

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

**FORM S-3
REGISTRATION STATEMENT**
*UNDER
THE SECURITIES ACT OF 1933*

ImageneBio, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

81-1697316
(I.R.S. Employer
Identification Number)

12526 High Bluff Drive, Suite 345
San Diego, California 92130
(858) 345-6265

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

Kristin Yarema, Ph.D.
Chief Executive Officer
ImageneBio, Inc.
12526 High Bluff Drive, Suite 345
San Diego, California 92130
(858) 345-6265

(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 proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ☐

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 of 1933, as amended, other than securities offered only in connection with dividend or interest reinvestment plans, 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, please 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-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 that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, 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 prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 5, 2026

PROSPECTUS

5,770,335 Shares of Common Stock



This prospectus covers the offer and resale by the selling stockholders (the “selling stockholders”) identified in this prospectus of up to an aggregate of 5,770,335 shares of our common stock, par value \$0.001 per share (the “common stock”), issuable upon the exercise of pre-funded warrants to purchase shares of our common stock (the “pre-funded warrants”). The pre-funded warrants were sold to the selling stockholders in a private placement that closed on April 14, 2026 (the “Private Placement”).

We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale by the selling stockholders of such shares.

Sales of the shares by the selling stockholders may occur at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. The selling stockholders may sell the shares to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders, the purchasers of the shares, or both.

We are paying the cost of registering the shares of common stock covered by this prospectus as well as various related expenses. The selling stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their shares. See “Plan of Distribution” for more information about how the selling stockholders may sell or dispose of their shares.

Our common stock is listed on the Nasdaq Capital Market under the symbol “IMA.” On August 4, 2026, the last reported sale price of our common stock was \$5.71 per share.

Investing in our common stock involves a high degree of risk. Before making an investment decision, please read the information under “[Risk Factors](#)” on page 4 of this prospectus and under similar headings in any amendment or supplement to this prospectus or in any filing with the Securities and Exchange Commission that is incorporated by reference herein.

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

The date of this prospectus is _____, 2026

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 (the “Registration Statement”) that we filed with the Securities and Exchange Commission (the “SEC”) using the “shelf” registration process. Under this shelf registration process, the selling stockholders hereunder may, from time to time, sell the shares of common stock offered by them described in this prospectus.

We have not authorized anyone to provide you with information other than the information that we have provided in this prospectus and your reliance on any unauthorized information or representation is at your own risk. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus and that any information in a supplement or amendment to this prospectus is accurate only as of the date of such supplement or amendment. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus includes industry and market data that we have obtained from industry and general publications, third-party research, studies and surveys, filings of public companies in their respective industries and related industry and internal company surveys. These sources include government and industry sources, which generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this prospectus, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. We do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the forecasts from the sources relied upon or cited herein.

Assumptions and estimates of future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Risk Factors.” These and other factors could cause future performance to differ materially from our assumptions and estimates. See “Cautionary Note Regarding Forward-Looking Statements.”

We have proprietary rights to trademarks, trade names and service marks appearing in this prospectus that are important to our business. This prospectus may also contain trade names, trademarks and service marks belonging to other companies that are the property of their respective owners. Solely for convenience, trademarks, trade names and service marks may appear in this prospectus without the ™ and ® symbols, but such references, or their failure to appear, should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights or the rights of the applicable licensors with respect thereto.

PROSPECTUS SUMMARY

This summary highlights certain information about us, the Private Placement (as defined below) and selected information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete and does not contain all of the information that you should consider before making an investment decision. For a more complete understanding of our company, you should read and consider carefully the more detailed information included or incorporated by reference in this prospectus and any applicable prospectus supplement, including the factors described under the heading “Risk Factors” on page 4 of this prospectus, as well as the information incorporated herein by reference, before making an investment decision.

Our Company

Overview

We are a clinical-stage biopharmaceutical company developing therapeutics for patients with immunological, autoimmune and inflammatory diseases. Our lead asset, IMG-007, recently named olevaprubart, is a non-depleting anti-OX40 monoclonal antibody that binds specifically to OX40 receptor on activated T cells to block receptor binding to OX40 ligand (“OX40L”). Olevaprubart is being developed to potentially treat multiple autoimmune and inflammatory diseases and disorders, with initial evaluation in atopic dermatitis (“AD”) and alopecia areata (“AA”). OX40 signaling is thought to be important in driving the pathogenesis of a spectrum of immunological, autoimmune and inflammatory diseases, including additional dermatological diseases, respiratory, gastrointestinal, and rheumatic diseases. Olevaprubart is initially being developed for the treatment of AD and AA, and we believe it has further “pipeline within a product” potential. We may explore additional indications with olevaprubart such as asthma, rheumatoid arthritis, and hidradenitis suppurativa, among others.

Corporate Information

We were originally incorporated under the laws of the State of Delaware in February 2016 under the name Kyn Therapeutics, Inc. We were the successor in interest to Kyn Therapeutics L.L.C., a limited liability company formed under the laws of the State of Texas in September 2014. In December 2019, we changed our name from Kyn Therapeutics, Inc. to Ikena Oncology, Inc. (“Ikena”). On July 25, 2025 (the “Closing Date”), we consummated the merger with Inmagene Biopharmaceuticals, an exempted company with limited liability incorporated and existing under the laws of the Cayman Islands (“Legacy Inmagene”) pursuant to the terms of the Agreement and Plan of Merger, dated as of December 23, 2024 (the “Merger Agreement”), by and among Ikena, Insight Merger Sub I, an exempted company with limited liability incorporated and existing under the laws of the Cayman Islands and a direct, wholly owned subsidiary of Ikena (“Merger Sub I”), Insight Merger Sub II, an exempted company with limited liability incorporated and existing under the laws of the Cayman Islands and a direct, wholly owned subsidiary of Ikena (“Merger Sub II”), and Legacy Inmagene.

Pursuant to the Merger Agreement, on the Closing Date, (i) Ikena effected a 1-for-12 reverse stock split of Ikena’s issued common stock (the “Reverse Stock Split”), (ii) Merger Sub I merged with and into Legacy Inmagene (the “First Merger”), with Legacy Inmagene surviving the First Merger as a wholly owned subsidiary of Ikena, (iii) immediately following the First Merger, Legacy Inmagene merged with and into Merger Sub II (the “Second Merger” and, together with the First Merger, the “Merger”), with Merger Sub II surviving the Second Merger as a wholly owned subsidiary of Ikena, and (iv) following the Second Merger, Ikena changed its name to “ImageneBio, Inc.” As of the open of trading on July 28, 2025, our common stock began trading on Nasdaq under the symbol “IMA”.

Our principal executive offices are located at 12526 High Bluff Drive, Suite 345, San Diego, CA 92130, and our telephone number is (858) 345-6265.

Our website address is imagenebio.com. Textual references and the information contained on, or that can be accessed through, our website are not a part of this prospectus.

Unless otherwise stated or the context otherwise requires, the references in this prospectus to the “Company,” “we,” “our,” or “us” refer to Imogene Biopharmaceuticals together with its consolidated subsidiaries for periods prior to the Merger and to ImogeneBio, Inc. together with its consolidated subsidiaries for periods following the Merger; references to “Ikena” refer to Ikena Oncology, Inc. for periods prior to the Merger; and references to “Legacy Imogene” refer to Imogene Biopharmaceuticals together with its consolidated subsidiaries for periods prior to the Merger.

Private Placement

On April 12, 2026, we entered into a Securities Purchase Agreement (the “Purchase Agreement”) with the selling stockholders named in this prospectus, pursuant to which we sold and issued, in a private placement transaction, pre-funded warrants to purchase up to 5,770,335 shares of common stock at the closing on April 14, 2026. Each pre-funded warrant was sold at a price of \$5.199 per pre-funded warrant. The pre-funded warrants have a per share exercise price of \$0.001. The total aggregate purchase price paid by the selling stockholders was approximately \$30.0 million. The pre-funded warrants are exercisable at any time and will not expire until exercised in full. The pre-funded warrants may not be exercised if the aggregate number of shares of common stock beneficially owned by the holder thereof immediately following such exercise would exceed a specified beneficial ownership limitation, not to exceed 19.99%. For additional information regarding the Purchase Agreement, refer to the summary included under Item 1.01 of our Current Report on Form 8-K filed with the SEC on April 13, 2026, which is incorporated by reference herein.

On April 14, 2026, we entered into a Registration Rights Agreement (the “Registration Rights Agreement”) with the selling stockholders named in this prospectus, pursuant to which we agreed to prepare and file, within three (3) business days following August 1, 2026, a registration statement with the SEC to register for resale the shares of our common stock issuable upon exercise of the pre-funded warrants issued at the closing under the Purchase Agreement, and generally to cause the registration statement to promptly become effective. For additional information regarding the Registration Rights Agreement, refer to the summary included under Item 1.01 of our Current Report on Form 8-K filed with the SEC on April 13, 2026, which is incorporated by reference herein.

The Offering	
Common stock offered by the selling stockholders	5,770,335 shares ⁽¹⁾
Terms of the offering	The selling stockholders will determine when and how they will sell the common stock offered in this prospectus, as described in “Plan of Distribution.”
Use of proceeds	We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus.
Risk factors	See “Risk Factors” on page 4 for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Nasdaq Capital Market symbol	IMA
(1) Consists of 5,770,335 shares of common stock issuable upon the exercise of pre-funded warrants held by the selling stockholders named in this prospectus. The selling stockholders named in this prospectus may offer and sell up to 5,770,335 shares of our common stock. Our common stock is listed on the Nasdaq Capital Market under the symbol “IMA.” Shares of our common stock that may be offered under this prospectus will be fully paid and non-assessable upon exercise of the pre-funded warrants. We will not receive any of the proceeds of sales by the selling stockholders of any of the common stock covered by this prospectus. Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders for offer and resale, we are referring to the shares of common stock issuable upon exercise of the pre-funded warrants issued in the Private Placement as described above. When we refer to the selling stockholders in this prospectus, we are referring to the selling stockholders identified in this prospectus and, as applicable, their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part.	

RISK FACTORS

An investment in our common stock involves a high degree of risk. In addition to the risks and uncertainties described under the section titled “Cautionary Note Regarding Forward-Looking Statements,” you should consider carefully the risks and uncertainties described under the heading “Risk Factors” and under similar headings in our most recent Annual Report on Form 10-K and in our subsequent Quarterly Reports on Form 10-Q, and other reports and documents that are incorporated by reference into this prospectus before deciding whether to purchase any of our common stock being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, financial condition and operating results. In that event, the trading price of our common stock could decline, and you could lose all or part of your investment. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business or results of operations.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve substantial risks and uncertainties. In some cases, you can identify forward-looking statements by the words “aim,” “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “objective,” “ongoing,” “plan,” “predict,” “project,” “potential,” “seek,” “should,” “will,” or “would,” or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements.

These forward-looking statements may include, among other things, statements about:

- our strategies, prospects, plans, expectations or objectives of management for our future operations;
- the potential benefits of olevaprubart, including as compared to our competitors’ products and product candidates;
- our ability to maintain and protect our intellectual property rights;
- legislative, regulatory, political and economic developments beyond our control and the potential impact on our business;
- our plans and ability to raise significant additional capital to proceed with the development and commercialization of olevaprubart and any future product candidates and to fund our continued operations;
- the initiation, timing and potential of planned or ongoing clinical trials for olevaprubart, including the timing for data readouts;
- our progress, scope or timing of the development of olevaprubart, including our plans to develop olevaprubart for additional immunological and inflammatory indications;
- expectations surrounding the potential safety, efficacy, and regulatory and clinical progress of olevaprubart and anticipated milestones and timing therefor;
- our plans and expectations regarding our current or future collaborations;
- our ability to successfully commercialize olevaprubart, if approved, the rate and degree of market acceptance of olevaprubart and the favorability of pricing regulations, reimbursement practices from third-party payors or healthcare reform initiatives in the United States and abroad;
- our ability to successfully identify and validate new product candidates or additional indications for olevaprubart;
- our planned use of cash and cash equivalents and the milestones we expect to fund with such proceeds;
- the accuracy of our estimates regarding our cash runway, expenses, future revenues and capital requirements;
- the sufficiency of our internal controls and procedures and our plans and ability to remediate any material weaknesses;
- our expectations and plans regarding ongoing legal proceedings against us;
- our ability to recognize the benefits that may be derived from the Merger, including the commercial or market opportunity of olevaprubart;
- developments and projections relating to our competitors, our industry or the market opportunities for olevaprubart or any future product candidates;

- regulatory, political, environmental, economic and public health developments in the United States and foreign countries; and
- other risks and uncertainties, including those under the caption “Risk Factors.”

You should refer to the “Risk Factors” section herein and in the documents incorporated by reference herein for a discussion of material factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date the statement is made, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

You should read this prospectus and the documents incorporated by reference herein completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale or other disposition of shares of our common stock held by the selling stockholders pursuant to this prospectus. We will bear the out-of-pocket costs, expenses and fees incurred in connection with the registration of shares of our common stock to be sold by the selling stockholders pursuant to this prospectus. Other than registration expenses, the selling stockholders will bear underwriting discounts, commissions, placement agent fees or other similar expenses payable with respect to sales of shares of our common stock.

SELLING STOCKHOLDERS

The selling stockholders may sell some, all or none of their shares. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale or other disposition of any of the shares. The shares covered hereby may be offered from time to time by the selling stockholders. As a result, we cannot estimate the number of shares of common stock the selling stockholders will beneficially own after termination of sales under this prospectus. In addition, the selling stockholders may have sold, transferred or otherwise disposed of all or a portion of their shares of common stock since the date on which they provided information for the table below.

Selling stockholder information for each additional selling stockholder, if any, will be set forth by a prospectus supplement to the extent required prior to the time of any offer or sale of such selling stockholder's shares pursuant to this prospectus. Any prospectus supplement may add, update, substitute, or change the information contained in this prospectus, including the identity of each selling stockholder and the number of shares registered on its behalf. A selling stockholder may sell or otherwise transfer all, some or none of such shares in this offering. See "*Plan of Distribution*."

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 information in the table below and the footnotes thereto regarding shares of common stock to be beneficially owned after the offering assumes the sale of all shares being offered by the selling stockholders under this prospectus. This information has been obtained from the selling stockholders. The percentage of shares owned after the offering is based on 11,279,130 shares outstanding as of July 15, 2026 plus the shares of common stock issuable upon exercise of the pre-funded warrants held by such selling stockholder (in each case, subject to any applicable beneficial ownership blocker).

Name	Number of Shares Beneficially Owned Before Offering	Number of Shares Offered	After Offering	
			Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Entities affiliated with Biotechnology Value Fund, L.P. ⁽¹⁾	1,128,648	528,947	1,110,002	9.40%
Coastlands Capital Partners LP ⁽²⁾	572,803	1,923,446	372,917	2.82%
Funicular Funds, LP ⁽³⁾	1,165,096	480,861	781,599	6.65%
Entities affiliated with Monashee Investment Management LLC ⁽⁴⁾	192,344	192,344	—	—
Omega Fund VI, L.P. ⁽⁵⁾	936,222	480,861	455,361	3.87%
Entities affiliated with OrbiMed Private Investments VI, LP ⁽⁶⁾	1,630,940	721,292	909,648	7.58%
Stonepine Capital, LP ⁽⁷⁾	96,172	96,172	—	—
Trails Edge Biotechnology Master Fund, LP ⁽⁸⁾	1,219,644	1,346,412	290,121	2.30%

- (1) Shares of our common stock beneficially owned prior to the offering represents (i) (a) 593,189 shares of common stock and (b) 18,646 shares of common stock issuable upon the exercise of pre-funded warrants held by Biotechnology Value Fund, L.P. ("BVF"); (ii) 433,269 shares of common stock held by Biotechnology Value Fund II, L.P. ("BVF2"); (iii) 66,808 shares of common stock held by Biotechnology Value Trading Fund OS LP ("Trading Fund OS") and (iv) 16,736 shares of common stock held by MSI BVF SPV, LLC ("MSI"). Due to a beneficial ownership blocker in the pre-funded warrants, the number of

shares beneficially owned before the offering excludes (1) 257,440 shares of common stock issuable upon the exercise of pre-funded warrants held by BVF; (2) 209,416 shares of common stock issuable upon the exercise of pre-funded warrants held by BVF2; (3) 34,835 shares of common stock issuable upon the exercise of pre-funded warrants held by Trading Fund OS; and (4) 8,610 shares of common stock issuable upon the exercise of pre-funded warrants held by MSI. Shares of our common stock beneficially owned after the offering represents the shares described in (i)(a), (ii), (iii), and (iv). BVF I GP LLC (“BVF GP”), as the general partner of BVF, may be deemed to beneficially own the shares beneficially owned by BVF. BVF II GP LLC (“BVF2 GP”), as the general partner of BVF2, may be deemed to beneficially own the shares beneficially owned by BVF2. Partners OS, as the general partner of Trading Fund OS, may be deemed to beneficially own the shares beneficially owned by Trading Fund OS. BVF GPH, as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the shares beneficially owned in the aggregate by BVF and BVF2. Partners, as the investment manager of BVF, BVF2, Trading Fund OS and MSI, beneficially owns the shares beneficially owned in the aggregate by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Account, including 16,736 shares held in the Partners Managed Account, and any shares held by MSI upon the closing of the Private Placement. BVF Inc., as the general partner of Partners, may be deemed to beneficially own the shares beneficially owned by Partners. Mark N. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the shares beneficially owned by BVF Inc. BVF GP disclaims beneficial ownership of the shares beneficially owned by BVF. BVF2 GP disclaims beneficial ownership of the shares beneficially owned by BVF2. Partners OS disclaims beneficial ownership of the shares beneficially owned by Trading Fund OS. BVF GPH disclaims beneficial ownership of the shares beneficially owned by BVF and BVF2. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the shares beneficially owned by BVF, BVF2 and Trading Fund OS and held in the Partners Managed Account. The address of the principal business office of BVF, BVF GP, BVF2, BVF2 GP, BVF GPH, MSI and Partners is 44 Montgomery St., 40th Floor, San Francisco, California 94104 and the address of the principal business office of Trading Fund OS and Partners OS is PO Box 309 Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

- (2) Shares of our common stock beneficially owned prior to the offering represents (i) 372,917 shares of common stock and (ii) 199,886 shares of common stock issuable upon the exercise of pre-funded warrants held by Coastlands Capital Partners LP (“Coastlands”). Due to a beneficial ownership blocker in the pre-funded warrants, the number of shares beneficially owned before the offering excludes 1,723,560 shares of common stock issuable upon the exercise of pre-funded warrants held by Coastlands. Shares of our common stock beneficially owned after the offering represents the shares described in (i). Matthew D. Perry is the control person of the Coastlands. Coastlands and Mr. Perry each disclaim beneficial ownership of the shares of common stock except to the extent of such entity or person’s pecuniary interest therein. The principal business address of Coastlands and Mr. Perry is 601 California Street, Suite 1210 San Francisco, California, 94108.
- (3) Represents (i) 781,599 shares of common stock and (ii) 383,497 shares of common stock issuable upon the exercise of pre-funded warrants held by Funicular Funds, LP (“Funicular”). Due to a beneficial ownership blocker in the pre-funded warrants, the number of shares beneficially owned before the offering excludes 97,364 shares of common stock issuable upon the exercise of pre-funded warrants held by Funicular. Shares of our common stock beneficially owned after the offering represents the shares described in (i). Cable Car Capital, LP (“Cable Car”), as the general partner of Funicular, and Jacob Ma-Weaver, as the managing member of Cable Car, may each be deemed the beneficial owner of the shares held by Funicular. The principal business address of Funicular, Cable Car and Mr. Ma-Weaver is 601 California Street, Suite 1151, San Francisco, California 94108.
- (4) Represents (i) 84,780 shares of common stock issuable upon the exercise of pre-funded warrants held by HIF Solitude Ltd (“HIF”) and (ii) 107,564 shares of common stock issuable upon the exercise of pre-funded warrants held by Mission Pure Alpha Master LP (“MPAM”). MPAM and HIF are managed by Monashee Investment Management, LLC (“Monashee Management”). Jeff Muller is CCO of Monashee Management and has voting and investment control over Monashee Management and, accordingly, may be deemed to have beneficial ownership of the shares held by MPAM and HIF. Mr. Muller, however, disclaims any beneficial ownership of the shares held by these entities. The business address of MPAM and HIF and Mr. Muller is c/o Monashee Investment Management, LLC, 75 Park Plaza, 4th Floor, Boston, Massachusetts 02116.

- (5) Shares of our common stock beneficially owned prior to the offering represents (i) 454,982 shares of common stock held by Omega Fund VI, L.P. (“Omega Fund”); (ii) 480,861 shares of common stock issuable upon the exercise of pre-funded warrants held by Omega Fund; and (iii) 379 shares of common stock held by Otello Stampacchia, a member of our board of directors. Shares of our common stock beneficially owned after the offering represents the shares described in (i) and (iii). Omega Fund VI GP Manager, Ltd. (“Omega Ltd.”) is the sole general partner of Omega Fund VI GP, L.P. (“Omega GP”), which is the sole general partner of Omega Fund; and each of Omega Ltd. and Omega GP may be deemed to own beneficially the shares held by Omega Fund. Claudio Nessi and Dr. Stampacchia are the directors of Omega Ltd. and, as a result, may be deemed to share voting and investment power over the shares held directly by Omega Fund. Each of Dr. Nessi, Dr. Stampacchia, Omega Ltd. and Omega GP disclaim beneficial ownership of the shares held by Omega Fund except to the extent of their pecuniary interest therein. The principal business address of Omega Fund is 888 Boylston Street, Suite 1111, Boston, MA 02199.
- (6) Shares of our common stock beneficially owned prior to the offering represents (i) (a) 753,062 shares of common stock and (b) 336,603 shares of common stock issuable on the exercise of pre-funded warrants held by OrbiMed Private Investments VI, LP (“OPI VI”); (ii) (a) 20,691 shares of common stock and (b) 384,689 shares of common stock issuable on the exercise of pre-funded warrants held by OrbiMed Genesis Master Fund, L.P. (“Genesis”); (iii) 135,516 shares of common stock held by Worldwide Healthcare Trust PLC (“WWH”) and (iv) 379 shares of common stock held by David Bonita, a member of our board of directors. Shares of our common stock beneficially owned after the offering represents the shares described in (i)(a), (ii)(a), (iii) and (iv). Furthermore, pursuant to an agreement between Dr. Bonita and OPI VI, OPI VI, has sole voting and dispositive power over any shares of common stock held by Dr. Bonita. OrbiMed Capital GP VI LLC (“GP VI”) is the general partner of OPI VI, and OrbiMed Advisors LLC (“Advisors”) is the managing member of GP VI. By virtue of such relationships, GP VI and Advisors may be deemed to have voting power and investment power over the securities held by OPI VI and as a result, may be deemed to have beneficial ownership over such securities. OrbiMed Genesis GP LLC (“Genesis GP”) is the general partner of Genesis. Advisors is the managing member of Genesis GP. Advisors exercises voting and investment power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and W. Carter Neild, each of whom disclaims beneficial ownership of the shares held by OPI VI. Advisors exercises investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho and W. Carter Neild, each of whom disclaims beneficial ownership of the shares held by Genesis, except to the extent of its or his pecuniary interest therein if any. OrbiMed Capital LLC (“OrbiMed Capital”) is the portfolio manager of WWH. OrbiMed Capital exercises investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho and W. Carter Neild, each of whom disclaims beneficial ownership of the shares held by WWH, except to the extent of its or his pecuniary interest therein if any. The principal business address of each of these entities and individuals is c/o OrbiMed Advisors LLC, 601 Lexington Avenue 54th Floor, New York, NY 10022.
- (7) Represents 96,172 shares of common stock issuable upon the exercise of pre-funded warrants held by Stonepine Capital, LP (“Stonepine”). Jon M. Plexico is the managing member of the general partner of Stonepine and may be deemed to have voting and dispositive power over these shares. The business address of Stonepine Capital, LP is 2900 NW Clearwater Drive, Suite 100-11, Bend, OR 97703.
- (8) Represents (i) 290,121 shares of common stock held directly by Trails Edge Biotechnology Master Fund, LP (“Trails Edge Biotechnology”) and (ii) 929,523 shares of common stock issuable upon the exercise of pre-funded warrants held directly by Trails Edge Biotechnology. Due to a beneficial ownership limitation in the pre-funded warrants, 416,889 shares of common stock issuable upon the exercise of pre-funded warrants held by Trails Edge Biotechnology are excluded from the beneficial ownership calculation. Shares of our common stock beneficially owned after the offering represents the shares described in (i). Trails Edge Capital Partners, LP (“Trails Edge Capital”) as the investment manager to Trails Edge Biotechnology, may be deemed to beneficially own these securities. Ortav Yehudai, as the Chief Investment Officer of Trails Edge Capital, exercises voting and investment discretion with respect to these securities and as such may be deemed to beneficially own the shares. The address for each Filer is 3445 Peachtree Road NE, Suite 900, Atlanta, GA 30326.

Please see the section titled “*Certain Relationships and Related Person Transactions*” in the documents incorporated by reference herein for information regarding material relationships with our selling stockholders within the past two years.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- distributions to members, partners, stockholders or other equityholders of the selling stockholders;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares 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;
- short sales and settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling stockholders for purposes of this prospectus.

In connection with the sale of our common stock 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 common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock 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 the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the pre-funded warrants by payment of cash, however, we will receive the nominal exercise price of the pre-funded warrants.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule, or another available exemption from the registration requirements under the Securities Act.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be “underwriters” within the meaning of Section 2(a)(11) of the Securities Act (it being understood that the selling stockholders shall not be deemed to be underwriters solely as a result of their participation in this offering). Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are “underwriters” within the meaning of Section 2(a)(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to use commercially reasonable efforts to cause the registration statement of which this prospectus constitutes a part to become effective and to remain continuously effective until the earlier of: (i) the date on which the selling stockholders shall have resold or otherwise disposed of all the shares covered by this prospectus and (ii) the date on which the shares covered by this prospectus no longer constitute “Registrable Securities” as such term is defined in the Registration Rights Agreement, such that they may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations and without current public information pursuant to Rule 144 under the Securities Act or any other rule of similar effect.

LEGAL MATTERS

Cooley LLP will pass upon the validity of the shares of common stock offered hereby.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2025 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company not generating any revenue from product sales and incurring operating losses and negative cash flows from operations since inception as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the informational requirements of the Exchange Act and in accordance therewith, file annual, quarterly and current reports, proxy statements and other information with the SEC electronically, and the SEC maintains a website that contains our filings as well as reports, proxy and information statements, and other information we file electronically with the SEC at www.sec.gov.

We also make available free of charge on or through our website at imagenebio.com/investors, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with or otherwise furnish it to the SEC. The website addresses for the SEC and us are inactive textual references and except as specifically incorporated by reference into this prospectus, information on, or accessible through, those websites are not part of this prospectus.

If you would like to request documents from the Company, please send a request in writing or by telephone to the following address:

ImageneBio, Inc.
12526 High Bluff Drive, Suite 345
San Diego, CA 92130
(858) 345-6265
Attn: Investor Relations

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information 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 an important 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 also incorporate by reference into this prospectus the documents listed below and any future filings made by us with the SEC (other than Current Reports or portions thereof 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 and other portions of documents that are furnished, but not filed, or are otherwise not incorporated into registration statements pursuant to applicable rules promulgated by the SEC) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the filing of the registration statement of which this prospectus is a part and prior to effectiveness of the registration statement, and (ii) after the effectiveness of the registration statement but prior to the termination of the offering of common stock covered by this prospectus:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, filed with the SEC on [March 10, 2026](#) (the “2025 Annual Report”);
- the information specifically incorporated by reference into the 2025 Annual Report from our definitive proxy statement on Schedule 14A, filed with the SEC on [April 30, 2026](#);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026 and June 30, 2026, filed with the SEC on [May 7, 2026](#) and [August 5, 2026](#), respectively;
- our Current Reports on Form 8-K filed with the SEC on [February 17, 2026](#), [March 17, 2026](#), [April 13, 2026](#), [June 17, 2026](#), [June 26, 2026](#) and [July 23, 2026](#); and
- the description of our common stock filed as [Exhibit 4.4](#) to the 2025 Annual Report, including all amendments or reports filed for the purpose of updating such description.

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 the prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents by writing us at ImagenBio, Inc., 12526 High Bluff Drive, Suite 345, San Diego, CA 92130 (858) 345-6265, Attn: Investor Relations.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

PART II**INFORMATION NOT REQUIRED IN THE PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following is a statement of the estimated expenses to be incurred by us in connection with the registration of the securities under this registration statement, all of which will be borne by us. All the amounts shown are estimates, except for the SEC registration fee.

SEC Registration Fee	\$ 4,439
Legal Fees and Expenses	\$ 25,000
Accounting Fees and Expenses	\$ 20,000
Miscellaneous	\$ 7,500
Total	\$ 56,939

Item 15. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware (“DGCL”) authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys’ fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

Our amended and restated certificate of incorporation and amended and restated bylaws limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director’s duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

- In addition, our amended and restated bylaws provide that we will indemnify our directors, officers and, in the discretion of our board of directors (“Board”), certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- We will advance expenses, including attorneys’ fees, to our directors and, in the discretion of our Board, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements, and intend to continue to enter into separate indemnification agreements with our directors and executive officers. These agreements provide that we will indemnify each of our directors and executive officers to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director or executive officer in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third parties, which indemnification relates to and might apply to the same proceedings arising out of such director's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that our obligations to those same directors are primary and any obligation of such affiliates or other third parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act. The limitation of liability and indemnification provisions in our charter and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Item 16. Exhibits.

(a) Exhibits.

Exhibit Number	Description
2.1+	Agreement and Plan of Merger, dated December 23, 2024, by and among the Registrant, Insight Merger Sub I, Insight Merger Sub II, and Inmagene Biopharmaceuticals (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on December 23, 2024).
4.1	Fifth Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on March 30, 2021).
4.2	Certificate of Amendment to the Fifth Amended and Restated Certificate of Incorporation of the Registrant, dated July 25, 2025 (Stock Split Amendment) (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on July 29, 2025).
4.3	Certificate of Amendment to the Fifth Amended and Restated Certificate of Incorporation of the Registrant, dated July 25, 2025 (Name Change Amendment) (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on July 29, 2025).
4.4	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on March 30, 2021).
4.5	Registration Rights Agreement, dated April 14, 2026, by and between the Registrant and the parties thereto (incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on May 7, 2026).

Exhibit Number	Description
5.1*	Opinion of Cooley LLP.
23.1*	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).
107*	Filing Fee Table.

* Filed herewith.

+ The annexes, schedules, and certain exhibits to this agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant hereby agrees to furnish supplementally a copy of any omitted annex, schedule or exhibit to the SEC upon request.

(b) **Financial Statement Schedules.** All financial statement schedules are omitted because the information called for is not required or is shown either in the consolidated financial statements or in the notes thereto.

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 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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 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 the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) above 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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act, that are incorporated by reference in this registration statement, or are contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

(2) That, for the purpose 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 that 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 under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(b) 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 foregoing provisions, 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 of the registrant 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 of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on August 5, 2026.

ImageneBio, Inc.

By: /s/ Kristin Yarema
Kristin Yarema, Ph.D.
Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Kristin Yarema, Ph.D., as his/her true and lawful attorney-in-fact and agent, each acting alone, with full power of substitution and resubstitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this registration statement on Form S-3, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his/her 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/ Kristin Yarema</u> Kristin Yarema, Ph.D.	Chief Executive Officer and Director (Principal Executive Officer)	August 5, 2026
<u>/s/ Yanina Grant</u> Yanina Grant	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	August 5, 2026
<u>/s/ Jonathan Jian Wang</u> Jonathan Jian Wang, Ph.D., MBA	Chair of the Board	August 5, 2026
<u>/s/ David P. Bonita</u> David P. Bonita, M.D.	Lead Independent Director	August 5, 2026
<u>/s/ Joseph P. Slattery</u> Joseph P. Slattery	Director	August 5, 2026
<u>/s/ Otello Stampacchia</u> Otello Stampacchia, Ph.D.	Director	August 5, 2026
<u>/s/ Weiguo Su</u> Weiguo Su, Ph.D.	Director	August 5, 2026



Asa M. Henin
+1 858 550 6104
ahenin@cooley.com

August 5, 2026

ImageneBio, Inc.
12526 High Bluff Drive, Suite 345
San Diego, California 92130
Ladies and Gentlemen:

We have acted as counsel to ImageneBio, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-3 (the "**Registration Statement**") with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Securities Act**"), including a related prospectus included in the Registration Statement (the "**Prospectus**"), covering the registration for resale of up to 5,770,335 shares (the "**Warrant Shares**") of the Company's common stock, \$0.001 par value per share (the "**Common Stock**"), issuable upon the exercise of pre-funded warrants to purchase shares of Common Stock (the "**Warrants**"). The Warrants were sold to the selling stockholders pursuant to the Securities Purchase Agreement (the "**Agreement**") dated April 12, 2026, among the Company and the investors identified therein.

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the Agreement, the Warrants, the Company's certificate of incorporation and bylaws, each as currently in effect, and such other records, documents, opinions, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery of all documents by all persons other than the Company. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

With respect to the Warrant Shares, we express no opinion to the extent that future issuances of securities of the Company, adjustments to outstanding securities of the Company or other matters cause the Warrants to be exercisable for more shares of Common Stock than the number available for issuance by the Company or that the consideration paid upon exercise of the Warrants is below the par value per share of the Common Stock.

On the basis of the foregoing, and in reliance thereon, and subject to the assumption, qualifications, limitations and exceptions set forth herein, we are of the opinion that the Warrant Shares, when issued and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

Our opinion is limited to the matters expressly set forth in this letter, and no opinion has been or should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof, and we have no obligation or responsibility to update or supplement this letter to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

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ImageneBio, Inc.
August 5, 2026
Page Two

We hereby consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement. In giving such consents, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

COOLEY LLP

By: /s/ Asa M. Henin
Asa M. Henin

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of ImagenBio, Inc. of our report dated March 10, 2026 relating to the financial statements, which appears in ImagenBio, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2025. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
San Diego, California
August 5, 2026

Calculation of Filing Fee Tables

S-3

ImageneBio, Inc.

Table 1: Newly Registered and Carry Forward Securities

☐ Not Applicable

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to be Paid	1 Equity	Common Stock, par value \$0.001 per share	Other	5,770,335	\$ 5.57	32,140,765.95	\$ 0.0001381	\$ 4,438.64				
Fees Previously Paid												
Carry Forward Securities												
Carry Forward Securities												
Total Offering Amounts:						\$		\$ 4,438.64				
						32,140,765.95						
Total Fees Previously Paid:								\$ 0.00				
Total Fee Offsets:								\$ 0.00				
Net Fee Due:								\$ 4,438.64				

Offering Note

¹ The amount registered represents an aggregate of 5,770,335 shares of ImageneBio, Inc.'s (the "Registrant's") common stock, par value \$0.001 per share (the "Common Stock"), which may be issued upon the exercise of pre-funded warrants, held by the selling stockholders named in the prospectus that forms a part of this registration statement this "Registration Statement"). Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), the Registration Statement on Form S-3 to which this exhibit is a part (the "Registration Statement") shall also cover any additional shares of Common Stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction. The proposed maximum aggregate offering price per unit and proposed maximum aggregate offering price is estimated in accordance with Rule 457(c) of the Securities Act solely for purposes of calculating the registration fee, and are based upon the average of the high and low prices of the Common Stock on July 31, 2026, as reported on the Nasdaq Capital Market.

Table 2: Fee Offset Claims and Sources

☒ Not Applicable

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rules 457(b) and 0-11(a)(2)											
Fee Offset Claims											
Fee Offset Sources											
Rule 457(p)											
Fee Offset Claims											
Fee Offset Sources											

Table 3: Combined Prospectuses

☒ Not Applicable

Security Type	Security Class Title	Amount of Securities Previously Registered	Maximum Aggregate Offering Price of Securities Previously Registered	Form Type	File Number	Initial Effective Date
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