



LeonaBio, Inc.

5,502,402 Shares of Common Stock

This prospectus relates to the disposition, from time to time, by the selling stockholder identified in this prospectus under the section titled “Principal and Selling Stockholder” of up to 5,502,402 shares of our common stock issuable upon the exercise of a pre-funded warrant.

The selling stockholder identified herein may or their permitted transferees or other successors-in-interest may, but are not required to, from time to time offer or sell shares of our common stock. See the section titled “Plan of Distribution” for a description of how the selling stockholder may dispose of the shares covered by this prospectus. We do not know when or in what amount the selling stockholder may offer the shares for sale.

We are not selling any shares of our common stock under this prospectus and we will not receive any proceeds from the sale of our common stock by the selling stockholder. We will receive proceeds from the cash exercise of the pre-funded warrant which, if exercised for cash with respect to all of the 5,502,402 shares of common stock underlying such warrant at the exercise price per share of \$0.001, would result in gross proceeds to us of approximately \$5,502. We have agreed to pay certain expenses related to the registration of the offer and sale of the shares of common stock pursuant to the registration statement of which this prospectus forms a part. The selling stockholder will bear all commissions and discounts, if any, attributable to the sale of the shares.

Our common stock is listed on The Nasdaq Capital Market under the symbol “LONA.” On April 1, 2026, the last reported closing sale price of our common stock on The Nasdaq Capital Market was \$10.02 per share.

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

Investing in our common stock involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “[Risk Factors](#)” starting on page 5 of this prospectus, and under similar headings in the documents that are incorporated by reference into this prospectus.

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 April 1, 2026.

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You should rely only on the information contained in this prospectus or contained in any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the selling stockholder have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is accurate only as of its date regardless of the time of delivery of this prospectus or of any sale of securities. Our business, operating results and financial condition may have changed since that date.

You should also read and consider the information in the documents to which we have referred you under the captions “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this prospectus.

For investors outside the United States, neither we nor the selling stockholder have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who come into possession of this prospectus and any free writing prospectus related to this offering in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus and any such free writing prospectus applicable to that jurisdiction.

PROSPECTUS SUMMARY

The following summary is qualified in its entirety by, and should be read together with, the more detailed information and financial statements and related notes thereto incorporated by reference into this prospectus. Before you decide to invest in our common stock, you should read the entire prospectus carefully, including the risk factors and the financial statements and related notes incorporated by reference into this prospectus. Unless the context requires otherwise, in this prospectus the terms “LeonaBio,” the “Company,” “we,” “us” and “our” refer to LeonaBio, Inc., a Delaware corporation, together with its subsidiaries, taken as a whole. This prospectus includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this prospectus are the property of their respective owners.

Company Overview

We are a clinical-stage biopharmaceutical company dedicated to the development of novel therapeutics for high unmet medical needs, including treatment-resistant metastatic breast cancer and amyotrophic lateral sclerosis (“ALS”), with the goal of improving patients’ lives. Our lead drug candidates, lasofoxifene and ATH-1105, are novel, small molecule therapies with the potential to address devastating diseases where current treatment options are limited or ineffective. With a strong commitment to scientific excellence and patient-centered innovation, we aim to advance meaningful new therapies that are designed to treat patients with treatment-resistant metastatic breast cancer and ALS. Our other product candidates include ATH-1020 and new early compounds to address neurodegenerative diseases.

Corporate Information

We were incorporated in Washington as a corporation in March 2011 under the name M3 Biotechnology, Inc. In October 2015, we converted to a Delaware corporation and subsequently changed our name to “Athira Pharma, Inc.” In January 2026, we changed our name to “LeonaBio, Inc.” Our principal executive office is located at 18706 North Creek Parkway, Suite 104, Bothell Washington 98011. Our telephone number is (425) 620-8501. Our website is www.leonabio.com. Information contained in, or that can be accessed through, our website is not a part of, and is not incorporated into, this report, and the inclusion of our website address in this report is an inactive textual reference only.

The Securities That May Be Offered

The selling stockholder named in this prospectus may offer and sell up to 5,502,402 shares of our common stock issuable upon the exercise of a pre-funded warrant. Our common stock is listed on The Nasdaq Capital Market under the symbol “LONA.” We will not receive any proceeds from sales by the selling stockholder of any of the shares of common stock covered by this prospectus. We will receive proceeds from any cash exercise of a pre-funded warrant to purchase the shares included in the shares that are being offered by the selling stockholder hereunder. See the section titled “Use of Proceeds.”

Throughout this prospectus, when we refer to the shares of our common stock, the offer and sale of which are being registered on behalf of the selling stockholder, we are referring to the shares of common stock that have been issued to or are issuable upon the exercise of a pre-funded warrant to the stockholder listed in the section titled “Principal and Selling Stockholder,” pursuant to the applicable securities purchase agreement described below. When we refer to the selling stockholder in this prospectus, we are referring to Sermonix Pharmaceuticals, Inc. (“Sermonix”) and, as applicable, any donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from Sermonix as a gift, pledge or other non-sale related transfer.

December 2025 Transaction with Sermonix

On December 18, 2025, we entered into a securities purchase agreement (the “Sermonix SPA”) with Sermonix. Pursuant to such agreement, Sermonix received a pre-funded warrant to purchase 5,502,402 shares of our common stock (the “Sermonix Pre-Funded Warrant”). The Sermonix Pre-Funded Warrant was issued in partial consideration for Sermonix’s entry into that certain License Agreement, dated as of December 18, 2025 (as may be amended, supplemented or otherwise modified from time to time, the “License Agreement”), by and between us and Sermonix, pursuant to which Sermonix granted us an exclusive license to develop, manufacture, commercialize and otherwise exploit products containing lasofoxifene in certain territories, in addition to further consideration as set forth in the License Agreement. The closing of the purchase and sale of the Sermonix Pre-Funded Warrant occurred on December 23, 2025.

The Sermonix Pre-Funded Warrant is exercisable at an exercise price of \$0.001 per share, subject to adjustments as provided therein and the restrictions discussed below, following approval from the Company’s stockholders for the issuance of the shares of common stock upon exercise of the Sermonix Pre-Funded Warrant, which approval was obtained on March 18, 2026 (the “Sermonix Pre-Funded Warrant Stockholder Approval” and such limitation, the “Sermonix Pre-Funded Warrant Exercise Limitation”). The Sermonix Pre-Funded Warrant cannot be exercised if, immediately prior to or following such exercise, Sermonix, together with its affiliates and any other persons whose beneficial ownership of shares of our common stock would be aggregated with Sermonix for purposes of Section 13(d) of the Securities Exchange Act of 1934 (the “Exchange Act”), would beneficially own more than 4.99% (the “Sermonix Maximum Percentage”) of our outstanding shares of our common stock. The Sermonix Maximum Percentage may be increased or decreased by Sermonix with 61 days’ prior written notice to us.

We also entered into a registration rights agreement with Sermonix requiring us to register the resale of the shares issuable upon exercise of the Sermonix Pre-Funded Warrant.

The securities may be sold to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth in the section titled “Plan of Distribution.”

RISK FACTORS

An investment in our securities involves a high degree of risk. Before you invest you should carefully consider the risks and uncertainties described in “Part I. Item 1A - Risk Factors” in our [Annual Report on Form 10-K](#), filed with the SEC on March 31, 2026, which are incorporated by reference in this prospectus, together with all of the other information contained in this prospectus and the documents incorporated by reference herein. If any of these risks actually occur, our business, operating results and financial condition could be materially and adversely impacted, the market price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known or which we consider immaterial as of the date hereof may also have an adverse effect on our business. The Risk Factors are not guarantees that no such conditions exist as of the date of this prospectus and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

CAUTIONARY NOTES REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference herein contain certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Exchange Act. Forward-looking statements are based on Company management’s beliefs and assumptions and on information currently available to management. The statements in this prospectus and the information incorporated by reference in this prospectus that are not purely historical are forward-looking statements. In some cases, you can identify forward-looking statements by such words as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “ongoing,” “plan,” “possible,” “potential,” “predict,” “on track,” “project,” “should,” “target,” “will,” “would” or the negative of these terms or words of similar import, although not all forward-looking statements contain these words. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other “forward-looking” information. These statements relate to our future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements, and are based on current expectations that involve risks and uncertainties, such as our plans, projections, objectives, expectations and intentions. These forward-looking statements include, but are not limited to, statements about:

- the sufficiency of our existing cash, cash equivalents and investments to fund our future operating expenses and capital expenditure requirements;
- our financial performance;
- our ability to obtain funding for our operations, including funding necessary to develop and commercialize our drug candidates and funding necessary for the payment of future milestone and other payments that may be earned by our collaboration partners;
- the ability of our nonclinical studies and clinical trials to demonstrate safety and efficacy of our drug candidates;
- the success, cost and timing of our development activities, nonclinical studies and clinical trials;
- our potential to complete the Phase 3 ELAINE-3 clinical trial for lasofoxifene and any subsequent clinical trials to show the clinical benefits of lasofoxifene;
- the potential of our Phase 2 ATH-1105 clinical trial and any subsequent clinical trials to show the beneficial characteristics, safety and efficacy of ATH-1105;
- the rate and degree of market acceptance of our drug candidates;
- the potential learnings from our ongoing clinical trials and their ability to inform and improve future clinical development plans;
- the timing and focus of our future clinical trials, and the reporting of data from those trials;
- anticipated milestone timelines, such as the timing of data releases, and our ability to meet such timelines;
- our plans relating to commercializing our drug candidates, if approved;
- our plans and ability to establish sales, marketing and distribution infrastructure to commercialize any drug candidates for which we obtain approval;
- our ability to attract and retain key managerial, scientific and clinical personnel and the expected contributions of such personnel;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the potential for lasofoxifene to be a new standard of care in the genetically defined patient group;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the pricing and reimbursement of our drug candidates, if approved;
- our reliance on third parties to conduct clinical trials of our drug candidates, and for the manufacture of our drug candidates for nonclinical studies and clinical trials;
- the success of competing therapies that are or may become available;
- the beneficial characteristics, safety and efficacy of our drug candidates;
- regulatory developments in the United States and other jurisdictions;
- our ability to obtain and maintain regulatory approval of our drug candidates in the United States and other jurisdictions, and any related restrictions, limitations or warnings in the label of any approved drug candidate;
- future agreements with third parties in connection with the commercialization of our drug candidates;

- our plans, capacity and capability relating to the further development and manufacturing of our drug candidates, including additional indications for which we may pursue regulatory approval;
- our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our drug candidates and technology;
- the outcome of legal proceedings which may in the future be instituted against us and certain of our directors and officers;
- the actions by activist stockholders, which have in the past been, and may in the future be, disruptive and could cause uncertainty about the strategic direction of our business;
- the size and growth potential of the markets for our drug candidates, if approved for commercial use, and our ability to serve those markets; and
- the potential benefits of any strategic collaborations, partnerships, or other transactions we may enter into.

These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the Risk Factors and elsewhere in “Part I. Item 1A - Risk Factors” in our [Annual Report on Form 10-K](#), filed with the SEC on March 31, 2026. These statements, like all statements in this report, speak only as of their date and we undertake no obligation to update or revise these statements in light of future developments. Our ability to advance the development of our product candidates is subject to risks and uncertainties, including: (1) unexpected costs, charges or expenses resulting from any transactions; (2) potential adverse reactions or changes to business relationships resulting from the announcement or completion of any transactions; and (3) risks associated with the possible failure to realize certain anticipated benefits of any transactions, including with respect to future financial and operating results. The Risk Factors are not guarantees that no such conditions exist as of the date of this prospectus and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and although 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 a thorough 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.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of our securities by the selling stockholder.

We will receive proceeds from the cash exercise of the pre-funded warrant which, if exercised for cash with respect to all of the 5,502,402 shares of common stock underlying such pre-funded warrant at the exercise price per share of \$0.001, would result in gross proceeds to us of approximately \$5,502.

We intend to use the net proceeds, if any, from the cash exercise of the pre-funded warrants and the warrants for working capital purposes and to advance lasofoxifene and the drug candidates in our existing pipeline.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock or any other securities. We anticipate that we will retain all available funds and any future earnings, if any, for use in the operation of our business and do not anticipate paying cash dividends in the foreseeable future. In addition, our credit facility materially restricts, and future debt instruments we issue may materially restrict, our ability to pay dividends on our common stock. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements of current or then-existing debt instruments and other factors our board of directors deems relevant.

DESCRIPTION OF CAPITAL STOCK

The description of our capital stock is incorporated by reference to [Exhibit 4.2](#) of our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, filed with the SEC on March 31, 2026.

As of March 16, 2026, there were 9,393,514 shares of our common stock issued and outstanding and there were 38 holders of record of our common stock. As of March 16, 2026, there were no outstanding shares of preferred stock.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of March 16, 2026 for:

- each person who we know beneficially owns more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our directors and executive officers as a group

The percentage of beneficial ownership shown in the table is based upon 9,393,514 shares of common stock outstanding as of March 16, 2026.

We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws.

In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we take into account shares of common stock issuable pursuant to stock options, warrants and restricted stock units that may be exercised or that are scheduled to vest on or before the 60th day after March 16, 2026. These shares are deemed to be outstanding and beneficially owned by the person holding those options, warrants or restricted stock units for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

Except as otherwise noted below, the address for each person listed in the table is c/o LeonaBio, Inc., 18706 North Creek Parkway, Suite 104, Bothell, Washington 98011.

	Shares Beneficially Owned	
	Number of Shares (#)	Percentage (%)
5% and greater stockholders:		
Anders Hove (1)	596,068	6.35%
Perceptive Entities (2)	1,882,370	19.99%
Named executive officers and directors:		
Mark Litton (3)	244,445	2.55%
Mark Worthington (4)	89,259	*
Javier San Martin (5)	53,976	*
Joseph Edelman (6)	1,882,370	19.99%
John M. Fluke, Jr. (7)	24,589	*
James A. Johnson (8)	10,228	*
Barbara Kosacz (9)	8,341	*
Kelly A. Romano (10)	16,412	*
Grant Pickering (11)	9,878	*
Michael Panzara (12)	7,185	*
All current directors and executive officers as a group (12 persons)	2,473,404	25.12%

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

- (1) Based on the Schedule 13G/A filed with the Securities and Exchange Commission on January 8, 2026. Consists of (i) 250,348 shares of common stock which Acorn Bioventures, L.P. and Acorn Capital Advisors GP, LLC may be deemed to beneficially own and (ii) 345,720 shares of common stock which Acorn Bioventures 2, L.P. and Acorn Capital Advisors GP 2, LLC may be deemed to beneficially own. Acorn Capital Advisors GP, LLC is the General Partner of Acorn Bioventures, L.P. and may be deemed to beneficially own the shares of common stock beneficially owned by Acorn Bioventures, L.P. Acorn Capital Advisors GP 2, LLC is the General Partner of Acorn Bioventures 2, L.P. and may be deemed to beneficially own the shares of common stock beneficially owned by Acorn Bioventures 2, L.P. Mr. Hove, in his capacity as Manager of each of Acorn Capital Advisors GP, LLC and Acorn Capital Advisors GP 2, LLC, may be deemed to beneficially own the shares beneficially owned by each of Acorn Capital Advisors GP, LLC and Acorn Capital Advisors GP 2, LLC. The business address of Acorn Bioventures, L.P. and Acorn Bioventures 2, L.P. is 420 Lexington Avenue, Suite 2626, New York, New York 10170.
- (2) Based on the Schedule 13D/A filed with the Securities and Exchange Commission on January 16, 2026. Consists of (i) 1,529,566 shares of common stock and 18,960 shares of common stock issuable upon the partial exercise of a pre-funded warrant that is exercisable within 60 days of March 16, 2026 held directly by Perceptive Life Sciences Master Fund, Ltd. ("Master Fund"), and (ii) 329,756 shares of common stock and 4,088 shares of common stock issuable upon the partial exercise of a pre-funded warrant that is exercisable within 60 days of March 16, 2026 held directly by Perceptive Xontogeny Venture Fund II, LP ("PXV II" and, together with Master Fund, "Perceptive Entities"). Perceptive Advisors LLC ("Perceptive Advisors") is the investment advisor of Perceptive Life Sciences Master Fund Ltd ("Perceptive Master Fund") and may be deemed to have beneficial ownership of the shares beneficially owned thereby. Perceptive Venture Advisors, LP ("Perceptive Venture") is the investment manager to Perceptive Xontogeny Venture Fund II, LP ("PXV II"), and accordingly, may be deemed to beneficially own the securities directly held by PXV II. Joseph Edelman is the controlling person of Perceptive Advisors and Perceptive Venture and accordingly, may be deemed to have beneficial ownership of the shares beneficially owned by the Perceptive Master Fund, PXV II, Perceptive Advisors and Perceptive Venture. Perceptive Advisors, Perceptive Venture, the Perceptive Master Fund, PXV II and Mr. Edelman disclaim beneficial ownership of all such securities except to the extent of its or his pecuniary interest therein. The business address for each of Perceptive Advisors, Perceptive Venture, the Perceptive Master Fund, PXV II and Mr. Edelman is 51 Astor Place, 10th Floor, New York, NY 10003.
- (3) Consists of 57,926 shares held of record by Dr. Litton, 656 shares held by Irrevocable Trust of OSL, 656 shares held by Irrevocable Trust of SWL, and 656 shares held by Irrevocable Trust of WGL, each irrevocable trust is for the benefit of Dr. Litton's children, and options to purchase 184,551 shares that are exercisable within 60 days of March 16, 2026.
- (4) Consists of 18,376 shares held by Mr. Worthington and options to purchase 70,883 shares that are exercisable within 60 days of March 16, 2026.
- (5) Consists of 15,887 shares held by Dr. San Martin and options to purchase 38,089 shares that are exercisable within 60 days of March 16, 2026.
- (6) Consists of the shares referenced in footnote (2) above and excludes 9,728 shares issuable upon the exercise of options held by Mr. Edelman, which are not exercisable within 60 days of March 16, 2026. Joseph Edelman is the managing member of Perceptive Advisors LLC and he may be deemed to beneficially own the shares held by Perceptive. Mr. Edelman disclaims beneficial ownership of all such securities except to the extent of its or his pecuniary interest therein.
- (7) Consists of 373 shares held of record by Fluke Capital Management, L.P., 14,488 shares held by Mr. Fluke, and options to purchase 9,728 shares that are exercisable within 60 days of March 16, 2026.
- (8) Consists of 500 shares held by Mr. Johnson and options to purchase 9,728 shares that are exercisable within 60 days of March 16, 2026.
- (9) Consists of options held by Ms. Kosacz to purchase 8,341 shares that are exercisable within 60 days of March 16, 2026.

- (10) Consists of 8,071 shares held by Ms. Romano and options to purchase 8,341 shares that are exercisable within 60 days of March 16, 2026.
- (11) Consists of 2,578 shares held by Mr. Pickering and options to purchase 7,300 shares that are exercisable within 60 days of March 16, 2026.
- (12) Consists of options held by Dr. Panzara to purchase 7,185 shares that are exercisable within 60 days of March 16, 2026.
- (13) Consists of 2,020,518 shares held by our current directors and executive officers as a group, pre-funded warrants to purchase 23,048 shares that are exercisable within 60 days of March 16, 2026, and options to purchase 429,838 shares that are exercisable within 60 days of March 16, 2026.

We have included in this prospectus and related registration statement 5,502,402 shares of our common stock issuable upon the exercise of a pre-funded warrant issued in our December 2025 transaction with Sermonix to the selling stockholder. The term “selling stockholder” includes the stockholder listed below and their transferees, pledges, donees or other successors in interest selling shares received after the date of this prospectus from the selling stockholder as a permitted transfer. Information concerning the selling stockholder may change after the date of this prospectus and changed information will be presented in a supplement to this prospectus if and when required.

The table below sets forth certain information with respect to the selling stockholder, including (1) the name and address of the selling stockholder; (2) the number of shares of our common stock beneficially owned by the selling stockholder prior to this offering; (3) the maximum number of shares being offered by the selling stockholder pursuant to this prospectus; and (4) the selling stockholder’s beneficial ownership after completion of this offering, assuming that all of the shares covered hereby (but no other shares, if any, held by the selling stockholder) are sold.

The table is based on information supplied to us by the selling stockholder, with beneficial ownership and percentage ownership determined in accordance with the rules and regulations of the SEC, and includes information with respect to voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose.

The percentage of each selling stockholder’s ownership is based on 9,393,514 shares of common stock outstanding as of March 16, 2026. In computing the number of shares beneficially owned by a selling stockholder and the percentage ownership of that selling stockholder before this offering, shares of common stock underlying the pre-funded warrant held by that selling stockholder are deemed outstanding, as well as any other derivative securities that are exercisable as of March 16, 2026, or exercisable within 60 days thereafter. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. The percentage of beneficial ownership after this offering is based on shares outstanding on March 16, 2026, which includes the shares of our common stock registered for sale in this offering.

The registration of the sale of shares of common stock held by and issuable to the selling stockholder upon exercise of the pre-funded warrant does not mean that the selling stockholder will sell or otherwise dispose of all or any of those securities. The selling stockholder may sell or otherwise dispose of all, a portion or none of such shares from time to time. We do not know the number of shares, if any, that will be offered for sale or other disposition by the selling stockholder under this prospectus. Furthermore, the selling stockholder may have sold, transferred or disposed of the shares of common stock covered hereby in transactions exempt from the registration requirements of the Securities Act since the date on which we filed this prospectus.

The selling stockholder has not, nor within the past three years has had, any position, office or other material relationship with us or any of our predecessors or affiliates. The selling stockholder is not a broker-dealer or an affiliate of a broker-dealer, except as noted below. We have prepared the table below based on information given to us by, or on behalf of, the selling stockholder.

Beneficial Ownership Before This Offering	Shares Offered Hereby Issuable Upon	Beneficial Ownership After This Offering
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Selling Stockholder (1)	Number of Shares Owned	Percentage of Outstanding Shares (2)	Exercise of Sermonix Pre-Funded Warrant(2)	Number of Shares Owned	Percentage of Outstanding Shares
Sermonix Pharmaceuticals, Inc. (3)	—	*%	5,502,402	—	*%
Total:	—	*%	5,502,402	—	*%

(*) Less than one percent.

- (1) This table and the information in the notes below are based upon information supplied by the selling stockholder and shares of our common stock outstanding as of March 16, 2026.
- (2) The Sermonix Pre-Funded Warrant is subject to beneficial ownership limitations such that the Sermonix Pre-Funded may not be exercised if, immediately prior to or following such exercise, the selling stockholder, together with its affiliates and any other persons whose beneficial ownership of shares of our common stock would be aggregated with the selling stockholder for purposes of Section 13(d) of the Exchange Act, would beneficially own more than the Sermonix Maximum Percentage of the total number of issued and outstanding shares of our common stock following such exercise. The Sermonix Maximum Percentage for the Sermonix Pre-Funded Warrant is 4.99%.
- (3) David Portman is the Chief Executive Officer of Sermonix and may be deemed to beneficially own the securities held by Sermonix. The address of Sermonix is 250 East Broad Street, Suite 250, Columbus, OH 43215.

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.

These sales may be effected in transactions, which may involve crosses or block transactions. 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 such options are listed on 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, if necessary, 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 or donate 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 warrant by payment of cash, however, we will receive the exercise price of the pre-funded warrant.

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. Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

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.

Each selling stockholder has informed the Company that it is not a registered broker-dealer and does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock. Upon the Company being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (1) the name of each such selling stockholder and of the participating broker-dealer(s), (2) the number of shares involved, (3) the price at which such the shares of common stock were sold, (4) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (5) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus and (6) other facts material to the transaction. In no event shall any broker-dealer receive fees, commissions and markups, which, in the aggregate, would exceed 8.0%. 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. There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

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: (1) the date on which the selling stockholders shall have resold or otherwise disposed of all the shares covered by this prospectus pursuant to any applicable securities exemption, including Rule 144 (or any successor provision) or pursuant to this prospectus, and (2) 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.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, that each selling stockholder will pay all underwriting discounts and selling commissions, if any and any related legal expenses incurred by it. We will indemnify the selling stockholders against certain liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the related registration rights agreements, or we may be entitled to contribution.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Seattle, Washington. Certain members of, and investment partnerships comprised of members of, and persons associated with, Wilson Sonsini Goodrich & Rosati, P.C. own less than 1% of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our [Annual Report on Form 10-K](#) for the year ended December 31, 2025, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at <https://www.leonabio.com/>. Information accessible on or through our website is not a part of this prospectus.

This prospectus is part of a registration statement that we filed with the SEC and does not contain all of the information in the registration statement. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities that we are offering. Forms of any documents establishing the terms of the offered securities are filed as exhibits to the registration statement of which this prospectus forms a part or under cover of a Current Report on Form 8-K and incorporated in this prospectus by reference. Statements in this prospectus about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should read the actual documents for a more complete description of the relevant matters.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information that we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated, and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents furnished pursuant to Items 2.02 or 7.01 of any Current Report on Form 8-K and, except as may be noted in any such Form 8-K, exhibits filed on such form that are related to such information) after the date of the initial registration statement of which this prospectus forms a part and prior to the effectiveness of the registration statement, as well as subsequent to the effectiveness of the registration statement, until the offering of the securities under the registration statement of which this prospectus forms a part is terminated or completed:

- our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on [March 31, 2026](#);
- our Current Reports on Form 8-K filed with the SEC on [January 9, 2026](#), [March 19, 2026](#), and [March 31, 2026](#) (other than information furnished and not filed under such Current Reports on Form 8-K); and
- the description of our common stock contained in the Registration Statement on Form 8-A relating thereto, filed with the SEC on [September 9, 2020](#), including any amendment or report filed for the purpose of updating such description.

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

LeonaBio, Inc.
18706 North Creek Parkway, Suite 104
Bothell, Washington 98011
Attn: Investor Relations
(425) 620-8501

You may also access the documents incorporated by reference in this prospectus through our website at www.leonabio.com. Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part. Information contained on our website is not part of this prospectus.



LeonaBio, Inc.

**5,502,402 Shares of Common Stock
Offered by the Selling Stockholder**

PROSPECTUS

April 1, 2026
