of our common stock outstanding. Although the Purchase Agreement provides that we may sell up to an aggregate of \$50,000,000 of shares of our common stock to Alumni Capital, only 15,000,000 shares of our common stock are being registered for resale under this prospectus, which represents (i) the Commitment Shares we will issue to Alumni Capital, excluding Commitment Shares that only become issuable upon approval by our shareholders of issuances of our common stock in excess of the Exchange Cap, (ii) shares of our common stock that we may issue and sell to Alumni Capital in the future under the Purchase Agreement in accordance with the Exchange Cap, if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement, (iii) additional Commitment Shares that only become issuable upon approval by our shareholders of issuances in excess of the Exchange Cap, and (iv) shares in excess of the Exchange Cap to the extent such shares are sold above the Minimum Price or our shareholders approve us issuing shares in excess of the Exchange Cap, if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell shares of our common stock to Alumni Capital under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our common stock in order to receive aggregate gross proceeds equal to the \$50,000,000 total commitment available to us under the Purchase Agreement. If all of such 15,000,000 shares of our common stock offered hereby were issued and outstanding as of the date of this prospectus, such shares would represent approximately % of the total number of outstanding shares of common stock, and approximately % of the total number of outstanding shares of common stock held by non-affiliates, in each case as of the date of this prospectus. If we elect to issue and sell to Alumni Capital under the Purchase Agreement more than the 15,000,000 shares of our common stock being registered for resale by Alumni Capital under this prospectus (assuming we have the right to do so under Nasdaq rules), which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares of our common stock, which could cause additional substantial dilution to our shareholders. The number of shares of our common stock ultimately offered for sale by Alumni Capital is dependent upon the number of shares purchased by Alumni Capital under the Purchase Agreement.

Issuances of our common stock to Alumni Capital under the Purchase Agreement will not affect the rights or privileges of our existing shareholders, except that the economic and voting interests of each of our existing shareholders will be diluted as a result of any such issuance. Although the number of shares of our common stock that our existing shareholders own will not decrease, the shares of our common stock owned by our existing shareholders will represent a smaller percentage of our total outstanding shares of our common stock after any such issuance of shares of our common stock to Alumni Capital under the Purchase Agreement. There are substantial risks to our shareholders as a result of the sale and issuance of common stock to Alumni Capital under the Purchase Agreement. See “Risk Factors.”

Conditions to Commencement and for Delivery of Fixed Purchase Notices

Our ability to deliver purchase notices to Alumni Capital under the Purchase Agreement are subject to the satisfaction by us, of certain conditions, all of which are entirely outside of Alumni Capital’s control, including, but not limited to, the following:

- the accuracy in all material respects of our representations and warranties included in the Purchase Agreement on the date of the Purchase Agreement and the date of each closing of a purchase and sale under the Purchase Agreement of;
- we having performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Purchase Agreement to be performed, satisfied or complied with by us;

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- the registration statement that includes this prospectus (and amendment or supplement thereto) shall remain effective for the offering and sale of the shares and (i) we shall not have received notice that the SEC has issued or intends to issue a stop order with respect to such registration statement or that the SEC otherwise has suspended or withdrawn the effectiveness of such registration statement, either temporarily or permanently, or intends or has threatened to do so and (ii) no other suspension of the use of, or withdrawal of the effectiveness of, such registration statement or the prospectus shall exist. Alumni Capital shall not have received any notice from us that the registration statement, prospectus and/or any prospectus supplement or amendment thereto fails to meet the requirements of Section 5(b) or Section 10 of the Securities Act;
- the number of shares then to be purchased by Alumni Capital shall not exceed the number of such shares that, when aggregated with all other shares of common stock then owned by the Alumni Capital beneficially or deemed beneficially owned by Alumni Capital, would result in Alumni Capital owning more than the Beneficial Ownership Limitation;
- trading in the common stock shall not have been suspended by the SEC or the Nasdaq, or otherwise halted for any reason, and the common stock shall have been approved for listing or quotation on and shall not have been delisted from or no longer quoted on the Nasdaq.
- the issuance of shares of common stock to Alumni Capital, including the Commitment Shares, shall not exceed the Exchange Cap if applicable, subject to appropriate adjustment for any stock dividend, stock split, stock combination, rights offerings, reclassification or similar transaction that proportionately decreases or increases the common stock) unless holders of a majority of our outstanding voting common stock that are present or represented by proxy at a meeting, to effectuate the transactions contemplated by the Purchase Agreement;
- the absence of any statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or adopted by any court or governmental authority of competent jurisdiction that prohibits or directly and materially adversely affects any of the transactions contemplated by the Purchase Agreement and the exhibits thereto, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by the Purchase Agreement and the exhibits thereto;
- the common stock must be DWAC Eligible and not subject to a “DTC chill”;
- the issuance of the Purchase Notice Shares shall not violate the shareholder approval requirements of Nasdaq;
- the absence of any event having an effect on our business, operations, properties, or financial condition that is material and adverse to us and/or any condition, circumstance, or situation that would prohibit or otherwise materially interfere with our ability to enter into and perform our obligations under any Purchase Agreement shall have occurred or be reasonably likely to occur; and
- all reports, schedules, registrations, forms, statements, information and other documents required to have been filed by us with the SEC pursuant to the reporting requirements of the Exchange Act shall have been filed with the SEC.

Termination of the Purchase Agreement

Unless earlier terminated as provided in the Purchase Agreement, the Purchase Agreement will terminate automatically on the earliest to occur of:

- December 31, 2024;
- the date on which Alumni Capital shall have purchased Shares for an aggregate purchase price of the Investment Amount; or

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- the date on which we commence a voluntary bankruptcy case or any third party commences a bankruptcy proceeding against us, a custodian is appointed us in a bankruptcy proceeding for all or substantially all of its property, or we make a general assignment for the benefit of its creditors.

We have the right to terminate the Purchase Agreement at any time, at no cost or penalty, except during any time that Alumni Capital holds any Purchase Notice Shares.

No Short-Selling or Hedging by Alumni Capital

Alumni Capital has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling our common stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on our Shareholders

All shares registered in this offering that may be issued or sold by us to Alumni Capital under the Purchase Agreement are expected to be freely tradable. The resale by Alumni Capital of a significant number of shares registered in this offering at any given time, or the perception that these sales may occur, could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock to Alumni Capital, if any, will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Alumni Capital all, some or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Alumni Capital, after Alumni Capital has acquired the shares, Alumni Capital may resell all, some or none of those shares of common stock at any time or from time to time in its discretion. Therefore, sales to Alumni Capital by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares to Alumni Capital under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Alumni Capital may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of Shares to Alumni Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us, subject to certain conditions.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Alumni Capital to purchase up to \$50,000,000 of our common stock, subject to certain limitations. If we elect to issue and sell to Alumni Capital under the Purchase Agreement more than the 15,000,000 shares of our common stock being registered for resale by Alumni Capital under this prospectus (assuming we have the right to do so under Nasdaq rules), which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares of our common stock, which could cause additional substantial dilution to our shareholders. The number of shares of our common stock ultimately offered for sale by Alumni Capital is dependent upon the number of shares purchased by Alumni Capital under the Purchase Agreement.

The following table sets forth the amount of gross proceeds we would receive from Alumni Capital from our sale of shares of common stock to Alumni Capital under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase⁽¹⁾	Percentage of Outstanding Shares Issued After Giving Effect to the Issuance to Alumni Capital⁽²⁾	Gross Proceeds from the Sale of Shares to Alumni Capital Under the Purchase Agreement
\$0.35	1,794,170 ⁽³⁾	16.7%	\$
\$0.40	1,794,170 ⁽³⁾	16.7%	\$
\$0.4515	15,000,000	62.56%	\$
\$0.50	15,000,000	62.56%	\$
\$0.55	15,000,000	62.56%	\$
\$0.60	15,000,000	62.56%	\$
\$0.65	15,000,000	62.56%	\$

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- (1) Although the Purchase Agreement provides that we may sell up to \$50,000,000 of our common stock to Alumni Capital, we are only registering 15,000,000 shares under this prospectus, which represents (i) the Commitment Shares we will issue to Alumni Capital, excluding Commitment Shares that only become issuable upon approval by our shareholders of issuances in excess of the Exchange Cap, (ii) shares of our common stock that we may issue and sell to Alumni Capital in the future under the Purchase Agreement in accordance with the Exchange Cap, if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement, (iii) additional Commitment Shares that only become issuable upon approval by our shareholders of issuances in excess of the Exchange Cap, and (iv) shares in excess of the Exchange Cap to the extent such shares are sold above the Minimum Price if and when we elect to sell shares of our common stock to Alumni Capital under the Purchase Agreement. The number of registered shares to be issued as set forth in this column (A) is without regard for the Exchange Cap and (B) includes the Commitment Shares to be issued to Alumni Capital upon the effectiveness of this Registration Statement, for which we will receive no proceeds.
- (2) The denominator is based on 8,975,340 shares of our common stock outstanding as of August 23, 2023, which includes the number of shares set forth in the adjacent column that we would have issued or sold to Alumni Capital, assuming the average purchase price in the first column. The numerator is based on the number of shares of our common stock issuable under the Purchase Agreement (that are the subject of this offering) at the corresponding assumed average purchase price set forth in the first column.
- (3) If our shareholders approve us issuing shares of common stock in excess of the Exchange Cap at below the Minimum Price, this number shall be increased to 15,000,000. We intend to seek shareholder approval to allow us to sell stock under the Purchase Agreement in excess of the Exchange Cap at below the Minimum Price.

USE OF PROCEEDS

This prospectus relates to shares of common stock that may be offered and sold from time to time by Alumni Capital. We will not receive any proceeds from the resale of shares of common stock by Alumni Capital.

We may receive up to \$50,000,000 in gross proceeds if we issue to Alumni Capital Shares issuable pursuant to the Purchase Agreement. We estimate that the net proceeds to us from the sale of our common stock to Alumni Capital pursuant to the Purchase Agreement would be up to \$49,814,289, assuming that we sell the full amount of our common stock that we have the right, but not the obligation, to sell to Alumni Capital under the Purchase Agreement, and after other estimated fees and expenses. See “Plan of Distribution” elsewhere in this prospectus for more information.

Any proceeds from the Selling Shareholder that we receive under the Purchase Agreement are currently expected to be used primarily for general corporate purposes, including working capital. These expected uses represent our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, as well as any new collaborations that we may enter into with third parties for our product candidates, the commercialization of our products or our product candidates, if approved, and any unforeseen cash needs. As a result, our management will have broad discretion in the application of the net proceeds from this offering, and the investors will be relying on the judgment of our management regarding the application of the net proceeds from this offering. As we are unable to predict the timing or amount of potential issuances of all of the additional shares of common stock issuable pursuant to the Purchase Agreement, we cannot specify with certainty all of the particular uses for the net proceeds that we will have from the sale of such additional shares. We may use the proceeds for purposes that are not contemplated at the time of this offering. It is possible that no shares will be issued under the Purchase Agreement other than the Commitment Shares.

We will incur all costs associated with this prospectus and the registration statement of which it is a part.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and our ability to pay cash dividends is currently restricted by the terms of our credit facility with MAM Eagle Lender, LLC. We currently intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay dividends on our common stock will be made at the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, financial condition, future prospects, anticipated cash needs, plans for expansion and any other factors deemed relevant by our board of directors.

SELLING SHAREHOLDER

This prospectus relates to the possible resale from time to time by Alumni Capital of any or all of the shares of common stock that may be issued by us to Alumni Capital under the Purchase Agreement. For additional information regarding the issuance of common stock covered by this prospectus, see the section titled “Alumni Capital Transaction” above. We are registering the shares of common stock pursuant to the provisions of the Purchase Agreement in order to permit the Selling Shareholder to offer the shares for resale from time to time. Except for the transactions contemplated by the Purchase Agreement, Alumni Capital has not had any material relationship with us within the past three years. As used in this prospectus, the term “Selling Shareholder” means Alumni Capital.

The table below presents information regarding the Selling Shareholder and the shares of common stock that it may offer from time to time under this prospectus. This table is prepared based on information supplied to us by the Selling Shareholder, and reflects holdings as of August 23, 2023. The number of shares in the column “Maximum Number of Shares of common stock to be Offered Pursuant to this Prospectus” represents all of the shares of common stock that the Selling Shareholder may offer under this prospectus. The Selling Shareholder may sell some, all or none of its shares of common stock in this offering. We do not know how long the Selling Shareholder will hold the shares of common stock before selling them, and we currently have no agreements, arrangements or understandings with the Selling Shareholder regarding the sale of any of the shares of common stock.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act, and includes shares of common stock with respect to which the Selling Shareholder has voting and investment power. The percentage of shares of common stock beneficially owned by the Selling Shareholder prior to the offering shown in the table below is based on an aggregate of 8,975,340 shares of our common stock outstanding on August 23, 2023. Because the purchase price of the shares of common stock issuable under the Purchase Agreement is determined on each purchase date, the number of shares that may actually be sold by us under the Purchase Agreement may be fewer than the number of shares being offered by this prospectus. The fourth column assumes the sale of all of the shares offered by the Selling Shareholder pursuant to this prospectus.

Name of Selling Shareholder	Number of Shares of Common Stock Owned Prior to Offering		Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus	Number of Shares of Common Stock Owned After Offering	
	Number	Percent		Number ⁽¹⁾	Percent ⁽²⁾
Alumni Capital LP ⁽³⁾	0	*	15,000,000	0	0

* Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1) Assumes the sale of all shares of common stock being offered pursuant to this prospectus.

(2) The denominator is based on 8,975,340 shares of our common stock outstanding as of August 23, 2023, which includes the total number of shares registered hereby.

(3) The business address of Alumni Capital LP is 801 Brickell Avenue, 8th Floor, Miami, Florida 33130. The general partner of Alumni Capital LP is Alumni Capital GP LLC. Ashkan Mapar is the manager of Alumni Capital GP LLC and as such has voting and disposition control over the Shares. We have been advised that none of Alumni Capital LP, Alumni Capital GP LLC nor Ashkan Mapar is a member of the Financial Industry Regulatory Authority (“FINRA”), or an independent broker-dealer, or an affiliate or associated person of a FINRA member or independent broker-dealer.

DESCRIPTION OF OUR SECURITIES

The following description of our capital stock and provisions of our Amended and Restated Articles of Incorporation, Second Amended and Restated Bylaws and the Pennsylvania Business Corporation Law of 1988, as amended ("PBCL") are summaries and are qualified in their entirety by reference to the Amended and Restated Articles of Incorporation and the Second Amended and Restated Bylaws. We have filed copies of these documents with the SEC as exhibits to our registration statement, of which this prospectus forms a part.

Authorized Capital Stock

We are authorized to issue a total of 200,000,000 shares of capital stock consisting of 190,000,000 shares of common stock, par value \$0.01 per share, and 10,000,000 shares of preferred stock, par value \$0.01.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of shareholders, including the election of directors, and do not have cumulative voting rights. Directors are elected by a plurality of the votes cast.

Subject to preferences that may be applicable to any then-outstanding shares of preferred stock, holders of our common stock are entitled to receive ratably dividends when, as, and if declared by our board of directors out of funds legally available therefor, subject to any preferential dividend rights of outstanding preferred stock. In the event of our liquidation, dissolution, or winding up, holders of our common stock will be entitled to ratably receive the net assets of our company available after the payments of all debts and other liabilities and subject to the prior rights of the holders of any then-outstanding shares of preferred stock.

Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights and privileges of the holders of the common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

As of September 1, 2023, 9,177,340 shares of common stock are issued and outstanding.

Preferred Stock

Our board of directors has the authority, without further action by our shareholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of our common stock.

As of September 1, 2023, there were 27,089,719 shares of Series X Preferred Stock outstanding, including 7,023,511 shares of Series X Preferred Stock held in escrow. No other shares of preferred stock were outstanding.

Anti-Takeover Effects of Our Amended and Restated Articles of Incorporation and Our Second Amended and Restated Bylaws

Provisions of our Amended and Restated Articles of Incorporation and Second Amended and Restated Bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which shareholders might otherwise receive a premium for their shares, or transactions that our shareholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our Amended and Restated Articles of Incorporation and Second Amended and Restated Bylaws:

- divide our board of directors into three classes with staggered three-year terms;
- provide that a special meeting of shareholders may be called only by a majority of our board of directors, the chairman of our board of directors, the chief executive officer or the president;
- establish advance notice procedures with respect to shareholder proposals to be brought before a shareholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of director;
- provide that shareholders may only act at a duly organized meeting; and
- provide that members of our board of directors may be removed from office by our shareholders only for cause by the affirmative vote of 75% of the total voting power of all shares entitled to vote generally in the election of directors.

Our Amended and Restated Articles of Incorporation also provide that, unless we consent in writing to the selection of an alternative forum, a state or federal court located within the County of Philadelphia in the Commonwealth of Pennsylvania will be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of our company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or our shareholders, (iii) any action asserting a claim arising pursuant to any provision of the PBCL or (iv) any action asserting a claim peculiar to the relationships among or between our company and our officers, directors and shareholders.

The exclusive forum provision described above is intended to apply to the fullest extent permitted by law, including to actions arising under the Securities Act or the Exchange Act. However, the enforceability of exclusive forum provisions in the governing documents of other companies has been challenged in legal proceedings, and it is possible that a court could find our forum selection provision to be inapplicable or unenforceable with respect to actions arising under the Securities Act or the Exchange Act. Even if it is accepted that our exclusive forum provision applies to actions arising under the Securities Act, shareholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Anti-Takeover Provisions under Pennsylvania Law

Provisions of the PBCL applicable to us provide, among other things, that:

- we may not engage in a business combination with an “interested shareholder,” generally defined as a holder of 20% of a corporation’s voting stock, during the five-year period after the interested shareholder became such except under certain specified circumstances;
- holders of our common stock may object to a “control transaction” involving us (a control transaction is defined as the acquisition by a person or group of persons acting in concert of at least 20% of the outstanding voting stock of a corporation), and demand that they be paid a cash payment for the “fair value” of their shares from the “controlling person or group”;
- holders of “control shares” will not be entitled to voting rights with respect to any shares in excess of specified thresholds, including 20% voting control, until the voting rights associated with such shares are restored by the affirmative vote of a majority of disinterested shares and our outstanding voting shares; and

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- any “profit,” as defined, realized by any person or group who is or was a “controlling person or group” with respect to us from the disposition of any equity securities of within 18 months after the person or group became a “controlling person or group” shall belong to and be recoverable by us.

Pennsylvania-chartered corporations may exempt themselves from these and other anti-takeover provisions. Our Amended and Restated Articles of Incorporation do not provide for exemption from the applicability of these or other anti-takeover provisions in the PBCL.

The provisions noted above may have the effect of discouraging a future takeover attempt that is not approved by our board of directors but which individual shareholders may consider to be in their best interests or in which shareholders may receive a substantial premium for their shares over the then current market price. As a result, shareholders who might wish to participate in such a transaction may not have an opportunity to do so. The provisions may make the removal of our board of directors or management more difficult. Furthermore, such provisions could result in our company being deemed less attractive to a potential acquiror and/or could result in our shareholders receiving a lesser amount of consideration for their shares of our common stock than otherwise could have been available either in the market generally and/or in a takeover.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc.

Stock Market Listing

Our shares of common stock are listed for trading on the Nasdaq Capital Market under the symbol “BXXR.”

PLAN OF DISTRIBUTION

The 15,000,000 shares of common stock offered by this prospectus are being offered by the Selling Shareholder, Alumni Capital. The shares may be sold or distributed from time to time by the Selling Shareholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the shares of our common stock offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for our common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares of common stock may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

Alumni Capital is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Alumni Capital has informed us that it intends to use one or more registered broker-dealers to effectuate all sales, if any, of our common stock that it has acquired and may in the future acquire from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such registered broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Alumni Capital has informed us that each such broker-dealer will receive commissions from Alumni Capital that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the purchasers, for whom the broker-dealers may act as agent, of the shares sold by the Selling Shareholders through this prospectus. The compensation paid to any such particular broker-dealer by any such purchasers of shares of our common stock sold by the Selling Shareholder may be less than or in excess of customary commissions. Neither we nor the Selling Shareholder can presently estimate the amount of compensation that any agent will receive from any purchasers of shares of our common stock sold by the Selling Shareholder.

We know of no existing arrangements between the Selling Shareholder or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement of which this prospectus forms a part to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares offered by this prospectus by the Selling Shareholder, including the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares by the Selling Shareholder, any compensation paid by the Selling Shareholder to any such brokers, dealers, underwriters or agents, and any other required information.

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We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our common stock covered by this prospectus by the Selling Shareholder.

We also have agreed to indemnify Alumni Capital and certain other persons against certain liabilities in connection with the offering of shares of our common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Alumni Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Alumni Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

We estimate that the total expenses for the offering will be approximately \$185,711.

Alumni Capital has represented to us that at no time prior to the date of the Purchase Agreement has Alumni Capital or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock, which establishes a net short position with respect to our common stock. Alumni Capital has agreed that during the term of the Purchase Agreement, neither Alumni Capital, nor any of its agents, representatives or affiliates will enter into or effect, directly or indirectly, any of the foregoing transactions.

We have advised the Selling Shareholder that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the Selling Shareholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the date that all shares of our common stock offered by this prospectus have been sold by the Selling Shareholder.

Our common stock is currently listed on The Nasdaq Capital Market under the symbol "BXXR."

LEGAL MATTERS

The validity of the shares of our common stock being offered by this prospectus have been passed upon for us by Goodwin Procter LLP, Philadelphia, Pennsylvania.

EXPERTS

The consolidated balance sheets of Baudax Bio, Inc. and Subsidiaries as of December 31, 2022, and the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for the year then ended, and the retrospective adjustments to the 2021 financial statements discussed in Notes 1 and 3(j) to the financial statements, have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their report which is incorporated herein by reference, which report includes an explanatory paragraph about the existence of substantial doubt concerning our ability to continue as a going concern. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

The consolidated balance sheets of TeraImmune and its subsidiary as of December 31, 2022 and 2021, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the "financial statements"), have been audited by Horne LLP independent registered public accounting firm, as stated in their report which is incorporated herein by reference, which report includes an explanatory paragraph about the existence of substantial doubt concerning TeraImmune's ability to continue as a going concern. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing. KPMG LLP, independent registered public accounting firm, audited the consolidated financial statements as of December 31, 2021, and for the year then ended, before the effects of the retrospective adjustment, which financial statements are not incorporated by reference herein. EisnerAmper LLP, an independent registered public accounting firm, audited the retrospective adjustment. The consolidated financial statements of Baudax Bio, Inc. as of December 31, 2021, and for the year then ended, have been incorporated by reference herein in reliance upon the reports of (1) KPMG LLP, solely with respect to the financial statements before the effects of the retrospective adjustment, and (2) EisnerAmper LLP, solely with respect to the retrospective adjustment, incorporated by reference herein, and upon the authority of said firms as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus forms part of a registration statement on FormS-1 that we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement or the documents incorporated by reference herein and therein. For further information with respect to us and the securities that we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement and the documents incorporated by reference herein and therein. You should rely only on the information contained in this prospectus or incorporated by reference herein or therein. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered hereby. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Baudax Bio. The address of the SEC website is www.sec.gov.

We maintain a website at www.baudaxbio.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it, 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. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- Our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on [February 23, 2023](#);
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023 and June 30, 2023, filed with the SEC on [May 11, 2023](#) and [August 16, 2023](#);
- The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2022 from our Definitive Proxy Statement on Form DEF 14A, filed on [April 28, 2023](#);
- Our Current Reports on Form 8-K and 8-K/A, as applicable filed with the SEC (other than portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits accompanying such reports that are related to such items) on [January 9, 2023](#), [January 24, 2023](#), [March 3, 2023](#), [March 27, 2023](#), [March 31, 2023](#), [April 4, 2023](#), [April 25, 2023](#), [April 28, 2023](#), [May 19, 2023](#), [June 15, 2023](#), [June 27, 2023](#), [June 28, 2023](#), [July 5, 2023](#), [July 17, 2023](#), [July 25, 2023](#), [July 31, 2023](#), [August 9, 2023](#), [August 21, 2023](#), [August 24, 2023](#), [August 25, 2023](#) and [September 5, 2023](#) (in each case other than any portions thereof deemed furnished and not filed); and
- The description of our common stock contained in our [Form 10](#) filed with the SEC on November 8, 2019 (File No. 001-39101), including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents by writing or telephoning us at the following address or phone number below. You may also access this information on our website at www.baudaxbio.com by viewing the “Financial & Filings” subsection of the “News & Investors” menu. No additional information is deemed to be part of or incorporated by reference into this prospectus.

Baudax Bio, Inc.
490 Lapp Road
Malvern, PA 19355
(484) 395-2440



Up to 15,000,000 Shares of Common Stock

Prospectus

, 2023

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the fees and expenses in connection with the issuance and distribution of the securities being registered (excluding the underwriting discount). Except for the Securities and Exchange Commission registration fee and the FINRA filing fee, all amounts are estimates.

	Amount Paid or to be Paid
SEC registration fee	\$ 711
Legal fees and expenses	\$ 75,000
Accounting fees and expenses	\$ 100,000
Printing expenses	\$ 10,000
Transfer agent fees and expenses	*
Miscellaneous	*
Total	\$ 185,711

* To be completed by amendment

Each of the amounts set forth above, other than the SEC registration fee and FINRA filing fee, is an estimate.

Item 14. Indemnification of Directors and Officers.

Our Second Amended and Restated Bylaws and Amended and Restated Articles of Incorporation provide that, to the fullest extent permitted by Pennsylvania law, any of our officers or directors who was or is a party or is threatened to be made a party to, any threatened, or pending or completed action, suit or proceeding, whether civil, criminal, administrative, investigative or through arbitration, by reason of fact that he/she is or was our director or officer, or is or was serving in any capacity at the request or for our benefit as a director, officer, employee, agent, partner, or fiduciary of, or in any other capacity for, another corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise, shall be indemnified by us for any expense, liability and loss (including, without limitation, attorneys' fees, judgments, fines, taxes, penalties, and amounts paid or to be paid in settlement) reasonably incurred in connection with such proceeding, unless where the individual's act or failure to act giving rise to the claim for indemnification is determined by a court to have constituted self-dealing, willful misconduct or recklessness. Indemnification shall not be made in respect of any claim, issue or matter as to which the person has been adjudged to be liable to us unless and only to the extent that a court determines that, despite the adjudication of liability but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for the expenses that the court deems proper.

Pennsylvania law requires that to the extent that one of our directors or officers has been successful on the merits or otherwise in defense of any action or proceeding referred to above or in defense of any claim, issue or matter therein, that director or officer shall be indemnified against expenses (including attorney fees) actually and reasonably incurred by him in connection therewith. Our Second Amended and Restated Bylaws further provide that the right to indemnification includes the right to have expenses reasonably incurred in defending any action or proceeding described above paid by us in advance of the final disposition of the action or proceeding to the fullest extent permitted by Pennsylvania law; provided that, if required by Pennsylvania law, the payment of such expenses incurred in advance of the final disposition of the action or proceeding shall be made only upon delivery to us of an undertaking to repay all amounts so advanced without interest if it is ultimately determined that the director or officer is not entitled to be indemnified.

We have entered into indemnification agreements with each of our directors and executive officers. These agreements require us to, among other things, indemnify each director and officer to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which indemnification is available.

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Item 16.

Exhibits

(a) Exhibits

Exhibit No.	Description	Method of Filing
2.1	<u>Separation Agreement, dated November 20, 2019, by and between Recro Pharma, Inc. and Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on November 26, 2019 (File No. 001-39101).
2.2Δ	<u>Agreement and Plan of Merger, dated June 29, 2023, by and among Baudax Bio, Inc., Bounce Merger Sub I, Inc., Bounce Merger Sub II, LLC and TeraImmune, Inc.</u>	Incorporated herein by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on July 5, 2023 (File No. 001-39101).
3.1	<u>Amended and Restated Articles of Organization of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 26, 2019 (File No. 001-39101).
3.2	<u>Articles of Amendment to the Amended and Restated Articles of Incorporation of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on August 11, 2021 (File No. 001-39101).
3.3	<u>Articles of Amendment to the Amended and Restated Articles of Incorporation of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed February 15, 2022 (File No. 001-39101).
3.4	<u>Articles of Amendment to the Amended and Restated Articles of Incorporation, as amended, of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 30, 2022 (File No. 001-39101).
3.5	<u>Second Amended and Restated Bylaws of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on May 11, 2023 (File No. 001-39101).
3.6	<u>Certificate of Designations of Series X Non-Voting Convertible Preferred Stock.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 5, 2023 (File No. 001-39101).
3.7	<u>Certificate of Designation of Preferences, Rights and Limitations of Series C Preferred Stock.</u>	Incorporated herein by reference to Exhibit 3.1 to the Company's Registration Statement on Form 8-A filed on August 24, 2023.
5.1+	Opinion of Goodwin Procter LLP	
10.1•	<u>Form of Indemnification Agreement between Baudax Bio, Inc. and individual directors and officers.</u>	Incorporated herein by reference to Exhibit 10.4 to the Company's Registration Statement on Form 10 filed on November 5, 2019 (File No. 001-39101).

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10.2†	<u>Dexmedetomidine License Agreement, dated August 22, 2008, by and between Recro Pharma, Inc. and Orion Corporation.</u>	Incorporated herein by reference to Exhibit 10.8 to the Company's Registration Statement on Form 10 filed on October 22, 2019 (File No. 001-39101).
10.3†	<u>First Amendment to Dexmedetomidine License Agreement, dated January 17, 2009, by and between Recro Pharma, Inc., and Orion Corporation.</u>	Incorporated herein by reference to Exhibit 10.9 to the Company's Registration Statement on Form 10 filed on October 22, 2019 (File No. 001-39101).
10.4†	<u>Dexmedetomidine API Supply Agreement, dated August 22, 2008, by and between Recro Pharma, Inc., and Orion Corporation.</u>	Incorporated herein by reference to Exhibit 10.10 to the Company's Registration Statement on Form 10 filed on October 22, 2019 (File No. 001-39101).
10.5•	<u>Baudax Bio, Inc. 2019 Equity Incentive Plan.</u>	Incorporated herein by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on November 26, 2019 (File No. 001-39101).
10.6†	<u>License Agreement, dated June 30, 2017, by and between Cornell University and Recro Pharma, Inc.</u>	Incorporated herein by reference to Exhibit 10.19 to the Company's Registration Statement on Form 10 filed on October 22, 2019 (File No. 001-39101).
10.7†	<u>Amendment to License Agreement, dated October 31, 2018, by and between Cornell University and Recro Pharma, Inc.</u>	Incorporated herein by reference to Exhibit 10.20 to the Company's Registration Statement on Form 10 filed on October 22, 2019 (File No. 001-39101).
10.8†	<u>Amendment to License Agreement, dated October 21, 2019, by and between Cornell University and Recro Pharma, Inc.</u>	Incorporated herein by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K filed on February 13, 2020 (File No. 001-39101).
10.9•	<u>Form of Employment Agreement to be entered into between Baudax Bio, Inc. and its executive officers.</u>	Incorporated herein by reference to Exhibit 10.23 to the Company's Registration Statement on Form 10 filed on November 5, 2019 (File No. 001-39101).
10.10†	<u>Credit Agreement, dated as of May 29, 2020, among the Company, the lenders party thereto and Wilmington Trust, National Association.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 2, 2020 (File No. 001-39101).
10.11	<u>Security Agreement, dated as of May 29, 2020, by and among the Company, Baudax Bio N.A. LLC, Baudax Bio Limited and Wilmington Trust, National Association.</u>	Incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on June 2, 2020 (File No. 001-39101).
10.12	<u>Intellectual Property Security Agreement, dated as of May 29, 2020, by and among the Company, Baudax Bio N.A. LLC, Baudax Bio Limited and Wilmington Trust, National Association.</u>	Incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on June 2, 2020 (File No. 001-39101).
10.13•	<u>Employment Agreement, dated February 12, 2020, between Baudax Bio, Inc. and Gerri Henwood.</u>	Incorporated herein by reference to Exhibit 10.26 to the Company's Annual Report on Form 10-K filed on February 13, 2020 (File No. 001-39101).

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10.14•	<u>Form of Stock Option Award Agreement.</u>	Incorporated herein by reference to Exhibit 10.34 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
10.15•	<u>Form of Restricted Stock Unit Award Agreement.</u>	Incorporated herein by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
10.16•	<u>Form of Performance-Based Restricted Stock Unit Award Agreement.</u>	Incorporated herein by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
10.17•	<u>Form of Award Agreement for Option Inducement Award.</u>	Incorporated herein by reference to Exhibit 10.37 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
10.18•	<u>Form of Award Agreement for Restricted Stock Unit Inducement Award.</u>	Incorporated herein by reference to Exhibit 10.38 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
10.19	<u>Form of Securities Purchase Agreement, by and between Baudax Bio, Inc. and the purchasers party thereto.</u>	Incorporated herein by reference to Exhibit 10.35 to the Company's Registration Statement on Form S-1/A filed on April 26, 2023 (File No. 333-271161)
10.20†	<u>Amendment No. 1 and Waiver to Credit Agreement, dated August 1, 2022, by among and Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 3, 2022 (File No. 001-39101).
10.21	<u>Amendment No. 2 to Credit Agreement, dated October 24, 2022, by among and Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 28, 2022 (File No. 001-39101).
10.22	<u>Amendment No. 3 to Credit Agreement, dated December 1, 2022, by among and Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 1, 2022 (File No. 001-39101).
10.23	<u>Amendment No. 4 to Credit Agreement, dated January 5, 2023, by and among Baudax Bio Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto</u>	Incorporated herein by reference to Exhibit 10.38 to the Company's Annual Report on Form 10-K filed on February 23, 2023 (File No. 001-39101).

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10.24	<u>Amendment No. 5 to Credit Agreement, dated March 29, 2023, by and among Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 31, 2023 (File No. 001-39101).
10.25	<u>Registration Rights Agreement between the Baudax Bio, Inc. and MAM Eagle Lender, LLC, dated March 29, 2023</u>	Incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 31, 2023 (File No. 001-39101).
10.26†	<u>Asset Transfer Agreement among Alkermes Pharma Ireland Limited and Baudax Bio, Inc., dated March 29, 2023</u>	Incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K/A filed on April 4, 2023 (File No. 001-39101).
10.27•	<u>Employment Agreement, by and between Baudax Bio, Inc. and Jillian Dilmore, dated May 10, 2023</u>	Incorporated herein by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q filed on May 11, 2023 (File No. 001-39101).
10.28	<u>Forbearance Agreement, dated as of June 29, 2023, by and among Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lender party thereto.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 5, 2023 (File No. 001-39101).
10.29	<u>Amendment No. 1 to the Forbearance Agreement, dated as of July 30, 2023, by and among Baudax Bio, Inc., Baudax Bio N.A. LLC, Baudax Bio Limited, Wilmington Trust, National Association, and the Lenders party thereto.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K/A filed on July 31, 2023 (File No. 001-39101).
10.30*	<u>Exclusive Patent License Agreement, dated as of June 18, 2020, by and between the U.S. Department of Health and Human Services, as represented by the National Institute of Allergy and Infectious Diseases and TeraImmune, Inc.</u>	Incorporated herein by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed on August 16, 2023 (File No. 001-39101).
10.31*	<u>Exclusive License Agreement, dated November 11, 2020, by and between the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. and TeraImmune, Inc.</u>	Incorporated herein by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q filed on August 16, 2023 (File No. 001-39101).
10.32*	<u>Exclusive License Agreement, dated August 5, 2019, by and between the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. and TeraImmune, Inc.</u>	Incorporated herein by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q filed on August 16, 2023 (File No. 001-39101).
10.33*	<u>Biological Materials License Agreement, dated August 26, 2019, by and between the U.S. Department of Health and Human Services, as represented by the National Cancer Institute and TeraImmune, Inc.</u>	Incorporated herein by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q filed on August 16, 2023 (File No. 001-39101).
10.34	<u>Form of Securities Purchase Agreement, by and Baudax Bio, Inc. and the purchasers party thereto.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 21, 2023 (File No. 001-39101).

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10.35	<u>Purchase Agreement, dated August 23, 2023, between Baudax Bio, Inc. and Alumni Capital LP.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 25, 2023 (File No. 001-39101).
10.36	<u>Amendment No. 7 to Credit Agreement, dated as of August 31, 2023, by and among Baudax Bio, Baudax Bio N.A. LLC, Baudax Bio Limited and TeraImmune, LLC, the lenders party thereto and Wilmington Trust, National Association.</u>	Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 5, 2023 (File No. 001-39101).
21.1	<u>Subsidiaries of Baudax Bio, Inc.</u>	Incorporated herein by reference to Exhibit 21.1 to the Company's Annual Report on Form 10-K filed on February 16, 2021 (File No. 001-39101).
23.1	<u>Consent of KPMG LLP, Independent Registered Public Accounting Firm.</u>	Filed herewith.
23.2	<u>Consent of EisnerAmper LLP, Independent Registered Public Accounting Firm.</u>	Filed herewith.
23.3	<u>Consent of Horne LLP, Independent Registered Public Accounting Firm of TeraImmune, Inc.</u>	Filed herewith.
23.4+	Consent of Goodwin Procter LLP (included in Exhibit 5.1)	(included in Exhibit 5.1)
24.1	<u>Power of Attorney</u>	(contained on the signature page to the Registration Statement)
107	<u>Filing Fee Table</u>	Filed herewith.

Δ Schedules have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. Baudax Bio agrees to furnish supplementally a copy of any omitted schedule to the SEC upon its request; provided, however, that Baudax Bio may request confidential treatment pursuant to Rule 24b-2 of the Exchange Act for any schedule so furnished.

• Management contract or compensatory plan or arrangement.

+ To be filed by amendment.

† Certain identified information in the exhibit has been omitted because it is both (i) not material and (ii) would likely cause competitive harm to the Company if publicly disclosed.

(b) Financial Statement Schedules

All financial statement schedules have been omitted because they are not required or because the required information is given in the financial statements or notes to those statements.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (a)(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the

aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act, that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purposes of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (5) That, for purposes of determining any liability under the Securities Act:
 - (i) the information omitted from the form of prospectus filed as part of the registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of the registration statement as of the time it was declared effective; and
 - (ii) each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the indemnification provisions described herein, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Malvern, Commonwealth of Pennsylvania on September 5, 2023.

Baudax Bio, Inc.

By: /s/ Gerri A. Henwood

Name: Gerri A. Henwood

Title: Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of Baudax Bio, Inc., hereby severally constitute and appoint Gerri A. Henwood and Jillian Dilmore, our true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution in her or him for her or him and in her or his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as she or he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or her or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Gerri A. Henwood</u> Gerri A. Henwood	President, Chief Executive Officer and Director (principal executive officer)	September 5, 2023
<u>/s/ Jillian Dilmore</u> Jillian Dilmore	Corporate Controller (principal financial and accounting officer)	September 5, 2023
<u>/s/ William L. Ashton</u> William L. Ashton	Director	September 5, 2023
<u>/s/ Arnold Baskies, M.D.</u> Arnold Baskies, M.D.	Director	September 5, 2023
<u>/s/ Winston J. Churchill</u> Winston J. Churchill	Director	September 5, 2023
<u>/s/ Andrew Drechsler</u> Andrew Drechsler	Director	September 5, 2023
<u>/s/ Yong Chan Kim, Ph.D</u> Yong Chan Kim, Ph.D	Director	September 5, 2023
<u>/s/ Wayne B. Weisman</u> Wayne Weisman	Director	September 5, 2023



KPMG LLP
1601 Market Street
Philadelphia, PA 19103-2499

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated March 16, 2022, except for Note 4, as to which the date is June 28, 2023, with respect to the consolidated financial statements of Baudax Bio, Inc., incorporated herein by reference, and to the reference to our firm under the heading "Experts" in the prospectus.

/s/ KPMG LLP

Philadelphia, Pennsylvania
September 5, 2023

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Baudax Bio, Inc. on FormS-1 to be filed on or about September 5, 2023 of our report dated February 23, 2023, except for Note 4, as to which date is June 28, 2023, on our audit of (i) the financial statements as of December 31, 2022 and for the year then ended, and (ii) the retrospective adjustments to the 2021 financial statements discussed in Notes 1 and 3(j) to the financial statements, which report was included in the Current Report on Form 8-K filed June 28, 2023. Our report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern. We also consent to the reference to our firm under the caption "Experts" in this Registration Statement.

/s/ EisnerAmper LLP

EISNERAMPER LLP
Philadelphia, Pennsylvania
September 5, 2023

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-1 of Baudax Bio, Inc. of our report dated June 26, 2023, relating to the consolidated financial statements of TeraImmune, Inc., incorporated by reference in the Current Report on Form 8-K/A of Baudax Bio, Inc. and included in Annex B of the Preliminary Proxy Statement on Schedule 14A of Baudax Bio, Inc., each of which were filed by Baudax Bio, Inc. on July 31, 2023.

We also consent to the reference of our firm under the heading “Experts” in such Registration Statement.

/s/ HORNE LLP

Ridgeland, Mississippi
September 5, 2023

Calculation of Filing Fee Table

Form S-1
(Form Type)Baudax Bio, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security type	Security class title	Fee calculation or carry forward rule	Amount registered	Proposed maximum offering price per unit(1)	Maximum aggregate offering price(1)(2)	Fee rate	Amount of registration fee(1)
Fees to Be Paid	Equity	Common Stock, par value \$0.01 per share	457(c)	15,000,000(3)	\$0.43	\$6,450,000	0.00011020	\$ 710.79
		Total Offering Amounts				\$6,450,000		\$ 710.79
		Total Fees Previously Paid				\$ 0		\$ 0
		Total Fee Offsets						\$ —
		Net Fee Due						\$ 710.79

- (1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended (the “Securities Act”), based on the average of the high and low sales prices of Baudax Bio, Inc.’s (the “Registrant”) common stock, par value \$0.01 per share, as reported on the Nasdaq Capital Market on September 1, 2023.
- (2) Pursuant to Rule 416(a) under the Securities Act, this registration statement shall also cover an indeterminate number of shares that may be issued and resold resulting from stock splits, stock dividends or similar transactions.
- (3) Represents shares of common stock that may be issued pursuant to that certain purchase agreement dated as of August 23, 2023 entered into by the Registrant and Alumni Capital LP.