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

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

ABEONA THERAPEUTICS INC.
(Exact Name Of Registrant As Specified In Its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

06-1245881
(I.R.S. Employer
Identification No.)

1330 Avenue of the Americas, 33rd Floor
New York, New York 10019
(646) 813-4701

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

Joseph Vazzano
Chief Financial Officer
Abeona Therapeutics Inc.
1330 Avenue of the Americas, 33rd Floor
New York, New York 10019
(646) 813-4705

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

Copy to:
John J. Concannon III
Brian V. Soares
Morgan, Lewis & Bockius LLP
One Federal Street
Boston, Massachusetts 02110
(617) 951-8000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement as determined by the selling securityholders.

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, 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 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 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 | <input type="checkbox"/> | Accelerated filer | <input type="checkbox"/> |
| Non-accelerated filer | <input checked="" type="checkbox"/> | Smaller reporting company | <input checked="" type="checkbox"/> |
| | | Emerging growth company | <input type="checkbox"/> |

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

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 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. These securities may not be sold until the registration statement is effective. This prospectus is not an offer to sell these securities, and we are not soliciting offers to buy these securities, in any state or other jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, PRELIMINARY PROSPECTUS DATED NOVEMBER 30, 2022



Up to 15,219,758 Shares of Common Stock Offered by the Selling Stockholders

This prospectus relates to the offer and resale, from time to time, by the selling stockholders named under the heading “Selling Stockholders” in this prospectus, or their assigns (the “Selling Stockholders”), of up to 15,219,758 shares of the Company’s Common Stock, par value \$0.01 per share (the “Common Stock”), which consists of (i) 7,065,946 shares of Common Stock, (ii) pre-funded warrants to purchase 543,933 shares of Common Stock with a term of five years from the issuance date (the “Pre-Funded Warrants”), and (iii) warrants to purchase 7,609,879 shares of Common Stock with a term of five years from the issuance date (the “Common Warrants” and together with the Pre-Funded Warrants, the “Warrants”), held by the Selling Stockholders. We are registering the offer and sale of the shares of Common Stock held by the Selling Stockholders and shares of Common Stock issuable upon the exercise of the Warrants held by the Selling Stockholders to satisfy the registration rights they were granted pursuant to a registration rights agreement entered into on November 7, 2022, in connection with the securities purchase agreement as of even date thereof. While we will not receive any proceeds from the sale of the Common Stock by the Selling Stockholders, we will receive proceeds from the exercise of any Warrants for cash.

Our registration of shares of Common Stock covered by this prospectus does not mean that the Selling Stockholders will offer or sell any such shares. The Selling Stockholders may sell shares of Common Stock covered by this prospectus in a number of different ways and at varying prices. For additional information on the possible methods of sale that may be used by the Selling Stockholders, you should refer to the section of this prospectus entitled “Plan of Distribution.” The Selling Stockholders may, individually but not severally, be deemed to be an “underwriter” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), of the shares of Common Stock that they are offering pursuant to this prospectus. The Selling Stockholders will bear all commissions and discounts, if any, attributable to their respective sales of Common Stock hereunder. We will bear all costs, expenses, and fees in connection with the registration of the Common Stock. We will not be paying any underwriting discounts or commissions in this offering.

A prospectus supplement may add, update, or change information contained in this prospectus. You should carefully read this prospectus, any applicable prospectus supplement, and the information incorporated by reference in this prospectus and any applicable prospectus supplement before you make your investment decision.

Our Common Stock is traded on The Nasdaq Capital Market under the symbol “ABEO.” On November 28, 2022, the closing price for our Common Stock, as reported on The Nasdaq Capital Market, was \$3.86 per share. Our principal executive offices are located at 1330 Avenue of the Americas, 33rd Floor, New York, New York 10019.

Investing in these securities involves certain risks. See “**Risk Factors**” on page 4 of this prospectus. See also “**Risk Factors**” in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.

Neither the SEC 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 _____, 2022

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3, which we have filed with the Securities and Exchange Commission (“SEC”) using a “shelf” registration process. Under this shelf registration process, the Selling Stockholders may from time to time sell the Common Stock described in this prospectus in one or more offerings or otherwise as described under “Plan of Distribution.”

This prospectus may be supplemented from time to time by one or more prospectus supplements. Such prospectus supplements may also add, update, or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you must rely on the information in the prospectus supplement. You should carefully read both this prospectus and any applicable prospectus supplement together with additional information described under the heading “Where You Can Find More Information” before deciding to invest in any Common Stock being offered.

Neither we nor the Selling Stockholders have authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any applicable prospectus supplement or any applicable free writing prospectus that we have authorized. We take no responsibility for and can provide no assurance as to the reliability of any other information that others may give you. The Common Stock is not being offered in any jurisdiction where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus is accurate as of any date other than the respective dates of such document. Our business, financial condition, results of operations, and prospects may have changed since those dates.

Unless the context otherwise indicates, references in this prospectus to “Abeona,” “the Company,” “we,” “our,” or “us” mean Abeona Therapeutics Inc. and its wholly owned subsidiaries. The term “Selling Stockholders” refers, collectively, to the selling stockholders named under the heading “Selling Stockholders” in this prospectus.

PROSPECTUS SUMMARY

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

Overview of the Company

We are a clinical-stage biopharmaceutical company developing cell and gene therapies for life-threatening rare genetic diseases. Our lead clinical program is EB-101, an autologous, engineered cell therapy currently in development for recessive dystrophic epidermolysis bullosa (“RDEB”). Our development portfolio also features AAV-based gene therapies designed to treat ophthalmic and other diseases, next-generation AAV-based gene therapies using the novel AIM™ capsid platform that we have exclusively licensed from the University of North Carolina at Chapel Hill, and internal AAV vector research programs.

Private Placement

Securities Purchase Agreement

On November 3, 2022, we entered into a Securities Purchase Agreement (the “Purchase Agreement”) with a group of investors (the “Purchasers”) providing for the private placement (the “Private Placement”) to the Purchasers of (i) 7,065,946 shares of our Common Stock, (ii) Pre-Funded Warrants to purchase 543,933 shares of Common Stock, and (iii) Common Warrants to purchase 7,609,879 shares of Common Stock, for an aggregate purchase price of approximately \$35.0 million. Each of the Warrants is subject to customary adjustments.

The Private Placement closed on November 7, 2022. We received gross proceeds from the Private Placement of approximately \$35.0 million, before deducting offering expenses payable by us.

Each Pre-Funded Warrant has an exercise price of \$0.01 per share of Common Stock and each Common Warrant has an exercise price of \$4.75 per share. The Warrants may not be exercised if the aggregate number of shares of the Common Stock beneficially owned by the holder thereof would exceed 4.99%, or, if elected by the holder prior to issuance thereof, 9.99%, immediately after exercise thereof, which ownership cap may be increased by the holder upon 61 days’ prior notice, but in no event may exceed 19.99%.

The Company intends to use the net proceeds from the Private Placement for development, working capital and general corporate purposes.

The securities issued to the Purchasers under the Purchase Agreement were offered in reliance on an exemption from registration provided by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D. The Company relied on this exemption from registration based in part on representations made by the Purchasers, including that each of the Purchasers is an “accredited investor,” as defined in Rule 501(a) under the Securities Act.

The sale of the securities pursuant to the Purchase Agreement has not been registered under the Securities Act or any state securities laws. The securities may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.

Registration Rights Agreement

On November 7, 2022, in connection with the Private Placement, we entered into a registration rights agreement (the “Registration Rights Agreement”) with the Purchasers, providing for the registration for resale of the shares of Common Stock and the shares of Common Stock issuable upon exercise of the Warrants pursuant to a registration statement to be filed with the SEC on or prior to December 7, 2022. We have agreed to use our best efforts to cause this registration statement to be declared effective as soon as possible, but in no event later than 30 days from the filing of this registration statement (or 90 days in the event of a full review of the Registration Statement by the SEC) (the “Effectiveness Date”), and to keep this registration statement continuously effective for a period that extends from the first date on which the SEC issues an order of effectiveness in relation to this registration statement until such date that all registrable securities (as such term is defined in the Registration Rights Agreement) covered by this registration statement have been sold hereunder or pursuant to Rule 144 or may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144. We have agreed to be responsible for all reasonable fees and expenses incurred in connection with the registration of the registrable securities under the Registration Rights Agreement. Additionally, we have agreed to indemnify the Selling Stockholders for losses, claims, damages, or liabilities, joint or several, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission of any material fact contained in any registration statement, subject to certain exceptions.

The registration statement of which this prospectus is a part relates to the offer and resale of the shares of Common Stock issued to the Purchasers pursuant to the Purchase Agreement, including the shares issuable upon exercise of the Warrants. When we refer to the Selling Stockholders in this prospectus, we are referring to the Purchasers named in this prospectus as the Selling Stockholders and, as applicable, any pledgees, assignees and successors-in-interest selling the Securities received after the date of this prospectus from the Selling Stockholders as a gift, pledge, or other non-sale related transfer.

Corporate Information

We were incorporated in 1974. On October 24, 2014, we changed our name to PlasmaTech Biopharmaceuticals, Inc., and on June 19, 2015, we changed our name to Abeona Therapeutics Inc. to reflect our broader rare disease commitment. Our principal executive office is located at 1330 Avenue of the Americas, 33rd Floor, New York, NY 10019, and our telephone number is (646) 813-4701. Our website address is www.abeonatherapeutics.com. We do not incorporate by reference into this registration statement or prospectus the information on our website, and you should not consider it as part of this registration statement or prospectus.

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THE OFFERING

This prospectus relates to the resale from time to time by the Selling Stockholders identified in this prospectus of up to 15,219,758 shares of Common Stock, which consists of (i) 7,065,946 shares of Common Stock, (ii) Pre-Funded Warrants to purchase 543,933 shares of Common Stock, and (iii) Common Warrants to purchase 7,609,879 shares of Common Stock. We are registering the offer and sale of the Common Stock held by the Selling Stockholders to satisfy the registration rights they were granted pursuant to the Registration Rights Agreement entered into on November 7, 2022, in connection with the Securities Purchase Agreement entered into on November 3, 2022. While we will not receive any proceeds from the sale of the Common Stock by the Selling Stockholders, we will receive proceeds from the exercise of any Warrants for cash.

| | |
|---|--|
| Issuer | Abeona Therapeutics Inc. |
| Common Stock offered by the Selling Stockholders | (i) 7,065,946 shares of Common Stock, (ii) 543,933 shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants, and (iii) 7,609,879 shares of Common Stock issuable upon the exercise of the Common Warrants. See “Selling Stockholders.” |
| Common Stock currently outstanding | 17,175,799 (as of November 7, 2022) |
| Common Stock to be outstanding assuming exercise of the Warrants | 25,329,611 |
| The Warrants | The Warrants were issued on November 7, 2022. Each Pre-Funded Warrant has an exercise price of \$0.01 per share, and each Common Warrant has an exercise price of \$4.75 per share. The Warrants are presently exercisable with a term of five years from the date of issuance. |
| Use of Proceeds | <p>We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder. However, we will receive proceeds from the exercise of any Warrants for cash.</p> <p>We intend to use the proceeds from the exercise of any Warrants for cash for development, working capital and general corporate purposes. See “Use of Proceeds” for more details.</p> |
| Trading Market and Ticker Symbol for Common Stock | Our Common Stock is listed on The Nasdaq Capital Market under the symbol “ABEO”. |
| Risk Factors | Investing in our securities involves a high degree of risk. For a discussion of factors to consider before deciding to invest in our Common Stock, you should carefully review and consider the “Risk Factors” section of this prospectus, as well as the risk factors described or referred to in any documents incorporated by reference in this prospectus, and in any applicable prospectus supplement or amendment. |

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RISK FACTORS

Investing in shares of our Common Stock involves a high degree of risk. Before deciding whether to invest in shares of our Common Stock, you should consider carefully the risks and uncertainties discussed in this section and under the sections titled Risk Factors contained in our most recent Annual Report on Form 10-K and in our most recent Quarterly Report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, the documents incorporated by reference, any prospectus supplement and any free writing prospectus that we may authorize. Please also read carefully the section titled “Special Note Regarding Forward-Looking Statements.”

Holders of our Common Stock may incur dilution due to issuances pursuant to the exercise of outstanding options or exercise of outstanding warrants.

As of September 30, 2022, there were 242,644 shares subject to outstanding options at a weighted average exercise price per share of \$37.03, and 1,788,000 shares subject to outstanding warrants at a weighted average exercise price per share of \$9.75. To the extent that additional shares of common stock are issued upon exercise of these outstanding options or warrants, you will incur further dilution. We may also acquire or license other technologies or finance strategic alliances by issuing equity, which may result in additional dilution to our stockholders.

Sales of a substantial number of shares of our Common Stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our Common Stock and could impair our ability to raise additional equity capital.

Sales of a substantial number of shares of our Common Stock in the public market, or the perception that such sales may occur, could cause the market price of our Common Stock to decline and could impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of shares of our Common Stock or other equity-related securities would have on the market price of our Common Stock.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement, and the other documents we have filed with the SEC that are incorporated herein by reference contain forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans, objectives of management, or other financial items are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “seek,” “intend,” “may,” “plan,” “predict,” “project,” “will,” “would,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus supplement, particularly as set forth and incorporated by reference in the “Risk Factors” section that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations, or investments we may make. You should read this prospectus supplement, the accompanying prospectus, and the documents that we incorporate by reference in this prospectus supplement completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, except as otherwise required by law. We advise you, however, to consult any further disclosures we make on related subjects in our future annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K we file with or furnish to the SEC.

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USE OF PROCEEDS

We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder.

We may receive proceeds from the exercise of the Warrants to the extent the Warrants are exercised. We can make no assurances that any of the Warrants will be exercised, or if exercised, the quantity that will be exercised or the period in which such Warrants will be exercised.

We intend to use the net proceeds from any exercise of the Warrants for development, working capital and general corporate purposes.

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SELLING STOCKHOLDERS

The Common Stock being offered by the Selling Stockholders are those previously issued to the Selling Stockholders, and those issuable to the Selling Stockholders, upon exercise of the Warrants. For additional information regarding the issuances of those shares of Common Stock and Warrants, see “Summary—Private Placement” above. We are registering the shares of Common Stock in order to permit the Selling Stockholders to offer the shares for resale from time to time. Except for the ownership of the shares of Common Stock and the Warrants, the Selling Stockholders have not had any material relationship with us within the past three years.

The table below lists the Selling Stockholders and other information regarding the beneficial ownership of the shares of Common Stock by each of the Selling Stockholders. The second column lists the number of shares of Common Stock beneficially owned by each Selling Stockholder, based on its ownership of the shares of Common Stock and Warrants, as of November 7, 2022, assuming exercise of the Warrants held by the Selling Stockholders on that date, without regard to any limitations on exercises.

The third column lists the shares of Common Stock being offered by this prospectus by the Selling Stockholders.

In accordance with the terms of the Registration Rights Agreement with the Selling Stockholders, this prospectus generally covers the resale of the sum of (i) the number of shares of Common Stock issued to the Selling Stockholders in the Private Placement described above and (ii) the maximum number of shares of Common Stock issuable upon exercise of the related Warrants, determined as if the outstanding Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the Registration Rights Agreement, without regard to any limitations on the exercise of the Warrants. The fourth column assumes the sale of all of the shares offered by the Selling Stockholders pursuant to this prospectus.

Under the terms of the Warrants, a Selling Stockholder may not exercise the Warrants to the extent such exercise would cause such Selling Stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock that would exceed 4.99% or 9.99%, as applicable, of our then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon exercise of such Warrants that have not been exercised. The number of shares in the table below do not reflect this limitation. The Selling Stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

| Name of Selling Stockholder | Number of Shares of Common Stock Owned Prior to Offering ⁽¹⁾ | Number of Shares of Common Stock to be Sold Pursuant to this Prospectus ⁽²⁾ | Number of Shares of Common Stock Owned After Offering ⁽²⁾ | Percentage of Class After Offering [*] |
|---|--|--|---|---|
| Adage Capital Partners, L.P. (3) | 2,092,030 | 1,521,740 | 570,290 | 3.3% |
| Entities affiliated with AIGH Capital Management, LLC (4) | 1,651,990 | 1,304,348 | 347,642 | 2.0% |
| Altium Growth Fund, LP (5) | 217,392 | 217,392 | — | — |
| Armistice Capital Master Fund Ltd. (6) | 4,794,192 | 4,350,192 | 444,000 | 2.6% |
| Blackwell Partners LLC – Series A (7)(8) | 1,089,842 | 1,089,842 | — | — |
| CVI Investments, Inc. (9) | 345,392 | 217,392 | 128,000 | * |
| Deerfield Partners, L.P. (10) | 1,739,130 | 1,739,130 | — | — |
| Entities Affiliated with EcoR1 Capital, LLC (11) | 2,173,912 | 2,173,912 | — | — |
| Nantahala Capital Partners Limited Partnership (8)(12) | 281,876 | 281,876 | — | — |
| Nantahala Capital Partners II Limited Partnership (8)(13) | 137,864 | 137,864 | — | — |
| NCP RFM LP (8)(14) | 425,118 | 425,118 | — | — |
| Pinehurst Partners, L.P. (8)(15) | 239,212 | 239,212 | — | — |
| Point72 Associates, LLC (16) | 1,849,740 | 1,521,740 | 328,000 | 1.9% |

* Percentage not listed if less than 1%.

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- (1) “Beneficial ownership” means that a person, directly or indirectly, has or shares voting or investment power with respect to a security or has the right to acquire such power within 60 days. The number of shares beneficially owned is determined as of November 7, 2022, and the percentage is based upon 17,175,799 shares of our Common Stock outstanding as of November 7, 2022.
 - (2) Assumes sale of all shares of Common Stock covered by this prospectus and no further acquisitions of shares of Common Stock by the Selling Stockholders.
 - (3) The number of shares beneficially owned consists of 1,331,160 shares and 760,870 shares issuable upon exercise of the Common Warrants. Bob Atchinson and Phillip Gross are the managing members of Adage Capital Advisors, L.L.C., which is the managing member of Adage Capital Partners GP, L.L.C., which is the general partner of Adage Capital Partners, L.P., and each such person or entity, as the case may be, may be deemed the beneficial owner of such shares. The address of Adage Capital Partners, L.P. is 200 Clarendon Street, 52nd Floor, Boston MA 02116.
 - (4) The number of shares beneficially owned consists of (i) 597,534 shares held by AIGH Investment Partners, LP (“AIGH LP”), (ii) 491,663 shares issuable upon the exercise of the Common Warrants and 160,284 shares issuable upon exercise of existing warrants held by AIGH LP, (iii) 151,473 shares held by WVP Emerging Manager Onshore Fund, LLC – AIGH Series (“AIGH Series”), (iv) 125,162 shares issuable upon the exercise of the Common Warrants and 34,964 shares issuable upon exercise of existing warrants held by AIGH Series, (v) 42,811 shares held by WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series (“OE Series”) and (vi) 35,349 shares issuable upon the exercise of the Common Warrants and 12,750 shares issuable upon exercise of existing warrants held by OE Series. Mr. Orin Hirschman is the managing member of AIGH Capital Management, LLC, a Maryland limited liability company, which is an advisor with respect to the securities held by AIGH LP and a sub-advisor with respect to the securities held by AIGH Series and OE Series, and has voting and investment control over the securities held by AIGH LP, AIGH Series and OE Series. The principal business address of Mr. Hirschman and each of the entities identified in this footnote is 6006 Berkeley Avenue, Baltimore, MD 21209.
 - (5) Includes 108,696 shares issuable upon exercise of Warrants. Altium Capital Management, LP, the investment manager of Altium Growth Fund, LP, has voting and investment power over these securities. Jacob Gottlieb is the managing member of Altium Capital Growth GP, LLC, which is the general partner of Altium Growth Fund, LP. Each of Altium Growth Fund, LP and Jacob Gottlieb disclaims beneficial ownership over these securities. The principal address of Altium Capital Management, LP is 152 West 57th Street, 20th Floor, New York, NY 10019.
 - (6) The number of shares beneficially owned consists of (i) 1,631,163 shares, (ii) 543,933 shares issuable upon the exercise of the Pre-Funded Warrants, (iii) 2,175,096 shares issuable upon the exercise of the Common Warrants, and (iv) 444,000 shares issuable upon exercise of existing warrants. The securities are directly held by Armistice Capital Master Fund Ltd. (the “Master Fund”), a Cayman Islands exempted company, and may be deemed to be indirectly beneficially owned by Armistice Capital, LLC (“Armistice”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. Armistice and Steven Boyd disclaim beneficial ownership of the reported securities except to the extent of their respective pecuniary interest therein. The address of the Master Fund is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.
 - (7) Consists of 544,921 shares and 544,921 shares issuable upon exercise of the Common Warrants held of record by Blackwell Partners LLC – Series A.
 - (8) Nantahala Capital Management, LLC is a Registered Investment Adviser and has been delegated the legal power to vote and/or direct the disposition of such securities on behalf of the selling stockholder as a General Partner, Investment Manager, or Sub-Advisor and would be considered the beneficial owner of such securities. The above shall not be deemed to be an admission by the record owners or the selling stockholder that they are themselves beneficial owners of these securities for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or any other purpose. Wilmot Harkey and Daniel Mack are managing members of Nantahala Capital Management, LLC and may be deemed to have voting and dispositive power over the shares held by the Selling Stockholder.
 - (9) The number of shares beneficially owned consists of (i) 108,696 shares, (ii) 108,696 shares issuable upon the exercise of the Common Warrants, and (iii) 128,000 shares issuable upon exercise of existing warrants. Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. The principal business address of CVI is c/o Heights Capital Management, Inc., 101 California Street, Suite 3250, San Francisco, California 94111.

-
- (10) Includes 869,565 shares of Common Stock issuable upon exercise of Common Warrants held by the holder. The general partner of Deerfield Partners, L.P. is Deerfield Mgmt, L.P. Deerfield Management Company, L.P. is the investment manager of Deerfield Partners, L.P. James E. Flynn is the sole member of the general partner of each of Deerfield Mgmt, L.P. and Deerfield Management Company, L.P. The Common Warrants may not be exercised if the aggregate number of shares of the Common Stock beneficially owned by the holder thereof would exceed 4.99% immediately after exercise thereof. Accordingly, notwithstanding the number of shares listed, the reporting person disclaims beneficial ownership of the shares of Common Stock issuable upon exercise of the Common Warrants to the extent that upon such exercise the number of shares beneficially owned the undersigned would exceed the 4.99% Ownership Cap applicable thereto.
 - (11) The number of shares beneficially owned consists of (i) 63,043 shares and 63,043 shares issuable upon exercise of the Common Warrants held of record by EcoR1 Capital Fund, L.P., and (ii) 1,023,913 shares and 1,023,913 shares issuable upon exercise of the Common Warrants held of record by EcoR1 Capital Fund Qualified, L.P. (collectively, “the EcoR1 Funds”). EcoR1 Capital, LLC (“EcoR1”) is the general partner of the EcoR1 Funds. Oleg Nodelman is the control person of EcoR1 and may be deemed to share voting and dispositive power over the securities reported herein that are held by the EcoR1 Funds. The Common Warrants may not be exercised if the aggregate number of shares of the Common Stock beneficially owned by the holder thereof would exceed 9.99% immediately after exercise thereof, which ownership cap may be increased by the holder up to 19.99% upon 61 days’ prior notice. The address of EcoR1 Capital Fund, L.P. and EcoR1 Capital Fund Qualified, L.P. is 357 Tehama Street #3, San Francisco, CA 94103.
 - (12) Consists of 140,938 shares and 140,938 shares issuable upon exercise of the Common Warrants held of record by Nantahala Capital Partners Limited Partnership.
 - (13) Consists of 68,932 shares and 68,932 shares issuable upon exercise of the Common Warrants held of record by Nantahala Capital Partners II Limited Partnership.
 - (14) Consists of 212,559 shares and 212,559 shares issuable upon exercise of the Common Warrants held of record by NCP RFM LP.
 - (15) Consists of 119,606 shares and 119,606 shares issuable upon exercise of the Common Warrants held of record by Pinehurst Partners, L.P.

(16) The number of shares beneficially owned consists of (i) 960,870 shares, (ii) 760,870 shares issuable upon exercise of the Common Warrants, and (iii) 128,000 shares issuable upon exercise of existing warrants held of record by Point72 Associates, LLC (“Point72 Associates”). Point72 Asset Management, L.P. (“Point72 Asset Management”) maintains investment and voting power with respect to the securities held by certain investment funds it manages, including Point72 Associates. Point72 Capital Advisors, Inc. is the general partner of Point72 Asset Management. Mr. Steven A. Cohen controls each of Point72 Asset Management and Point72 Capital Advisors, Inc. As such, each of Point72 Asset Management, Point72 Capital Advisors, Inc. and Mr. Cohen may be deemed to beneficially own the securities held by Point72 Associates. Each of Point72 Asset Management, Point72 Capital Advisors, Inc. and Mr. Cohen disclaims beneficial ownership of any such securities. The address of the principal business office of Point72 Associates, Point72 Asset Management, Point72 Capital Advisors, Inc. and Mr. Cohen is c/o Point 72 Asset Management, LP, 72 Cummings Point Road, Stamford, CT 06902.

Relationship with Selling Stockholders

As discussed in greater detail above under the section titled “Prospectus Summary—Private Placement,” in November 2022, we entered into the Purchase Agreement with the Selling Stockholders pursuant to which we sold and issued shares of our Common Stock and Warrants and also entered into the Registration Rights Agreement with the Selling Stockholders pursuant to which we agreed to file a registration statement with the SEC to cover the resale of the shares of our Common Stock and shares of Common Stock issuable upon the exercise of the Warrants issued pursuant to the Securities Purchase Agreement by the Selling Stockholders.

None of the Selling Stockholders has held any position or office with us or our affiliates within the last three years or has had a material relationship with us or any of our predecessors or affiliates within the past three years, other than as a result of the ownership of our shares of Common Stock or other securities.

PLAN OF DISTRIBUTION

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

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

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

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

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

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

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

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) the date on which all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect, (iii) November 7, 2024, or (iv) a Change of Control (as defined in the Registration Rights Agreement). The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and

have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the shares of Common Stock to be offered for resale by the Selling Stockholders under this prospectus will be passed upon for us by Morgan, Lewis & Bockius LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements incorporated by reference from the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021 have been audited by Whitley Penn LLP, an independent registered public accounting firm, as stated in their report, which is incorporated by reference into this prospectus. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements, or other documents, the reference may not be complete, and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement, or other document. Because we are subject to the information and reporting requirements of the Exchange Act, 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 <http://www.sec.gov>.

You may also access our SEC filings at our website www.abeonatherapeutics.com. Our website and the information contained on, or that can be accessed through, our website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on our website or any such information in making your decision whether to purchase our securities.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

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

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2021, filed with the SEC on March 31, 2022;
- Our Quarterly Reports on Form 10-Q for the periods ended (i) [March 31, 2022](#), filed with the SEC on May 13, 2022, (ii) [June 30, 2022](#), filed with the SEC on August 11, 2022, and (iii) [September 30, 2022](#), filed with the SEC on November 14, 2022;
- Our Current Reports on Form 8-K, filed with the SEC on [March 9, 2022](#), [April 29, 2022](#), [May 2, 2022](#), [May 17, 2022](#), [May 19, 2022](#), [June 14, 2022](#), [June 30, 2022](#), [July 20, 2022](#), [August 17, 2022](#), [November 3, 2022](#), and [November 3, 2022](#); and
- The description of our common stock, par value \$0.01 per share contained in our Registration Statement on [Form 8-A](#), dated and filed with the SEC on November 4, 2014, as updated by [Exhibit 4.4](#) to our Form 10-K for the fiscal year ended December 31, 2019, and including any amendments or reports filed with the SEC for the purpose of updating such description.

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act, except as to any portion of any report or documents that is not deemed filed under such provisions, (1) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (2) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus is a part has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents and will be automatically updated and, to the extent described above, supersede information contained or incorporated by reference in this prospectus and previously filed documents that are incorporated by reference in this prospectus.

Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02, 7.01 or 9.01 of Form 8-K. Upon written or oral request, we will provide without charge to each person, including any beneficial owner, to whom a copy of the prospectus is delivered a copy of any or all of the reports or documents incorporated by reference herein (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing or telephoning us at the following address: Abeona Therapeutics Inc., 1330 Avenue of the Americas, 33rd Floor, New York, New York 10019.

* * *



Up to 15,219,758 Shares of
Common Stock Offered by the Selling Stockholders

PROSPECTUS

, 2022

We have not authorized any dealer, salesperson, or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth various expenses being borne by the Company in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates except for the Securities and Exchange Commission Registration Fee.

| | |
|---|---------------------|
| Securities and Exchange Commission registration fee | \$ 6,490.84 |
| Accountants' fees and expenses | 10,000 |
| Legal fees and expenses | 40,000 |
| Miscellaneous | 10,000 |
| Total: | <u>\$ 66,490.84</u> |

Item 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law ("DGCL") empowers a Delaware corporation to indemnify its officers and directors and certain other persons to the extent and under the circumstances set forth therein.

Our Certificate of Incorporation and Bylaws provide for indemnification of our officers and directors and certain other persons against liabilities and expenses incurred by any of them in certain stated proceedings and under certain stated conditions.

The above discussion of our Certificate of Incorporation, as amended, Bylaws and Section 145 of DGCL is not intended to be exhaustive and is qualified in its entirety by such Certificate of Incorporation, Bylaws, and statute.

The Company maintains a general liability insurance policy that covers certain liabilities of the Company's directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement that the Company enters into in connection with the sale of Common Stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, the Company, its directors, its officers, and persons who control the Company within the meaning of the Securities Act, against certain liabilities.

Item 16. Exhibits.

See Exhibit Index below, which is incorporated herein by reference.

Item 17. Undertakings.

(a) The Registrant hereby undertakes:

(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 of 1933;

(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 Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

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

(2) That, for the purpose of determining any liability under the Securities Act of 1933, 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 of 1933 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 of 1933 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 that 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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 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 Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes that: (1) for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and (2) for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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INDEX TO EXHIBITS

- 3.1 [Amended and Restated Certificate of Incorporation of Abeona Therapeutics Inc. \(incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022\)](#)
- 3.2 [Certificate of Amendment to Restated Certificate of Incorporation of Abeona Therapeutics Inc. \(incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed on June 30, 2022\)](#)
- 3.3 [Amended and Restated Bylaws of Abeona Therapeutics Inc. \(incorporated by reference to Exhibit 3.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022\)](#)
- 4.1 [Form of Warrant \(incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on November 3, 2022\)](#)
- 4.2 [Form of Pre-Funded Warrant \(incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on November 3, 2022\)](#)
- 4.3 [Form of Registration Rights Agreement \(incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K filed on November 3, 2022\)](#)
- 5.1* [Opinion of Morgan, Lewis & Bockius LLP](#)
- 23.1* [Consent of Whitley Penn LLP](#)
- 23.2 [Consent of Morgan, Lewis & Bockius LLP \(included in Exhibit 5.1 hereto\)](#)
- 24.1 [Powers of Attorney \(included on signature page to the original filing of this registration statement\)](#)
- 107* [Filing Fee Table](#)

* Filed herewith

II-3

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 New York, New York, on November 30, 2022.

POWER OF ATTORNEY

We, the undersigned officers and directors of Abeona Therapeutics Inc. hereby severally constitute and appoint Joseph Vazzano our true and lawful attorney with full power to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement, and any registration statement filed pursuant to Rule 462 under the Securities Act of 1933, as amended, in connection with said Registration Statement, and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange

Commission, and generally to do all such things in our name and on our behalf in our capacities as officers and directors to enable Abeona Therapeutics Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney, or his substitute or substitutes, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

ABEONA THERAPEUTICS INC.

By: /s/ Joseph Vazzano
Joseph Vazzano
Chief Financial Officer

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|---|--|-------------------|
| <u>/s/ Vishwas Seshadri</u> Vishwas Seshadri | Chief Executive Officer and Director (Principal Executive Officer) | November 30, 2022 |
| <u>/s/ Joseph Vazzano</u> Joseph Vazzano | Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | November 30, 2022 |
| <u>/s/ Michael Amoroso</u> Michael Amoroso | Chairman of the Board | November 30, 2022 |
| <u>/s/ Christine Silverstein</u> Christine Silverstein | Director | November 30, 2022 |
| <u>/s/ Todd Wider</u> Todd Wider | Director | November 30, 2022 |
| <u>/s/ Paul Mann</u> Paul Mann | Director | November 30, 2022 |
| <u>/s/ Faith L. Charles</u> Faith L. Charles | Director | November 30, 2022 |
| <u>/s/ Mark Alvino</u> Mark Alvino | Director | November 30, 2022 |
| <u>/s/ Leila Alland</u> Leila Alland | Director | November 30, 2022 |
| <u>/s/ Donald Wuchterl</u> Donald Wuchterl | Director | November 30, 2022 |

November 30, 2022

Abeona Therapeutics Inc.
1330 Avenue of the Americas, 33rd Floor
New York, New York 10019

Re: Abeona Therapeutics Inc. Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Abeona Therapeutics Inc., a Delaware corporation (the “Company”), in connection with the preparation of a Registration Statement on Form S-3 (the “Registration Statement”) for filing with the Securities and Exchange Commission (the “SEC”) pursuant to the Securities Act of 1933, as amended (the “Act”), for the registration by the Company of 15,219,758 shares (the “Shares”) of common stock, par value \$0.001 per share, of the Company (the “Common Stock”), consisting of (i) 7,065,946 shares of Common Stock (the “Common Shares”) held by the selling stockholders named in the Registration Statement (the “Selling Stockholders”), (ii) 543,933 shares of Common Stock issuable upon the exercise of pre-funded warrants (the “Pre-Funded Warrant Shares”) and (iii) 7,609,879 shares of Common Stock issuable upon the exercise of warrants (the “Common Warrant Shares”), pursuant to the Registration Rights Agreement, dated as of November 7, 2022, by and between the Company and the Selling Stockholders.

We have examined the Registration Statement, the Restated Certificate of Incorporation of the Company, as amended to date, the Amended and Restated Bylaws of the Company, as amended to date, and such certificates, records, statutes and other documents as we have deemed relevant in rendering this opinion. As to matters of fact, we have relied on representations of officers of the Company.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies and the authenticity of the originals of all documents submitted to us as copies.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares by the Selling Stockholder, to register and qualify the Shares for sale under all appropriate state securities or “blue sky” laws.

Based upon the foregoing, we are of the opinion that (i) the Common Shares have been duly authorized by the Company and are validly issued, fully paid and non-assessable, (ii) the Pre-Funded Warrant Shares have been duly authorized and, when issued upon exercise in accordance with the terms of the warrants against payment in full therefor, will be validly issued, fully paid and nonassessable and (iii) the Common Warrant Shares have been duly authorized and, when issued upon exercise in accordance with the terms of the warrants against payment in full therefor, will be validly issued, fully paid and nonassessable.

The opinion set forth above is limited to the laws of the Delaware General Corporation Law.

We hereby consent to the use of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to us under the caption “Legal Matters” in the prospectus included in the Registration Statement. In giving such consent, we do not thereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the SEC thereunder.

Very truly yours,

Morgan, Lewis & Bockius LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 31, 2022, relating to the consolidated financial statements of Abeona Therapeutics Inc., which appears in the Annual Report on Form 10-K of Abeona Therapeutics Inc. for the year ended December 31, 2021.

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

/s/ Whitley Penn LLP

Plano, Texas
November 30, 2022

Calculation of Filing Fee Tables

S-3
(Form Type)Abeona Therapeutics Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

| Security Type | Security Class Title | Fee Calculation or Carry Forward Rule | Amount Registered (1) | Proposed Maximum Offering Price Per Unit (3) | Maximum Aggregate Offering Price (3) | Fee Rate | Amount of Registration Fee |
|-----------------------------|----------------------|---|-----------------------|--|--------------------------------------|-----------|----------------------------|
| Newly Registered Securities | | | | | | | |
| Fees to Be Paid | Equity | Common Stock, \$0.01 par value per share Rule 457(c) | 15,219,758(2) | \$ 3.87 | \$ 58,900,463.46 | 0.0001102 | \$ 6,490.84 |
| Total Offering Amounts | | | | | \$ 58,900,463.46 | | \$ 6,490.84 |
| Total Fees Previously Paid | | | | | | | — |
| Total Fee Offsets | | | | | | | — |
| Net Fee Due | | | | | | | \$ 6,490.84 |

- (1) Represents the shares of common stock, \$0.01 par value per share (the “common stock”), of Abeona Therapeutics Inc. (the “Registrant”) that will be offered for resale by the selling stockholders pursuant to the prospectus to which this exhibit is attached. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), the shares being registered hereunder include such indeterminate number of additional shares of common stock as may be issuable as a result of stock splits, stock dividends or similar transactions with respect to the shares being registered hereunder.
- (2) Consists of an aggregate of up to 15,219,758 shares of the Registrant’s common stock, including 543,933 shares of common stock issuable upon the exercise of pre-funded warrants of the Registrant and 7,609,879 shares of common stock issuable upon the exercise of warrants of the Registrant.
- (3) This estimate is made pursuant to Rule 457(c) under the Securities Act solely for purposes of calculating the registration fee. The price per share and aggregate offering price are based upon the average of the high and low prices of the Registrant’s common stock on November 25, 2022, as reported on the Nasdaq Capital Market.