PROSPECTUS



11,253,370 Shares of Common Stock

This prospectus relates to the resale from time to time of up to 11,253,370 shares (the "Shares") of common stock, par value \$0.001 per share (the "Common Stock") of iBio, Inc., that are issuable upon exercise of warrants ("New Warrants"), held by the Selling Stockholders identified in this prospectus (the "Selling Stockholders"), including its pledgees, assignees, donees, transferees or its respective successors-in-interest.

The New Warrants held by the Selling Stockholders were sold to the Selling Stockholders by our company in a private placement that was completed on April 30, 2025 pursuant to the terms of an inducement letter, dated as of April 29, 2025 (the "Inducement Agreement"), by and between our company and each of the Selling Stockholders. Pursuant to that private placement, we issued to the Selling Stockholders an aggregate of 11,253,370 New Warrants to purchase up to 11,253,370 shares of Common Stock. The New Warrants have an exercise price of \$0.86 per share, were immediately exercisable upon issuance and will expire five years from issuance. The private placement was effected pursuant to the exemptions provided in Section 4(a)(2) under the Securities Act of 1933, as amended, or the Securities Act, and Rule 506(b) of Regulation D promulgated thereunder.

The Selling Stockholders identified in this prospectus, or its pledgees, assignees, donees, transferees or their respective successors-in-interest, from time to time may offer and sell through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices held by them directly or through underwriters, agents or broker-dealers on terms to be determined at the time of sale, as described in more detail in this prospectus the 11,253,370 Shares underlying the New Warrants held by them in one or more offerings under this prospectus, for their own account. We are not offering any Shares under this prospectus and will not receive any of the proceeds from the sale of the Shares by the Selling Stockholders. We will, however, receive up to an aggregate of approximately \$9.7 million in cash from the exercise of the New Warrants, assuming the exercise in full of all the New Warrants. See "Plan of Distribution" beginning on page 8 of this prospectus for more information about how the Selling Stockholders may sell their respective Shares.

The Selling Stockholders acquired the Shares in a transaction exempt from registration under the Securities Act of 1933, as amended in reliance on Section 4(a)(2) thereof and Rule 506(b) of Regulation D thereunder. We are filing the registration statement on Form S-3, of which this prospectus forms a part, to fulfill our contractual obligations with the Selling Stockholders to provide for the resale by the Selling Stockholders of the Shares offered hereby. See "Selling Stockholders" beginning on page 9 of this prospectus for more information about the Selling Stockholders. The registration of the Shares to which this prospectus relates does not require the Selling Stockholders to sell any of its Shares.

We have agreed to bear all of the expenses in connection with the registration of the Shares pursuant to this prospectus. The Selling Stockholders will pay or assume all commissions, discounts, fees of underwriters, selling brokers or dealer managers and similar expenses, if any, attributable to their sales of the Shares.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Our Common Stock is listed on The Nasdaq Capital Market ("Nasdaq") under the symbol "IBIO." On June 20, 2025, the last reported sale price of our Common Stock on Nasdaq was \$0.771 per share.

An investment in shares of our Common Stock involves risks. See the "Risk Factors" beginning on page 5 and in our filings with the Securities and Exchange Commission.

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

The date of this prospectus is June 23, 2025.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS	<u>ii</u>
PROSPECTUS SUMMARY	<u>1</u>
THE OFFERING	<u>4</u>
RISK FACTORS	<u>5</u>
FORWARD-LOOKING STATEMENTS	<u>7</u>
USE OF PROCEEDS	<u>8</u>
SELLING STOCKHOLDERS	9
PLAN OF DISTRIBUTION	<u>13</u>
<u>LEGAL MATTERS</u>	<u>14</u>
EXPERTS	<u>14</u>
WHERE YOU CAN FIND MORE INFORMATION	<u>14</u>
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	<u>14</u>

The registration statement containing this prospectus, including the exhibits to the registration statement, provides additional information about us and the Common Stock offered under this prospectus. The registration statement, including the exhibits, can be read on our website and the website of the Securities and Exchange Commission. See "Where You Can Find More Information."

Information contained in, and that can be accessed through our web site, www.ibioinc.com., shall not be deemed to be part of this prospectus or incorporated herein by reference and should not be relied upon by any prospective investors for the purposes of determining whether to purchase the Common Stock offered hereunder.

Unless the context otherwise requires, the terms "we," "us," "our," "the Company," "iBio" and "our business" refer to iBio, Inc. and "this offering" refers to the offering contemplated in this prospectus.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the "SEC"). Under this registration process, the Selling Stockholders may, from time to time, sell the securities offered by them described in this prospectus. We will not receive any proceeds from the sale by the Selling Stockholders of the Shares offered by them described in this prospectus.

This prospectus provides you with a general description of the Shares the Selling Stockholders may offer. A prospectus supplement may also add, update or change information contained in this prospectus. To the extent that any statement made in an accompanying prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the accompanying prospectus supplement. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the headings "Where You Can Find More Information and "Incorporation of Certain Information by Reference."

Neither we nor the Selling Stockholders have authorized anyone to provide you with any information or to make any representations other than those contained, or incorporated by reference, in this prospectus, any post-effective amendment, or any applicable prospectus supplement or free-writing prospectus prepared by or on behalf of us or to which we have referred you. We and the Selling Stockholders take no responsibility for and can provide no assurance as to the reliability of any other information that others may give you. This prospectus is an offer to sell only the Shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should not assume that the information contained in this prospectus or any applicable prospectus supplement 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 is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus or any applicable prospectus supplement is delivered, or securities are sold, on a later date.

This prospectus contains 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, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section entitled "Where You Can Find More Information."

This prospectus and the information incorporated herein by reference include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus, any applicable prospectus supplement or any related free writing prospectus are the property of their respective owners.

ii

PROSPECTUS SUMMARY

This summary highlights about us and selected information contained elsewhere in this prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before investing in our Common Stock. You should read this entire prospectus and the documents incorporated by reference carefully, especially the risks of investing in our Common Stock discussed under and incorporated by reference in "Risk Factors" on page 5 of this prospectus, along with our consolidated financial statements and notes to those consolidated financial statements and the other information incorporated by reference in this prospectus, before making an investment decision.

The Company

We are a preclinical stage biotechnology company leveraging the power of Artificial Intelligence (AI) for the development of hard-to-drug precision antibodies. Our core mission is to harness the potential of AI and machine learning (ML) to unveil elusive biologies that stand out and have evaded other scientists. Through our innovative AI Drug Discovery Platform, we champion a culture of innovation by identifying novel targets, forging strategic collaborations to enhance efficiency, diversify pipelines, and with the goal of accelerating preclinical processes. Our proprietary technology stack is designed to minimize downstream development risks by employing AI-guided epitope-steering and monoclonal antibody (mAb) optimization.

Our groundbreaking Engage Tx^{TM} technology enables us to target bi-specific molecules. With the ability to navigate sequence diversity and promote Human-Cyno cross reactivity while mitigating cytokine release, our goal is to enhance agility and bolster preclinical safety assessments. Another key feature of our technology stack is our Shield Tx^{TM} masking technology, which keeps antibodies inactive until they reach diseased tissue. At that point, the masks are removed and the antibodies become active, all with the goal of broadening the therapeutic window and potentially improving both efficacy and safety.

Our strategic approach to fulfilling our mission is outlined as follows:

- Further develop and expand our technology stack: We are continuously expanding and developing our technology stack to tackle current challenges in antibody discovery.
 - o Current challenges in antibody discovery: Key challenges in today's antibody discovery techniques include:
 - A limited number of drug targets that can be pursued with traditional antibody discovery techniques.
 - Lack of antibodies with complex mechanisms of action.
 - Safety concerns for antibodies against widely expressed targets.
 - Significant time required to optimize antibody leads.
 - Lack of early assessment of the developability of antibodies.

Our technology platform addresses current challenges in antibody discovery: Our epitope steering technology allows the precise targeting of antibodies against hard-to-drug proteins and challenging target epitopes. This is believed to unlock a vast novel target space and enable the targeting of newly identified epitopes on well-validated proteins for best-in-class drug development. While many approved antibodies function by disrupting protein-protein interactions, the discovery of antibodies with more complex mechanisms has been challenging. Our ability to steer antibodies towards agonistic or cell-activating epitopes, or epitopes that lock protein complexes in certain active or inactive conformations, is believed to enable the creation of antibodies with a wide variety of complex modes of action.

Although bispecific antibodies and antibody-drug conjugates have proven to be highly efficacious, they have also raised safety concerns. Our ShieldTx technology is an integrated part of the discovery process, designed to allow antibodies to be masked and rendered inactive until they reach the intended tissue (e.g., a tumor), where the mask is removed and the antibody is activated. ShieldTx is believed to have the capability of reducing or eliminating adverse effects stemming from on-target, off tumor effects, increase the probability of success in identifying a suitable mask for an antibody, and reduce development time.

1

- o Lastly, our StableHu technology, coupled with mammalian display technology, has been shown in pre-clinical studies to allow for the reduction of lead optimization times by utilizing single-shot multi-dimensional optimization techniques. This also improves the developability of lead antibodies early in the discovery process.
- Capital efficient business approach: Our strategic business approach is structured around the following pillars of value creation:
 - o **Strategic Collaborations**: We have leveraged our platform and pipeline by forming strategic partnerships. We aim to become the preferred partner for pharmaceutical and biotechnology companies seeking rapid and cost-effective integration of complex molecules into their portfolios, de-risking their early-stage preclinical work. Additionally, rich array of fast follower immune-oncology molecules within our pre-clinical pipeline holds the potential to drive substantial partnerships, opening doors to innovative projects. By tapping into our infrastructure and expertise, partners have the potential to streamline timelines, reduce costs tied to biologic drug discovery applications and cell line process development, and expedite preclinical programs with efficiency.
 - o Developing and advancing our in-house programs cost effectively. Clinical advancement is crucial for drug discovery. On December 31, 2024, as a result of the collaboration with AstralBio, Inc. ("AstralBio"), we entered into an exclusive agreement with AstralBio, pursuant to which AstralBio licensed to us an antibody targeting myostatin, now named IBIO-600, for research, diagnosis, treatment, prevention, or management of any disease or medical condition on an worldwide exclusive basis and with the right to grant sublicenses. In parallel, we initiated a bispecific antibody program targeting myostatin/activin A to treat obesity and cardiometabolic disorders, leveraging its proprietary technology stack as well as the technology of IBIO-600. We have the exclusive option to license two (2) additional obesity and cardiometabolic targets from AstralBio and as a result, we will receive the rights to develop, manufacture and commercialize those targets upon exercise. We continue to assess our options to license the remaining three assets, which includes an antibody targeting Activin E, under the AstralBio collaboration to add additional obesity and cardiometabolic programs into our pre-clinical pipeline.
 - o **Tech Licensing in Diverse Therapeutic Areas:** In pursuit of adding value, we are exploring partnerships in diverse therapeutic domains such as CNS, immunology and inflammation or vaccines. Our intention is to license our AI tech stack, extending its benefits to our partners and amplifying its biological impact and insights. This strategic approach enables us to capitalize on the value of our meticulously curated data while empowering collaborations and innovations, while at the same time allowing us to focus on both the platform and our core therapeutic areas, metabolic diseases and oncology.
- Focused Investment in advancing the platform: We maintain a focused commitment to invest in our platform, continually unlocking the potential of biology through AI and ML.

In essence, we believe that we are sculpting a future where cutting-edge AI-driven biotechnology propels the discovery of intricate biologics, fostering partnerships, accelerating innovation, and propelling the advancement of science.

Recent Developments

Issuance of Shares to AstralBio

In consideration of the rights and licenses granted by AstralBio, Inc. ("AstralBio") to us in we agreed to pay AstralBio an upfront license fee in the amount of \$750,000. In lieu of paying such upfront fee in cash, on January 28, 2025, we issued to AstralBio 246,087 shares of our Common Stock, which amount was calculated based on the volume weighted average price of our Common Stock as reported by Bloomberg, LP over the five day period ending at 4:00 PM on the day prior to issuance.

Transfer of Listing

On February 19, 2025, acting pursuant to authorization from our Board, we determined to voluntarily withdraw the listing of our Common Stock from NYSE American and to transfer such listing to The Nasdaq Capital Market ("Nasdaq"). The listing and trading of our Common Stock on NYSE American ended at market close on March 3, 2025, and began on the Nasdaq at market open on March 4, 2025. Our Common Stock continues to trade under the ticker symbol "IBIO."

2

AstralBio Activin E License Agreement

On April 21, 2025, we entered into an exclusive license related to Activin E (the Activin E License Agreement") with AstralBio, has licensed to us, on an worldwide exclusive basis and with the right to grant sublicenses, the AstralBio Licensed Patents (as defined in the Activin E License Agreement) and AstralBio Licensed Know-How (as defined in the Activin E License Agreement) to develop, manufacture and commercialize and otherwise exploit any product directed to Activin E that contains the Activin E Licensed Product.

Inducement of Existing Warrants

On April 29, 2025, we entered the Inducement Agreement with the Selling Stockholders of certain existing warrants (the "Existing Warrants") to purchase shares of Common Stock. Pursuant to the Inducement Agreement, the Selling Stockholders agreed to exercise for cash on April 29, 2025 Existing Warrants to purchase an aggregate of 5,626,685 shares of Common Stock at a reduced exercise price of \$0.86 per share, which was the Minimum Price, as defined in the rules of Nasdaq, as of the close of trading on April 28, 2025. In consideration of the Selling Stockholders' agreement to exercise the Existing Warrants in accordance with the Inducement Agreement, we agreed to issue New Warrants to purchase up to 11,253,370 shares of Common Stock (the "Inducement Warrant Shares"), for consideration of \$0.125 per New Warrant. We received aggregate gross proceeds of approximately \$6.2 million from the exercise of the Existing Warrants and the sale of the New Warrants, before deducting financial advisory fees and other

expenses payable by us. We agreed in the Inducement Agreement to file a resale registration statement within 45 days of the date of the Inducement Agreement providing for the resale of the Inducement Warrant Shares by the holders of the Inducement Warrant Shares.

The New Warrants will have an exercise price of \$0.86 per share, will be exercisable upon issuance and will expire on the five-year anniversary of the date of issuance. The exercise price and the number of shares of Common Stock issuable upon exercise of each New Warrant are subject to appropriate adjustments in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the Common Stock. In addition, in certain circumstances, upon a fundamental transaction (as defined in the New Warrants), a holder of New Warrants will be entitled to receive, upon exercise of the New Warrants, the kind and amount of securities, cash or other property that such holder would have received had they exercised the New Warrants immediately prior to the fundamental transaction.

We engaged Chardan to act as our financial advisor in connection with the transactions summarized above and paid Chardan an aggregate fee equal to approximately \$217,000 in connection with the transactions contemplated by the Inducement Agreement. We expect to use the net proceeds from these transactions for working capital and other general corporate purposes.

General Corporate Information

We were incorporated under the laws of the State of Delaware on April 17, 2008, under the name iBioPharma, Inc. We engaged in a merger with InB:Biotechnologies, Inc., a New Jersey corporation on July 25, 2008, and changed our name to iBio, Inc. on August 10, 2009.

Our principal executive offices are located at 11750 Sorrento Valley Road, Suite 200, San Diego, California 92121 and our telephone number is (979) 446-0027. Our website address is www.ibioinc.com. The information contained on, or accessible through, our website does not constitute part of this Registration Statement. We have included our website address in this Registration Statement solely as an inactive textual reference.

3

THE OFFERING

This prospectus relates to the resale or other disposition from time to time by the Selling Stockholders identified in this prospectus of up to 11,253,370 Shares of our Common Stock. None of the Shares registered hereby are being offered for sale by us.

Shares of Common Stock outstanding prior to

this offering

16,219,281 Shares

Shares of Common Stock offered by the

11,253,370 Shares

Selling Stockholders

Terms of the offering

The Selling Stockholders and any of their pledgees, assignees and successors-in-interest will determine when and how they sell the Shares offered in this prospectus and may, from time to time, sell any or all of their shares covered hereby on Nasdaq or any other stock exchange, market or trading facility on which the shares are traded or in privately negotiated transactions. These sales may be at fixed or negotiated prices. See "Plan of Distribution."

Common Stock outstanding after this offering

27,472,651, including the Shares

Use of Proceeds

The Selling Stockholders will receive all of the proceeds from the sale of any Shares sold by them pursuant to this prospectus. We will not receive any proceeds from the sale of the Shares by the Selling Stockholders (although we may receive proceeds from any exercise of the New Warrants, to the extent such New Warrants are exercised by the Selling Stockholders). See "More of Proceeds" in this prospectus.

Selling Stockholders). See "Use of Proceeds" in this prospectus.

Risk Factors

You should read the "Risk Factors" section of this prospectus and in the documents incorporated by reference in this prospectus for a discussion of factors to consider before deciding to purchase shares of our Common Stock.

Nasdaq symbol

Our Common Stock is listed on Nasdaq under the symbol "IBIO."

Except as otherwise indicated, the number of shares of Common Stock to be outstanding immediately after this offering is based on 16,219,281 shares of our Common Stock outstanding as of June 12, 2025, and excludes:

- · 1,185,924 shares of Common Stock issuable upon the exercise of stock options outstanding at a weighted average exercise price of \$5.92 per share;
- · 16,330,854 shares of Common Stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$1.06 per share;
- · 11 shares of Common Stock issuable upon the vesting of restricted stock units; and
- · 396,433 shares of Common Stock reserved for future issuance under the 2023 Omnibus Equity Incentive Plan.

4

RISK FACTORS

Investing in our shares of Common Stock involves a high degree of risk. Before deciding whether to invest in our Common Stock, you should consider carefully the risks and uncertainties described below, together with all of the other information included or incorporated by reference in this prospectus, including the risks and uncertainties discussed under "Risk Factors" in our most recent Annual Report on Form 10-K and our subsequent Current Reports on Form 10-Q, which are incorporated by reference in this prospectus, as well as any updates thereto contained in subsequent filings with the SEC or any free writing prospectus, before deciding whether to purchase our Common Stock in this offering. All of these risk factors are incorporated herein in their entirety. The risks described below and incorporated by reference are material risks currently known, expected or reasonably foreseeable by us. However, the risks described below and incorporated by reference are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business, operating results, prospects or financial condition. If any of these risks actually materialize, our business, financial condition, and results of operations 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. For more information, see the section entitled "Where You Can Find More Information."

Risks Related to this Offering

Resales of our Common Stock in the public market by our stockholders as a result of this offering may cause the market price of our Common Stock to fall.

We are registering for resale shares of Common Stock. The price per share of our Common Stock in this offering may result in an immediate decrease in the market price of our Common Stock. This decrease may continue after the completion of this offering. Sales of substantial amounts of our Common Stock in the public market, or the perception that such sales might occur, could adversely affect the market price of our Common Stock. The issuance of new shares of Common Stock could result in resales of our Common Stock by our current stockholders concerned about the potential ownership dilution of their holdings. Furthermore, in the future, we may issue additional shares of Common Stock or other equity or debt securities exercisable or convertible into Common Stock. Any such issuance could result in substantial dilution to our existing stockholders and could cause our stock price to decline.

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

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different levels of dilution and different outcomes in their investment results. The Selling Stockholders may sell such Shares at different times and at different prices.

We have additional securities available for issuance, which, if issued, could adversely affect the rights of the holders of our Common Stock.

We may from time-to-time issue additional shares of Common Stock or preferred stock. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, Common Stock or preferred stock. Any future issuances of Common Stock or securities convertible into Common Stock, would further dilute the percentage ownership of us held by holders of Common Stock. In addition, the issuance of certain securities, may be used as an "antitakeover" device without further action on the part of our stockholders, and may adversely affect the holders of the Common Stock.

Because we will not declare cash dividends on our Common Stock in the foreseeable future, stockholders must rely on appreciation of the value of our Common Stock for any return on their investment.

We have never declared or paid cash dividends on our Common Stock. We currently anticipate that we will retain all available funds and future earnings, if any, to fund the development and growth of our business and will not declare or pay any cash dividends in the foreseeable future. As a result, only appreciation of the price of our Common Stock, if any, will provide a return to investors in this offering.

Stockholders may experience significant dilution as a result of potential future financings that we may effect.

Purchasers of the Shares in this offering, as well as our existing Stockholders, will experience significant dilution if we sell additional shares at prices significantly below the price at which they invested. In addition, we may issue additional shares of Common Stock or other equity securities exercisable for shares of Common Stock in connection with, among other things, future acquisitions of additional companies or assets, or under our equity incentive plans, in certain cases without shareholder approval. Our existing Stockholders may experience significant dilution if we issue shares of Common Stock in the future at prices below the price at which previous Stockholders invested.

5

Our issuance of additional shares of Common Stock or other common stock equivalents would have the following effects:

- our existing Stockholders' proportionate ownership interest in us will decrease;
- the relative voting strength of each previously outstanding ordinary share may be diminished; and
- the market price of our Shares may decline.

Investors may experience significant dilution as a result of this offering and future offerings.

The exercise of the New Warrants and the issuance of up to 11,253,370 Shares underlying such New Warrants could cause our existing stockholders to experience dilution.

The Selling Stockholders identified herein are selling from time to time up to 11,253,370 Shares underlying the New Warrants, which constitutes approximately 68% of our issued and outstanding shares of Common Stock prior to the offering pursuant to this prospectus. Such sales could cause the market price of our Common Stock to decline.

Purchasers of the Shares, as well as our existing stockholders, will experience dilution if the Selling Stockholders identified herein sell the Shares underlying the New Warrants. In addition, we may also offer additional shares of Common Stock in the future, which may result in additional significant dilution.

Future issuances or sales, or the potential for future issuances or sales, of our shares of Common Stock may cause the trading price of our Common Stock to decline and could impair our ability to raise capital through subsequent equity offerings.

We have issued a significant number of shares of Common Stock and we may do so in the future. Shares of Common Stock to be issued in future equity offerings could cause the market price of our Common Stock to decline and could have an adverse effect on our earnings per share if and when we become profitable. In addition, future sales of our shares of Common Stock or other securities in the public markets, or the perception that these sales may occur, could cause the market price of our Common Stock to decline, and could materially impair our ability to raise capital through the sale of additional securities.

The market price of our Common Stock could decline due to sales, or the announcements of proposed sales, of a large number of shares of Common Stock in the market, including sales of shares of Common Stock by our large Stockholders, or the perception that these sales could occur. These sales or the perception that these sales could occur could also depress the market price of our Common Stock and impair our ability to raise capital through the sale of additional equity securities or make it more difficult or impossible for us to sell equity securities in the future at a time and price that we deem appropriate. We cannot predict the effect that future sales of shares of Common Stock or other equity-related securities would have on the market price of our Common Stock.

Our Certificate of Incorporation authorizes our board of directors to, among other things, issue additional shares of Common Stock or securities convertible or exchangeable into Common Stock, without stockholder approval. We may issue such additional shares of Common Stock or convertible securities to raise additional capital. The issuance of any additional shares of Common Stock or convertible securities could be substantially dilutive to our Stockholders. Moreover, to the extent that we issue restricted share units, stock appreciation rights, options or warrants to purchase our shares of Common Stock in the future and those stock appreciation rights, options or warrants are exercised, or as the restricted share units settle, our Stockholders may experience further dilution. Holders of our Common Stock have no preemptive rights that entitle such holders to purchase their *pro rata* share of any offering of shares or equivalent securities and, therefore, such sales or offerings could result in increased dilution to our Stockholders.

An active trading market for our Common Stock may not be sustained.

Although our Common Stock is listed on Nasdaq, the market for our Common Stock has demonstrated varying levels of trading activity. Furthermore, the current level of trading may not be sustained in the future. The lack of an active market for our Common Stock may impair investors' ability to sell their shares of Common Stock at the time they wish to sell them or at a price that they consider reasonable, may reduce the fair market value of their shares of Common Stock and may impair our ability to raise capital

to continue to fund operations by selling shares and may impair our ability to utilize our shares as consideration in any licensing or other collaboration transactions with third parties.

Our share price may be subject to substantial volatility, and stockholders may lose all or a substantial part of their investment.

Our Common Stock is currently traded on Nasdaq. There is limited public float, and trading volume historically has been low and sporadic. As a result, the market price for our Common Stock may not necessarily be a reliable indicator of our fair market value. The price at which our Common Stock trades may fluctuate as a result of a number of factors, including the number of shares available for sale in the market, quarterly variations in our operating results, actual or anticipated announcements of new releases by us or competitors, the gain or loss of sources of revenues, changes in the estimates of our operating performance, market conditions in our industry and the economy as a whole.

6

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference herein, contain, and any applicable prospectus supplement or free writing prospectus including the documents we incorporate by reference therein may contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including statements regarding our future financial condition, business strategy and plans and objectives of management for future operations. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terminology such as "believe," "will," "may," "estimate," "continue," "anticipate," "intend," "should," "plan," "might," "approximately," "expect," "predict," "could," "potentially" or the negative of these terms or other similar expressions. Forward-looking statements appear in a number of places throughout this prospectus and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things:

- · our plans to develop and commercialize our product candidates;
- the timing of our planned clinical trials for our product candidates;
- the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;
- · our commercialization, marketing and manufacturing capabilities and strategy;
- expectations regarding clinical trial data;
- our intellectual property position;
- our competitive position and the development of and projections relating to our competitors or our industry;
- · our ability to identify, recruit and retain key personnel;
- the impact of laws and regulations;
- our plans to identify additional product candidates with significant commercial potential that are consistent with our commercial objectives;
- · our estimates regarding future revenue, expenses and needs for additional financing; and
- · the industry in which we operate and the trends that may affect the industry or us.

Discussions containing these forward-looking statements may be found, among other places, in the sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in the documents incorporated by reference herein, including our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, as well as any amendments thereto.

These forward-looking statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus in their entirety, many of these risks and uncertainties under the heading "Risk Factors" contained in the documents incorporated by reference herein. These forward-looking statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

7

USE OF PROCEEDS

We will not receive any proceeds from the sale of the Shares of Common Stock by the Selling Stockholders. We will, however, receive up to an aggregate of approximately \$9.7 million in cash from the exercise of the New Warrants, assuming the exercise in full for cash of all the New Warrants, which we intend to use for working capital and general corporate purposes.

The Selling Stockholders will receive all of the proceeds of the sale of Shares offered from time to time pursuant to this prospectus. Accordingly, we will not receive any proceeds from the sale of the Shares that may be sold from time to time pursuant to this prospectus. See "Plan of Distribution" elsewhere in this prospectus for more information

This prospectus relates to the sale of up to 11,253,370 Shares that the Selling Stockholders may sell in one or more offerings upon exercise of some or all of New Warrants that the Selling Stockholder received from us in the April 2025 warrant inducement of the Existing Warrants (the "April 2025 Warrant Inducement") and private placement of New Warrants (the "April 2025 Private Placement") described above. The table below sets forth information about the maximum number of shares of Common Stock that may be offered from time to time by the Selling Stockholders under this prospectus. The Selling Stockholders identified below may currently hold or acquire shares of Common Stock in addition to those registered hereby. In addition, the Selling Stockholders identified below may sell, transfer, assign or otherwise dispose of some or all of its shares of Common Stock registered hereunder in private placement transactions exempt from or not subject to the registration requirements of the Securities Act. We may amend or supplement this prospectus from time to time in the future to update or change the Selling Stockholders list and the securities that may be resold.

The following table sets forth, to our knowledge, information concerning the beneficial ownership of shares of our Common Stock by the Selling Stockholders as of June 12, 2025. The information in the table below with respect to the Selling Stockholders has been obtained from the Selling Stockholders and we have prepared the following table based on the information supplied to us by the Selling Stockholders on or prior to June 12, 2025. When we refer to the "Selling Stockholders" in this prospectus, or, if required, a post-effective amendment to the registration statement of which this prospectus is a part, we mean the Selling Stockholders listed in the table below as offering shares of Common Stock, as well as its respective pledgees, assignees, donees, transferees or successors-in-interest. Throughout this prospectus, when we refer to the shares of Common Stock being registered on behalf of the Selling Stockholders, we are referring to the Shares issued to the Selling Stockholders pursuant to the Inducement Agreement. The Selling Stockholders may sell all, some or none of the Shares subject to this prospectus. See "Plan of Distribution" below as it may be supplemented and amended from time to time

The number of shares of Common Stock beneficially owned prior to the offering for the Selling Stockholders includes all shares of our Common Stock beneficially held by the Selling Stockholders as of June 12, 2025, without regard to any limitations on exercises. The shares reported under "Maximum Number of Shares of Common Stock Being Offered for Resale" consist of the maximum number of Shares of Common Stock being offered by this prospectus by the Selling Stockholders, also without regard to any limitations on exercises. The percentages of shares owned immediately following the sale of the Shares offered for resale are based on 27,472,651 shares of Common Stock outstanding, assuming the issuance of 11,253,370 Shares upon the exercise of the New Warrants.

This prospectus generally covers the resale of the maximum number of shares of Common Stock issuable upon exercise of the New Warrants, determined as if the outstanding New Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the registration right agreement, without regard to any limitations on the exercise of the New Warrants. The fourth and fifth columns assume the sale of all of the shares offered by the Selling Stockholders pursuant to this prospectus and gives effect to all applicable beneficial ownership limitations, if any.

Under the terms of the New Warrants, the Selling Stockholders may not exercise the New Warrants to the extent such exercise would cause such Selling Stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock that would exceed 4.99% (or, at the option of the Selling Stockholder, 9.99%), of our then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon exercise of such warrants which have not been exercised. The Selling Stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

The Selling Stockholders have purchased our securities in certain of our prior financing transactions and also participated in the April 2025 Warrant Inducement and April 2025 Private Placement. See "Relationships with Selling Stockholders" below. In addition, to our knowledge, none of the Selling Stockholders is an affiliate of a broker-dealer and there are no participating broker-dealers. To the extent a Selling Stockholders would be an affiliate of a broker-dealer, or if there would be any participating broker-dealer, such Selling Stockholders and/or participating broker-dealer would be deemed to be an "underwriter" within the meaning of the Securities Act, and any commissions or discounts given to any such Selling Stockholders or broker-dealer could be regarded as underwriting commissions or discounts under the Securities Act.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to our Common Stock. Generally, a person "beneficially owns" shares of our Common Stock if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for the Selling Stockholders named below.

9

	Shares of Common Stock Beneficially Owned Prior	Maximum Number of Shares of Common Stock Being Offered	Shares of Com To Be Benefic Immediately the Sale of the of Commo Offered for	ially Owned Following he Shares on Stock
Selling Stockholders	to the Offering	for Resale	Number	Percentage
ADAR1 Capital Management, LLC (1)	2,764,363	2,456,140	308,223	1.12%
Lynx1 Master Fund, LP (2)	6,206,159	2,807,016	2,878,362	9.99%
Armistice Capital Master Fund Ltd. (3)	4,990,214	4,990,214	0	_
Opaleye, L.P. (4)	1,125,000	750,000	375,000	1.36%
Patrick J. Crutcher (5)	425,438	250,000	175,438	*

^{*} Represents less than one percent (1%) of the outstanding Common Stock

(1) The shares reported under "Maximum Number of Shares of Common Stock Being Offered for Resale" consist of 2,456,140 shares of Common Stock issuable upon exercise of New Warrants held by ADAR1 Capital Management, LLC. The New Warrants are subject to a beneficial ownership limitation of 9.99%, which limitation restricts ADAR1 Capital Management, LLC from exercising that portion of the New Warrants that would result in ADAR1 Capital Management, LLC and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The shares reported under "Shares of Common Stock Beneficially Owned Prior to the Offering" consist of the aforementioned 2,456,140 shares of Common Stock issuable upon exercise of New Warrants, as well as (i) 308,223 shares of Common Stock, as reported to us by ADAR1 Partners, LP, the Capital Management, LLC, which does not give effect to limitations on exercisability of the New Warrants or Pre-Funded Warrants. The shares reported under "Shares of Common Stock To Be Beneficially Owned Immediately Following the Sale of the Shares of Common Stock Offered for Resale" consist of 308,223 shares of Common Stock. ADAR1 Capital Management, LLC acts as an investment adviser to, and manages investment and trading accounts of, ADAR1 Fund Partners, LP ("ADAR1 Fund"). ADAR1 Capital Management GP, LLC ("ADAR1 General Partner") acts as the general partner of ADAR1 Fund. ADAR1 Capital Management and ADAR1 General Partner may be deemed to indirectly beneficially own securities held by ADAR1 Fund. Mr. Daniel Schneeberger is the Manager of ADAR1 Capital Management, LLC and ADAR1 General Partner. Mr. Schneeberger may be deemed to indirectly beneficially own securities held by ADAR1 Fund. Mr. Daniel Schneeberger is the Manager of ADAR1 Capital Management, LLC is 3503 Wild Cherry Drive, Building 9, Austin, Texas 78738.

- (2) The shares reported under "Maximum Number of Shares of Common Stock Being Offered for Resale" consist of 2,807,016 shares of Common Stock issuable upon exercise of New Warrants held by Lynx1 Capital Management LP. The New Warrants are subject to a beneficial ownership limitation of 9.99%, which limitation restricts Lynx1 Capital Management LP from exercising that portion of the New Warrants that would result in Lynx1 Capital Management LP and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The shares reported under "Shares of Common Stock Beneficially Owned Prior to the Offering" include the aforementioned 2,807,016 shares of Common Stock issuable upon exercise of New Warrants, as well as (i) 1,538,573 shares of Common Stock, and (ii) 1,860,570 shares of Common Stock issuable upon the exercise of Pre-Funded Warrants held by Lynx1 Capital Management LP, as reported to us by Lynx1 Capital Management LP, which does not give effect to limitations on exercisability of the New Warrants or Pre-Funded Warrants. The shares reported under "Shares of Common Stock To Be Beneficially Owned Immediately Following the Sale of the Shares of Common Stock Offered for Resale" consist of: (i) 1,538,573 shares of Common Stock; and (ii) 1,339,789 shares of Common Stock issuable upon exercise of Pre-Funded Warrants, but such number of shares does not include 520,781 shares of Common Stock issuable upon exercise of Pre-Funded Warrants, but such number of shares does not include 520,781 shares of Common Stock issuable upon exercise of Pre-Funded Warrants because Lynx1 Capital Management LP is prohibited from exercising such Pre-Funded Warrants, if, as a result of such exercise, it and its affiliates would beneficially own more than 9.99% of the total number of shares of Common Stock then issued and outstanding immediately after giving effect to the exercise. Lynx1 Capital Management LP is the investment manager of Lynx1 Master Fund LP ("Lynx1 Fund"). Mr. Wes
- (3) The shares reported under "Shares of Common Stock Beneficially Owned Prior to the Offering" and "Maximum Number of Shares of Common Stock Being Offered for Resale" consists 4,990,214 shares of Common Stock issuable upon the exercise of New Warrants held by Armistice Capital LLC, as reported to us by Armistice Capital LLC, which does not give effect to limitations on exercisability of the New Warrants. The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the "Master Fund"), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC ("Armistice Capital"), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The New Warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.

10

- (4) The shares reported under "Maximum Number of Shares of Common Stock Being Offered for Resale" consist of 750,000 shares of Common Stock issuable upon exercise of New Warrants held by Opaleye, L.P. The New Warrants are subject to a beneficial ownership limitation of 9.99%, which limitation restricts Opaleye, L.P. from exercising that portion of the New Warrants that would result in Opaleye, L.P. and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The shares reported under "Shares of Common Stock Beneficially Owned Prior to the Offering" include the aforementioned 750,000 shares of Common Stock issuable upon exercise of New Warrants, as well as 375,000 shares of Common Stock, as reported to us by Opaleye, L.P., which does not give effect to limitation on exercisability of the New Warrants. The shares reported under "Shares of Common Stock To Be Beneficially Owned Immediately Following the Sale of the Shares of Common Stock Offered for Resale" consist of 375,000 shares of Common Stock. Mr. James Silverman, as the President of Opaleye, L.P., is deemed to control Opaleye L.P. The address of Opaleye, L.P., is One Boston Place, 26th Floor, Boston, Massachusetts 02108.
- (5) The shares reported under "Maximum Number of Shares of Common Stock Being Offered for Resale" consist of 250,000 shares of Common Stock issuable upon exercise of New Warrants held by Mr. Crutcher. The New Warrants are subject to a beneficial ownership limitation of 9.99%, which limitation restricts Mr. Crutcher from exercising that portion of the New Warrants that would result in Mr. Crutcher and his affiliates owning, after exercise, a number of shares of Common Stock in excess of the beneficial ownership limitation. The shares reported under "Shares of Common Stock Beneficially Owned Prior to the Offering" include the aforementioned 250,000 shares of Common Stock issuable upon exercise of New Warrants, as well as 175,438 shares of Common Stock, as reported to us by Mr. Crutcher. The shares reported under "Shares of Common Stock To Be Beneficially Owned Immediately Following the Sale of the Shares of Common Stock Offered for Resale" consist of 175,438 shares of Common Stock. The address for Mr. Crutcher is 1334 Beech Valley Road NE, Atlanta, Georgia 30306.

Relationships with Selling Stockholders

To our knowledge, except for the Selling Stockholders' participation in the April 2025 Warrant Inducement and April 2025 Private Placement and as set forth below, the Selling Stockholders do not have, and haves not had within the past three years, any position, office or other material relationship with us or any of our predecessors or affiliates.

Armistice Capital LLC was an investor in our public offering that closed in December 2023 and acquired shares of Common Stock, a pre-funded warrant, Series C warrants (the "Series C Warrants") and Series D warrants (the "Series D Warrants") in the public offering, of which Series C Warrants to purchase up to 1,000,000 shares of Common Stock and Series D Warrants to purchase up to 1,000,000 shares of Common Stock, which are subject to a 4.99% beneficial ownership limitation, remained outstanding prior to the April 2025 Warrant Inducement, all of which were exercised in connection with the April 2025 Warrant Inducement. Prior to the April 2025 Warrant Inducement, Armistice Capital LLC was also the holder of Series A warrants (the "Series A Warrants") to purchase up to 144,230 shares of Common Stock, all of which were also exercised in connection with the April 2025 Warrant Inducement. The Series A Warrants, Series C Warrants and Series D Warrants exercised by Armistice Capital LLC in connection with the April 2025 Warrant Inducement are collectively referred to as the "Prior Existing Armistice Warrants."

On March 26, 2024, we entered into a securities purchase agreement with the Selling Stockholders and other investors for the issuance and sale in a private placement offering (the "March 2024 Private Placement") of an aggregate of: (i) 2,701,315 shares Common Stock, (ii) pre-funded warrants (to purchase up to 2,585,963 shares Common Stock at an exercise price of \$0.0001 per share, and (iii) Series E Common Stock purchase warrants (the "Series E Warrants") to purchase up to 5,287,278 shares of the Company's Common Stock at an exercise price of \$2.64 per share. The Series E Warrants are exercisable at any time after the six-month anniversary of their issuance (the "Initial Exercise Date") at an exercise price of \$2.64 per share and have a term of exercise equal to five years from the date of issuance. The combined purchase price for one share of common stock and the accompanying Series E Warrant was \$2.85 and the purchase price for one pre-funded warrant and the accompanying Series E Warrant was \$2.849. The Selling Stockholders were issued Series E Warrants to purchase an aggregate of 3,482,455 shares of Common Stock in the March 2024 Private Placement, which, together with the Prior Existing Armistice Warrants, comprise the Existing Warrants.

In connection with the March 2024 Private Placement, we entered into a side letter agreement with Lynx1 Capital Management LP which provides that Lynx1 Capital Management LP will be entitled to nominate one individual to serve as a director on our Board of Directors for one three-year term commencing with our 2024 Annual Meeting of Stockholders.

In March 2024, we entered into a collaboration with AstralBio, Inc., a privately held biotechnology company co-founded by Patrick Crutcher, to discover, engineer and develop novel antibodies to treat obesity and other cardiometabolic conditions. As part of the collaboration, we granted an exclusive license to AstralBio of our AI-powered technology to identify and engineer four (4) targets for the treatment of obesity and cardiometabolic diseases, of which AstralBio may continue the pre-clinical development and deploy its proven drug development expertise to advance candidates to an Investigational New Drug (IND) application. We have the exclusive option to license three (3) obesity and cardiometabolic targets from AstralBio and as a result, we will receive the rights to develop, manufacture and commercialize those targets upon exercise.

collaboration and pursuant to the license agreement, AstralBio provided us a \$750,000 credit which we applied toward the option fee for the exclusive license of the novel antibody that inhibits the function of Activin E.

On April 25, 2024, we entered into a Consulting Agreement with Patrick Crutcher, AstralBio's Co-founder and Chief Executive Officer, pursuant to which we issued stock options to purchase up to 133,000 shares of Common Stock under the 2023 Omnibus Equity Incentive Plan, which were exercisable at an exercise price of \$1.72 per share, but which expired on April 24, 2025, thirty (30) days after the expiration of the term of the Consulting Agreement. The options were not exercised prior to their expiration and were forfeited.

On December 31, 2024, we entered into a License Agreement with AstralBio, pursuant to which AstralBio licensed to us, on a worldwide exclusive basis and with the right to grant sublicenses, under the AstralBio Licensed Patents and AstralBio Licensed Know-How to Develop, Manufacture and Commercialize and otherwise exploit any product directed to GDF8 (myostatin) that contains the licensed antibody targeting myostatin for research, diagnosis, treatment, prevention, or management of any disease or medical condition. As partial payment for the License Agreement, we issued 246,087 shares of Common Stock to AstralBio.

On April 21, 2025, we entered into an Activin E License Agreement with AstralBio, pursuant to which AstralBio licensed to us, on a worldwide exclusive basis and with the right to grant sublicenses, under the AstralBio Licensed Patents and AstralBio Licensed Know-How to Develop, Manufacture and Commercialize and otherwise exploit any product directed to Activin E that contains the licensed antibody targeting Activin E for research, diagnosis, treatment, prevention, or management of any disease or medical condition

On January 13, 2025, a pre-funded warrant to purchase 1,560,570 shares of Common Stock that we issued to Woodforest National Bank ("Woodforest") on May 31, 2024, pursuant to the terms of a settlement agreement by and between us and Woodforest, was assigned by Woodforest to Lynx1 Master Fund LP, which pre-funded warrant expires upon full exercise thereof and is exercisable at a nominal exercise price equal to \$0.0001 per share.

12

PLAN OF DISTRIBUTION

The Selling Stockholders of the securities and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The Selling Stockholders may use any one or more of the following methods when selling securities:

- · ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- · purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- · an exchange distribution in accordance with the rules of the applicable exchange;
- · privately negotiated transactions;
- · settlement of short sales;
- · in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- · a combination of any such methods of sale; or
- · any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the Shares of Common Stock offered hereby will be passed upon for us by Blank Rome LLP.

EXPERTS

The consolidated financial statements of iBio Inc. and Subsidiaries for the two years ended June 30, 2024 have been audited by Grassi & Co., CPAs, P.C., independent registered public accounting firm, as set forth in their report thereon appearing in iBio Inc. and Subsidiaries Annual Report on Form 10-K for the year ended June 30, 2024 and incorporated by reference herein. Such consolidated financial statements are incorporated by reference herein in reliance upon such report, which includes an explanatory paragraph on our ability to continue as a going concern, given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement 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. For further information with respect to us and the securities being offered under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we, the Selling Stockholders nor any agent, underwriter or dealer has authorized any person to provide you with different information. Neither we nor the Selling Stockholders are 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 by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public at the SEC's website at www.sec.gov. Additional information about iBio, Inc. is contained at our website, www.ibioinc.com. Information on our website is not incorporated by reference into this prospectus. We make available on our website our SEC filings as soon as reasonably practicable after those reports are filed with the SEC.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-35023. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this prospectus:

- · Our Annual Report on Form 10-K for the fiscal year ended June 30, 2024 filed with the SEC on September 20, 2024 as amended September 24, 2024;
- Our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2024, filed with the SEC on November 12, 2024 Our Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2024, filed with the SEC on February 10, 2025, and Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025, filed with the SEC on May 2, 2025;
- Our Current Reports on Form 8-K filed with the SEC on July 3, 2024, July 9, 2024, July 26, 2024, November 25, 2024 (other than information furnished under Item 2.02 and exhibits related thereto), January 2, 2025 (other than information furnished under Item 7.01 and exhibits related thereto), January 10, 2025 (other than information furnished under Item 7.01 and exhibits related thereto), April 7, 2025 (other than information furnished under Item 7.01 and exhibits related thereto), April 7, 2025 (other than information furnished under Item 7.01 and exhibits related thereto), April 22, 2025 (other than information furnished under Item 7.01 and exhibits related thereto), April 22, 2025 (other than information furnished under Item 7.01 and exhibits related thereto); and
- The description of our Common Stock set forth in: (i) our registration statement on Form 8-A filed with the SEC on December 29, 2010, including any amendments thereto or reports filed for the purposes of updating this description, and (ii) Exhibit 4.2 to our Annual Report on Form 10-K for the fiscal year ended June 30, 2024 filed with the SEC on September 20, 2024.

We also incorporate by reference into this prospectus all documents (other than portions of those documents not deemed filed) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (Commission File Number 001-35023) (i) on or after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of such registration statement, and (ii) on or after the date of this prospectus but prior to the termination of the offering (i.e., until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus forms a part has been withdrawn). 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.

14

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with this prospectus, including exhibits that are specifically incorporated by reference into such documents. You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

iBio, Inc. 11750 Sorrento Valley Road, Suite 200 San Diego, California 92121 (979) 446-0027

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