

PROSPECTUS

**AEON BIOPHARMA, INC.****17,851,599 Shares of Common Stock****Pre-Funded Warrants to Purchase 24,837,008 Shares of Common Stock**

Two-Year Milestone Warrants to Purchase (i) 42,688,607 Shares of Common Stock or (ii) Pre-Funded Warrants to Purchase 42,688,607 Shares of Common Stock in Lieu Thereof Five-Year Milestone Warrants to Purchase (i) 42,688,607 Shares of Common Stock or (ii) Pre-Funded Warrants to Purchase 42,688,607 Shares of Common Stock in Lieu Thereof 110,214,222 Shares of Common Stock Underlying the Pre-Funded Warrants, the Two-Year Milestone Warrants (or Underlying the Pre-Funded Warrants Issued Upon Exercise Thereof) and the Five-Year Milestone Warrants (or Underlying the Pre-Funded Warrants Issued Upon Exercise Thereof)

We are offering pursuant to this prospectus 17,851,599 shares of our Class A common stock, \$0.0001 par value per share (the “Common Stock”) pre-funded warrants to purchase 24,837,008 shares of Common Stock (the “Pre-Funded Warrants”). Each share of Common Stock and each Pre-Funded Warrant will be accompanied by (i) one two-year milestone warrant to purchase one share of Common Stock or one Pre-Funded Warrant in lieu thereof (the “Two-Year Milestone Warrants”) and (ii) one five-year warrant to purchase one share of Common Stock or one Pre-Funded Warrant, in lieu thereof (the “Five-Year Milestone Warrants”) and, together with the Two-Year Milestone Warrants, the “Milestone Warrants”; and the Milestone Warrants, together with the Pre-Funded Warrants, the “Warrants”), in each case at the applicable exercise price described in this prospectus. The combined public offering price of each share of Common Stock and accompanying Milestone Warrants is \$0.3221 and for each Pre-Funded Warrant and accompanying Milestone Warrants is \$0.3220.

Each Pre-Funded Warrant will be exercisable for one share of our Common Stock. Pre-Funded Warrants will be exercisable upon issuance and will expire when exercised in full. The exercise price of each Pre-Funded Warrant will be \$0.0001 per share. The Pre-Funded Warrants will not be listed on the NYSE American and are not expected to trade in any market; however, we anticipate that the shares of our Common Stock to be issued upon exercise of the Pre-Funded Warrants will trade on the NYSE American. This prospectus also relates to the shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants.

The Two-Year Milestone Warrant will be immediately exercisable upon issuance at an exercise price of \$0.3221 per share of Common Stock or \$0.3220 per Pre-Funded Warrant and the Five-Year Milestone Warrant will be immediately exercisable upon issuance at an exercise price of \$0.3704 per share or \$0.3703 per Pre-Funded Warrant. At the option of the holder, each Milestone Warrant may be exercised for either one share of Common Stock or one Pre-Funded Warrant. Each Two-Year Milestone Warrant will expire on the earliest of (x) the second anniversary of the date of issuance and (y) 45 days after our public announcement that we have received Type 2B meeting minutes from the U.S. Food and Drug Administration (“FDA”) that do not preclude advancement of ABP-450 toward a Biologics License Application under the Section 351(k) biosimilar pathway. Each Five-Year Milestone Warrant will expire on the earliest of (x) the fifth anniversary of the date of issuance and (y) 45 days following our public announcement that we have initiated a Phase 3 clinical equivalence trial of ABP-450 as a biosimilar to BOTOX®. The Milestone Warrants and the Pre-Funded Warrants that are issuable upon exercise thereof will not be listed on the NYSE American and are not expected to trade in any market; however, we anticipate that the shares of our Common Stock to be issued upon exercise of the Milestone Warrants will trade on the NYSE American. This prospectus also relates to the shares of Common Stock issuable upon the exercise of the Milestone Warrants. The Milestone Warrants and the Pre-Funded Warrants will be issued in accordance with, and subject to the terms of, a warrant agency agreement (the “Warrant Agency Agreement”) to be entered into with Continental Stock Transfer & Trust Company, as warrant agent.

Our Common Stock is listed on the NYSE American under the symbol “AEON”. On July 10, 2026, the closing price of our Common Stock was \$0.4830. There is no established trading market for the Warrants, and we do not

expect a market to develop for any of them. We do not intend to apply for a listing of the Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Warrants will be limited.

The public offering price was determined through negotiation among us, Lake Street Capital Markets, LLC, the representative of the several underwriters in this offering (the “Representative”), and the investors in the offering based on market conditions at the time of pricing.

INVESTING IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. THESE RISKS ARE DESCRIBED IN THE “RISK FACTORS” SECTION ON PAGE 9 OF THIS PROSPECTUS. YOU SHOULD ALSO CONSIDER THE RISK FACTORS DESCRIBED OR REFERRED TO IN ANY DOCUMENTS INCORPORATED BY REFERENCE IN THIS PROSPECTUS, AND IN ANY APPLICABLE PROSPECTUS SUPPLEMENT, BEFORE INVESTING IN THESE SECURITIES.

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

	Per Share and Accompanying Milestone Warrants	Per Pre-Funded Warrant and Accompanying Milestone Warrants	Total
Public offering price	\$0.3221	\$0.3220	\$13,747,516.61
Underwriting discounts and commissions ⁽¹⁾	\$0.0225	\$0.0225	\$ 867,351.00
Proceeds to us, before expenses	\$0.2996	\$0.2995	\$12,880,165.61

- (1) Assumes no exercise of the Representative’s over-allotment option described below. The Company has agreed to pay to the Underwriters in this offering (the “Underwriters”) an underwriting discount equal to 7.0% of the gross proceeds of this offering; provided, however, that the total amount of underwriting discounts and commissions set forth in the table above has been reduced to reflect that the Underwriters will receive an underwriting discount of 5.0% with respect to 2,328,469 shares of Common Stock and Pre-Funded Warrants to purchase 12,418,504 shares of Common Stock. See “Underwriting” on page 31 for additional information regarding underwriting compensation.

We have granted the Representative a 30-day option to purchase from us up to an additional 6,403,291 shares of Common Stock and/or Pre-Funded Warrants to purchase up to 6,403,291 shares of Common Stock (or any combination thereof), representing 15% of the total number of shares of Common Stock and Pre-Funded Warrants sold in this offering, and/or Two-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock and/or Five-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock, solely to cover over-allotments, if any. The purchase price to be paid per additional share of Common Stock or per additional Pre-Funded Warrant will be equal to the public offering price per share of Common Stock or per Pre-Funded Warrant, as applicable, less the underwriting discounts and commissions and less the \$0.000001 price per additional Milestone Warrant, and the purchase price per additional Milestone Warrant is \$0.000001. If the Representative exercises the option in full for shares of Common Stock only, the additional underwriting discounts and commissions payable by us related to such exercise will be approximately \$144,375, and the additional proceeds to us related to such exercise, before expenses, will be approximately \$1,918,125.

Delivery of the securities offered hereby is expected to be made on or about July 15, 2026 subject to satisfaction or waiver of customary closing conditions.

Sole Book-Runner

Lake Street

Lead Manager

Laidlaw & Company (UK) Ltd.

The date of this prospectus is July 13, 2026

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ABOUT THIS PROSPECTUS

You should read this prospectus and the related exhibits filed with the SEC, together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference” before making your investment decision.

You should rely only on the information provided in this prospectus or in a prospectus supplement or any free writing prospectuses or amendments thereto. Neither we, nor the Underwriters, have authorized anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information in this prospectus is accurate only as of the date hereof. Our business, financial condition, results of operations and prospects may have changed since that date.

Neither we, nor the Underwriters, are offering to sell or seeking offers to purchase these securities in any jurisdiction where the offer or sale is not permitted. We have not 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 outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities as to distribution of the prospectus outside of the United States.

Unless the context otherwise requires, references in this prospectus to “AEON,” “the Company,” “we,” “us” and “our” refer to AEON Biopharma, Inc. and its subsidiaries on a consolidated basis. Our logo and all product names are our common law trademarks. Solely for convenience, trademarks and tradenames referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Industry and Market Data

This prospectus and the documents incorporated by reference contain estimates, projections and other information concerning our industry, our business, the science of our products and the markets for our products, including data regarding the incidence of certain medical conditions and the scientific basis of our products. We obtained the industry, science, market and similar data set forth in this prospectus from our internal estimates and research and from academic and industry research, publications, surveys, and studies conducted by third parties. While we believe that these industry publications and third-party research, surveys and studies are reliable, we have not independently verified such data and we do not make any representation as to the accuracy of the information. The content of the above sources, except to the extent specifically set forth in this prospectus, does not constitute a portion of this prospectus and is not incorporated herein. Information that is based on estimates, forecasts, projections, market research, scientific research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information.

PROSPECTUS SUMMARY

This summary contains basic information about us and this offering. Because it is a summary, it does not contain all of the information that you should consider before investing. Before you decide to invest in our Common Stock, you should read this entire prospectus carefully, including the section entitled “Risk Factors,” and any documents incorporated by reference.

Our Business

Overview

We are a biopharmaceutical company focused on developing ABP-450 as a biosimilar to BOTOX[®] (onabotulinumtoxinA) for therapeutic indications. Our strategy is to pursue biosimilarity across all clinically relevant dimensions of the reference product, including label breadth, dosing and dilution, clinical performance and physician workflow, in order to enable seamless substitution and minimize switching friction for prescribers and payers, and to initially pursue regulatory approval in the United States through Section 351(k). We hold exclusive development and commercialization rights for ABP-450 in therapeutic indications across the United States, Canada, the European Union, the United Kingdom, and certain other international territories.

Building on this strategy, we are advancing ABP-450 through the 351(k) biosimilar pathway toward a potential BLA in the United States, targeting the therapeutic botulinum toxin market, which we estimate to be approximately \$3.5 billion in 2026 and projected to grow at an annual growth rate of approximately 8%, according to Clarivate Therapeutic Botulinum Toxin Market Insights 2025. This large and continually growing market has historically been dominated by a single branded product, BOTOX[®]. We believe this market has remained highly concentrated in part due to the reference product’s broad label covering all twelve FDA-approved therapeutic indications, which has limited the adoption of competing products with narrower labels. Based on qualitative interviews conducted by a third-party market research firm with a small number of neurologists and payers in late 2025, physicians reported operational complexity and economic constraints associated with existing therapeutic neurotoxins, including limited flexibility under buy-and-bill reimbursement dynamics and challenges associated with managing products with differing dosing, dilution and labeling requirements. These interviewees indicated that, despite these challenges, BOTOX[®] remains the predominant product due to its comprehensive label and established clinical workflows. We believe these dynamics may contribute to continued reliance on a single product and highlight the importance of a biosimilar approach designed for full-label alignment and workflow compatibility. ABP-450 is the same botulinum toxin complex that is currently approved as a biosimilar in Mexico, India and Philippines and, in the U.S., is approved to provide temporary improvement in the appearance of moderate to severe glabellar lines for certain adult patients and marketed by Evolus, Inc. under the name Jeuveau[®] in the U.S. and Nuceiva[®] in Canada and the European Union. We have established a highly experienced management team with specific experience in biopharmaceutical and botulinum toxin development and commercialization.

ABP-450 is manufactured by Daewoong Pharmaceutical Co., Ltd. (“Daewoong”) pursuant to a license and supply agreement under which we hold exclusive development and commercialization rights to ABP-450 for therapeutic indications in the United States, Canada, the European Union, the United Kingdom, and certain other international territories. ABP-450 is manufactured by Daewoong in a facility designed to be compliant with current Good Manufacturing Practice (“cGMP”) that has manufactured products approved by the FDA, Health Canada, and the European Commission. These facilities have been inspected by global regulatory authorities, including the FDA and EMA. The same botulinum toxin complex is commercially available in multiple international markets and is approved in the United States for aesthetic use under the brand name Jeuveau[®]. Our development program is focused exclusively on therapeutic indications, where we believe the biosimilar pathway may enable efficient development and broad label access, subject to regulatory review.

We believe the U.S. therapeutic neurotoxin market is characterized by a concentrated prescriber and payer base, which may enable an efficient commercialization approach. Based on third-party claims data analyses, a relatively small number of high-volume neurologists account for a significant portion of therapeutic neurotoxin utilization, and a limited number of payers cover a majority of treated patients. We believe this concentration may allow for targeted engagement strategies focused on key prescribers and payers.

We held an initial meeting with the FDA in the third quarter of 2024 during which we obtained feedback from the FDA on the next steps to develop a BOTOX[®] biosimilar. We commenced analytical studies in the fourth quarter of 2024 to prepare for a BPD Type 2a meeting with the FDA that was held in January 2026. During the meeting, the FDA reviewed the Company's proposed analytical similarity strategy under the 351(k) biosimilar pathway. The FDA acknowledged the scientific challenges associated with characterizing a 900 kDa botulinum neurotoxin complex, provided constructive feedback on our proposed development approach and analytical assessment plan, and noted that our analytical methodologies appeared reasonable to support advancement of the program toward a comprehensive analytical similarity package. We believe this feedback provides a framework for the remaining analytical components of our biosimilar development program and plan to complete the majority of our analytical comparability program in 2026. We are currently planning to hold a BPD Type 2b meeting with the FDA in the second half of 2026 to discuss the next phase of the development program to support approval of ABP-450 as a biosimilar to BOTOX[®] across all approved therapeutic indications.

The initial results from our analytical studies indicate a 100% amino acid sequence match confirmed between ABP-450 and BOTOX[®], based on sequence coverage of 93% to 99% for the five proteins that comprise the 900 kDa botulinum toxin type A complex, using liquid chromatography/mass spectrometry ("LC/MS") analysis of more than 3,400 amino acids across multiple lots of ABP-450 and BOTOX[®], without any sequence deviations observed. Additionally, ABP-450 also demonstrated highly similar potency across two distinct assays (LD50 — an in vivo biological activity assay and CBPA — a cell-based potency assay) to support clinical dose predictability, comparable vial-to-vial active ingredient composition using ELISA — further supporting dose similarity and reliability, and functional cleavage of SNAP-25, consistent with the mechanism of action. These results contribute to our assessment of analytical similarity by characterizing key structural attributes of ABP-450 relative to the reference product and are intended to reduce residual uncertainty and potentially limit the need for further clinical assessments. Additional analytical and functional studies are ongoing as part of our broader analytical similarity assessment. Based on an internal review of peer-reviewed literature, we have identified more than 230 reported or potential therapeutic uses across multiple therapeutic areas, including neurology, pain, urology, gastroenterology, ophthalmology, dermatology, autonomic disorders, and musculoskeletal conditions. ABP-450 has been previously evaluated in multiple clinical and preclinical programs, including Phase 2 studies in cervical dystonia and migraine and preclinical work in gastroparesis and neuropsychiatric models. The Phase 2 cervical dystonia program met its primary and key secondary endpoints and, together with its open-label safety extension, provides human clinical data supporting the potential safety and efficacy of ABP-450. We are not currently pursuing additional 351(a) indication-specific development programs, but we retain related intellectual property and know-how that could support future collaborations or lifecycle opportunities.

Prior to licensing the botulinum toxin complex to Evolus, Daewoong conducted a broad preclinical development program for ABP-450 and has received approval from over 69 regulatory authorities. Subsequently, Evolus completed a comprehensive clinical development program of the same botulinum toxin complex and has received approval in the United States, the European Union and Canada to market and sell Jeuveau[®] in the United States and Nuceiva[®] in Canada and the European Union for the temporary improvement in the appearance of moderate to severe glabellar, or frown lines in adults. Over 2,100 adult subjects with moderate to severe glabellar lines at maximum frown participated in Evolus' clinical development program, and each of Evolus' Phase 3 clinical studies successfully met their respective primary safety and efficacy endpoints. While none of these preclinical or clinical programs specifically contemplated any therapeutic use of ABP-450, given that the FDA's regulatory requirements are generally the same for the cosmetic or therapeutic use of a toxin, we believe that the positive data derived from these preclinical and clinical studies will support the clinical development and potential future safety labeling of ABP-450 for our 351(k) biosimilar program, across all labeled dose ranges.

We plan to pursue approval of ABP-450 by submitting a Section 351(k) BLA that exclusively contemplates therapeutic indications for ABP-450, which we believe could improve provider reimbursement for ABP-450, if approved. Existing botulinum toxins, including BOTOX[®], are approved under a single BLA for both therapeutic and cosmetic indications. As a result of this and other factors, other botulinum toxins are required to include the sales prices of both therapeutic and cosmetic botulinum toxin sales when calculating the average selling price, or ASP, that is used to determine the reimbursement amount physicians receive for therapeutic usage. The inclusion of a lower cosmetic sales price in the calculation of ASP can, in some cases,

cause physicians that inject for therapeutic applications to lose money when treating patients with existing botulinum toxins and also creates a deterrent to providing payors and/or providers with rebates or other financial incentives. If we are successful in obtaining approval of a Section 351(k) BLA for therapeutic indications of ABP-450, we believe this could facilitate more consistent reimbursement economics for providers administering ABP-450 in therapeutic settings while also providing greater flexibility to support contracting strategies with payors. Subject to pricing, reimbursement and formulary decisions, these characteristics may create greater alignment between provider reimbursement incentives and payor objectives to manage treatment costs. We believe such alignment, if achieved, could support adoption of ABP-450 in therapeutic indications. This pricing approach would be unique within the current therapeutic neurotoxin market and, we believe, could provide flexibility to offer competitive net pricing to payers while maintaining favorable reimbursement dynamics for providers. In addition, under the Medicare Part B buy-and-bill framework, biosimilars are generally reimbursed at the biosimilar's own ASP plus an add-on payment equal to 6% of the reference product's ASP, which, because the reference product typically has a higher ASP than the biosimilar, can result in a larger per-unit margin for providers administering the biosimilar relative to the reference product. However, our expected pricing model has not been finalized and may differ from current expectations.

We have never been profitable from operations and, as of March 31, 2026, we had an accumulated deficit of \$482.6 million. We have never generated revenue from ABP-450. We have concluded that we do not have sufficient cash to fund our operations through March 31, 2027 without additional financing, and as a result, there is substantial doubt about our ability to continue as a going concern. As of the date of this prospectus, we expect to have sufficient cash to fund our operating plan into the third quarter of 2026. Any further development of ABP-450 for any indication, including the biosimilar pathway and any additional studies, will require additional funding, which may not be available to us on reasonable terms, or at all.

We do not expect to receive any revenue from ABP-450 or any future product candidates that we develop unless and until we obtain regulatory approval and commercialize ABP-450 or any future product candidates. We expect to continue to incur significant expenses and increasing net operating losses for the foreseeable future as we seek regulatory approval, prepare for and, if approved, proceed to commercialization of ABP-450.

Recent Developments

Leerink ATM

On August 14, 2024, the Company entered into a sales agreement with Leerink Partners LLC ("Leerink Partners") relating to an at-the-market offering program (the "ATM"), pursuant to which the Company may offer and sell, from time to time at its sole discretion, shares of Common Stock, having aggregate gross proceeds of up to \$50.0 million through Leerink Partners as sales agent subject to applicable limitations. Under the ATM, Leerink Partners is entitled to commission at a rate equal to 3.0% of the gross proceeds from sales of shares of Common Stock under the ATM. The Company may cancel its at-the-market program at any time upon prior notice, pursuant to its terms. As of May 26, 2026, we have issued and sold an aggregate of 2,661,939 shares of Common Stock under the ATM and received net proceeds of approximately \$2.9 million, and approximately \$47.0 million of Common Stock remains available to be sold under the ATM subject to applicable limitations.

NYSE Continued Listing

On March 31, 2026, we received written notice of non-compliance (the "Notice") from the NYSE American indicating that we are not in compliance with the continued listing standards set forth in Section 1003(a)(ii) of the NYSE American Company Guide. Section 1003(a)(ii) requires stockholders' equity of \$4.0 million or more if a listed company has reported losses from continuing operations and/or net losses in three of its four most recent fiscal years. The Notice states that we reported a stockholders' deficit of approximately \$55 million as of December 31, 2025 and have incurred losses from continuing operations and/or net losses in three of our four most recent fiscal years, as reflected in our Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 30, 2026.

As previously reported, on February 7, 2025, we received a prior notice from NYSE American that we were not in compliance with Section 1003(a)(i) of the NYSE American Company Guide, which requires stockholders' equity of \$2.0 million or more if a listed company has reported losses from continuing operations and/or net losses in two of its three most recent fiscal years. NYSE American allows for an exemption to Section 1003(a) for companies that satisfy both (1) total market capitalization of at least \$50 million, or total assets and revenue of \$50 million each in its last fiscal year or in two of its last three fiscal years; and (2) at least 1,100,000 shares publicly held, market value of publicly held shares of at least \$15 million, and 400 round lot holders. Pursuant to that prior notice, we submitted a plan to regain compliance by August 3, 2026 (the "Plan"). In April 2025, NYSE American accepted the Plan and granted us until August 3, 2026 (the "Plan Period") to regain compliance. We have been subject to periodic reviews by NYSE American and have been making progress consistent with the Plan.

The Notice relates to our previously disclosed compliance status following our year-end results and does not have immediate effect on the listing of Common Stock on NYSE American or the Plan Period. Our Common Stock will continue to be listed and traded on NYSE American during the Plan Period, subject to compliance with other applicable listing standards, and will continue to trade with a ".BC" indicator to denote that we are below compliance. We will also continue to be included in the NYSE American list of noncompliant issuers.

We intend to continue to execute the Plan to regain compliance with Sections 1003(a)(i) and 1003(a)(ii) by August 3, 2026. However, there can be no assurance that we will be able to regain compliance within the required timeframe. We have a right to appeal a staff delisting determination in accordance with Section 1010 and Part 12 of the NYSE American Company Guide. Our receipt of the Notice does not affect our business operations or our reporting obligations with the SEC.

Corporate Information

We were initially incorporated in the State of Delaware on November 17, 2020 under the name Priveterra Acquisition Corp. Upon the closing of the business combination on July 21, 2023, we changed our name to AEON Biopharma, Inc. Our principal executive offices are located at 5 Park Plaza, Suite 1750, Irvine, California 92614 and our telephone number is (949) 354-6499.

THE OFFERING

Shares of our Common Stock to be Offered	17,851,599 shares of Common Stock and accompanying Milestone Warrants as described below at a combined public offering price of \$0.3221 per share of Common Stock and accompanying Milestone Warrants.
Pre-funded Warrants to be Offered	Pre-Funded Warrants to purchase 24,837,008 shares of Common Stock and accompanying Milestone Warrants as described below at a combined public offering price of \$0.3220 per Pre-Funded Warrant and accompanying Milestone Warrants. Each Pre-Funded Warrant will have an exercise price of \$0.0001 per share.
Milestone Warrants to be Offered	Together with each share of Common Stock (or Pre-Funded Warrant) offered in this offering, we are also offering (i) one Two-Year Milestone Warrant to purchase one share of Common Stock or one Pre-Funded Warrant in lieu thereof and (ii) one Five-Year Milestone Warrant to purchase one share of Common Stock or one Pre-Funded Warrant in lieu thereof, representing 200% aggregate warrant coverage (100% coverage in the form of Two-Year Milestone Warrants and 100% coverage in the form of Five-Year Milestone Warrants). The Two-Year Milestone Warrant will be immediately exercisable upon issuance at an exercise price of \$0.3221 per share or

	\$0.3220 per Pre-Funded Warrant (representing 100% of the public offering price, less the \$0.0001 per share exercise price in the case of the Pre-Funded Warrant) and the Five-Year Milestone Warrant will be immediately exercisable upon issuance at an exercise price of \$0.3704 per share or \$0.3703 per Pre-Funded Warrant (representing 115% of the public offering price, less the \$0.0001 per share exercise price in the case of the Pre-Funded Warrant). Each Two-Year Milestone Warrant will expire on the earliest of (x) the second anniversary of the date of issuance and (y) 45 days after our public announcement that we have received Type 2B meeting minutes from the FDA that do not preclude advancement of ABP-450 toward a Biologics License Application under the Section 351(k) biosimilar pathway. Each Five-Year Milestone Warrant will expire on the earliest of (x) the fifth anniversary of the date of issuance and (y) 45 days following our public announcement that we have initiated a Phase 3 clinical equivalence trial of ABP-450 as a biosimilar to BOTOX®. At the option of the holder, each Milestone Warrant may be exercised for either one share of Common Stock or one Pre-Funded Warrant in lieu thereof. To better understand the terms of the Milestone Warrants, you should carefully read the “Description of the Securities We are Offering” section of this prospectus. You should also read the form of each Milestone Warrant, which is filed as an exhibit to the registration statement of which this prospectus forms a part. The Milestone Warrants and the Pre-Funded Warrants will be issued in accordance with, and subject to the terms of the Warrant Agency Agreement to be entered into with Continental Stock Transfer & Trust Company, as warrant agent. See “<i>Description of the Securities We Are Offering</i>” for additional information.
Lock-Up Agreements	In connection with this offering, we and all of our executive officers and directors and certain of our stockholders have agreed, for a period of 90 days from the date of this prospectus, not to, without the prior written approval of the Representative, offer, sell, contract to sell or otherwise dispose of or hedge Common Stock or securities convertible into or exchangeable for Common Stock, subject to certain exceptions, including issuances of Common Stock or securities convertible into or exchangeable for Common Stock by us to the extent we determine in good faith that such issuances are reasonably necessary to regain or maintain compliance with the continued listing standards of the NYSE American. For more information, see “Underwriting.”
Over-allotment Option	We have granted the Representative a 30-day option to purchase from us up to an additional 6,403,291 shares of Common Stock and/or Pre-Funded Warrants to purchase up to 6,403,291 shares of Common Stock (or any combination thereof), representing 15% of the total number of shares of Common Stock and Pre-Funded Warrants sold in this offering, and/or Two-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock and/or Five-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock, solely to cover over-allotments, if any. The purchase price to be paid per

	additional share of Common Stock or per additional Pre-Funded Warrant and accompanying Milestone Warrants will be equal to the public offering price per share of Common Stock or per Pre-Funded Warrant, as applicable, less the underwriting discounts and commissions and less the \$0.000001 price per additional Milestone Warrant, and the purchase price per additional Milestone Warrant is \$0.000001. If the Representative exercises the option in full for shares of Common Stock only, the additional underwriting discounts and commissions payable by us related to such exercise will be approximately \$144,375, and the additional proceeds to us related to such exercise, before expenses, will be approximately \$1,918,125.
Shares of our Common Stock outstanding prior to this offering	26,307,211 shares of Common Stock.
Shares of our Common Stock to be outstanding after this offering	68,995,818 shares of Common Stock (assuming the full exercise of the Pre-Funded Warrants).
Use of proceeds	We expect to receive net proceeds of approximately \$12.2 million from the issuance and sale of the securities in this offering, or approximately \$14.1 million if the Representative exercises its over-allotment option in full for Common Stock only, at a price of \$0.3221 per share of Common Stock and accompanying Milestone Warrants, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for working capital and general corporate purposes, including conducting comparative analytical testing on ABP-450 to support biosimilarity to BOTOX®. We will not receive any proceeds from the sale of the Milestone Warrants at closing (other than the nominal purchase price attributable thereto); however, we may receive additional gross proceeds of up to approximately \$29.6 million in the aggregate if all of the Milestone Warrants are exercised for cash at the applicable exercise price. See “Use of Proceeds.”
NYSE American symbol for our Common Stock	“AEON”.
Risk Factors	This investment involves a high degree of risk. See “Risk Factors” beginning on page 9 of this prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.
Unless otherwise noted, the number of shares of Common Stock to be outstanding is based on 26,307,211 shares of Common Stock outstanding as of July 10, 2026 and excludes as of July 10, 2026: • 158,005 shares of Common Stock issuable upon the exercise of options, with a weighted-average exercise price of \$296.85 per share; • 11,377,317 shares of Common Stock issuable upon the vesting and settlement of restricted stock units (“RSUs”); • 2,352,070 shares of Common Stock issuable for vested RSUs that have not been issued, of which 357,638 shares of Common Stock will be withheld to satisfy tax obligations;	

- 6,084,111 shares of Common Stock that were reserved for future issuance under our 2023 Incentive Award Plan (the “2023 Plan”) and 2025 Employment Inducement Incentive Award Plan (the “2025 EIP”), as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the 2023 Plan;
- 149,036 shares of Common Stock that were reserved for future issuance under our 2023 Employee Stock Purchase Plan (“ESPP”), as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the ESPP;
- an aggregate of 18,389,740 shares of Common Stock issuable upon the exercise of private placement warrants, at a weighted average exercise price of \$4.97 per share, and an aggregate of 24,400,289 shares of Common Stock issuable upon the exercise of pre-funded warrants, at a weighted average exercise price of \$0.0001 per share, in each case to purchase shares of our Common Stock;
- 3,268,860 shares of Common Stock issuable upon conversion of certain senior secured convertible note (the “Convertible Note”), assuming at a conversion price of \$1.00 per share and the maximum accrued interest prior to the maturity date of the Convertible Note); and
- 208,657 shares of Common Stock (the “Contingent Consideration Shares”) issuable subject to achievement of certain milestone provisions set forth in our Business Combination Agreement, dated as of December 12, 2022 (as amended, the “Business Combination Agreement”).

Except as otherwise indicated, all information in this prospectus assumes:

- no exercise of outstanding options or settlement of outstanding RSUs;
- no conversion of the Convertible Note;
- no settlement of the Contingent Consideration Shares;
- the full exercise of the Pre-Funded Warrants;
- no exercise of the Milestone Warrants; and
- no exercise of the Representative’s over-allotment option.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our securities, we urge you to carefully consider the risks described below and in the “Risk Factors” sections of our most recent [Annual Report on Form 10-K for the fiscal year ended December 31, 2025](#), which is incorporated by reference into this prospectus, together with the information included in this prospectus and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. The risks and uncertainties incorporated by reference into this prospectus or described below are not the only ones we face. Additional risks and uncertainties not presently known or which we consider immaterial as of the date hereof may also materially harm our business and could result in a complete loss of your investment. If any of the matters discussed in the following risk factors were to occur, our business, financial condition, results of operations, cash flows, or prospects could be materially and adversely affected, the market price of our Common Stock could decline, as well as the value of the Pre-Funded Warrants, and you could lose all or part of your investment in our securities.

Risks Related to the Offering

Our management has broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management has broad discretion as to the use of the net proceeds from this offering, and we could use them for purposes other than those currently contemplated. Accordingly, you rely on the judgment of our management with regard to the use of those net proceeds, and you do not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that we may invest those net proceeds in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flows.

If you purchase our securities in this offering, you will incur immediate and substantial dilution in the book value of your shares of Common Stock.

You will suffer immediate and substantial dilution in the pro forma as adjusted net tangible book value of the Common Stock you purchase in this offering. Based on the public offering price of \$0.3221 per share and accompanying Milestone Warrants and assuming the full exercise of the Pre-Funded Warrants, purchasers of securities in this offering will experience immediate dilution of \$0.37 per share in the pro forma as adjusted net tangible book value of the Common Stock. See the section of this prospectus titled “Dilution” for a more detailed description of these factors.

There is no public market for any of the Warrants being offered in this offering.

There is no established public trading market for any of the Warrants being sold in this offering, and we do not expect a market to develop. We will not list any of the Warrants on any securities exchange or nationally recognized trading system, including the NYSE American. Without an active market, the liquidity of the Warrants will be limited.

We may not be able to successfully complete this offering on the terms or in the amounts currently contemplated, and even if this offering is completed, we may need to raise additional capital in the near term.

This offering is being conducted on a firm commitment underwritten basis, and the Underwriters are obliged to purchase all of the securities offered by us pursuant to this prospectus, subject to the satisfaction of customary closing conditions. However, this offering is subject to market conditions, and there can be no assurance that this offering will be completed on the terms currently contemplated, or at all.

Even if this offering is completed, the net proceeds we receive may be insufficient to fund our operations, business plans, or near-term liquidity needs for the periods anticipated. Our actual capital requirements will depend on numerous factors, including the progress of our research and development activities, regulatory developments affecting our product candidates, the timing and outcome of clinical and preclinical studies, manufacturing and supply chain considerations, and general market conditions.

If we are unable to generate sufficient cash flow from operations or raise additional capital when needed, we may be required to delay, reduce or eliminate certain research and development programs or other strategic initiatives. Additional financing may not be available on acceptable terms, or at all, and any future equity financings may be dilutive to existing stockholders. Debt financing may involve restrictive covenants or require the pledging of assets. Failure to obtain necessary additional financing could materially and adversely affect our business, financial condition, results of operations, and prospects.

The Warrants are speculative in nature.

The Warrants do not confer any rights of Common Stock ownership on their holders, such as voting rights or the right to receive dividends, but merely represent the right to acquire shares of Common Stock at a fixed price. Commencing on the date of issuance, holders of Warrants may exercise their right to acquire the underlying Common Stock and pay the stated warrant exercise price per share.

Until holders of Warrants acquire shares of our Common Stock upon exercise thereof, holders of such Warrants will have no rights with respect to shares of our Common Stock. Upon exercise of the Warrants, such holders will be entitled to exercise the rights of a holder of Common Stock only as to matters for which the record date occurs after the exercise date.

The Milestone Warrants may expire before their milestones are achieved, and holders of the Milestone Warrants will not receive any consideration if the Milestone Warrants expire unexercised or are otherwise terminated without value.

The Two-Year Milestone Warrants will expire on the earliest of (i) the second anniversary of the date of issuance and (ii) 45 days following our public announcement that we have received Type 2B meeting minutes from the FDA that do not preclude advancement of ABP-450 toward a Biologics License Application under the Section 351(k) biosimilar pathway. The Five-Year Milestone Warrants will expire on the earliest of (i) the fifth anniversary of the date of issuance and (ii) 45 days following our public announcement that we have initiated a Phase 3 clinical equivalence trial of ABP-450 as a biosimilar to BOTOX[®]. There is no assurance that we will achieve either of these milestones within the applicable warrant term, or at all, and the achievement of either milestone is subject to a number of significant risks and uncertainties, including regulatory, clinical, operational, financial and commercial risks described elsewhere in this prospectus and in the documents incorporated by reference herein. In particular, our ability to schedule and successfully conduct a Type 2B meeting with the FDA and receive supportive meeting minutes, and our ability to advance ABP-450 into a Phase 3 clinical trial, will depend on, among other factors, the results of our ongoing analytical and functional similarity studies, our ability to obtain sufficient additional capital, feedback from the FDA, the availability of clinical trial sites and materials, our ability to successfully manufacture ABP-450 at commercial scale through our third-party manufacturer, and general macroeconomic and regulatory conditions.

If the applicable milestone is not achieved and publicly announced prior to the expiration date of the applicable Milestone Warrant, the Milestone Warrant will expire unexercised and holders will receive no consideration for such Milestone Warrant. In addition, even if the applicable milestone is achieved, holders will have only a limited period following our public announcement of such achievement to exercise the applicable Milestone Warrant. Following such announcement, the market price of our Common Stock may fluctuate significantly, and the Milestone Warrants may not have any economic value at the time of exercise if the market price of our Common Stock is at or below the exercise price of the applicable Milestone Warrant. Furthermore, the Milestone Warrants do not confer any rights of Common Stock ownership on their holders, such as voting rights or the right to receive dividends, but merely represent the right to acquire shares of Common Stock (or Pre-Funded Warrants, at the option of the holder) at a fixed price during the applicable exercise period. Until a holder acquires shares of Common Stock upon exercise of a Milestone Warrant, such holder will have no rights with respect to the shares of Common Stock underlying such Milestone Warrant. As a result, the Milestone Warrants are highly speculative in nature and holders may lose all or a substantial portion of the value attributable to the Milestone Warrants.

Raising additional capital may cause dilution to our stockholders, including purchasers of securities in this offering, restrict our operations or require us to relinquish rights to our technologies or current or future therapeutic candidates.

Until such time, if ever, as we can generate the cash we need from operations, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, royalty monetization

or revenue interest financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. To the extent that we raise additional capital through the sale of Common Stock or securities convertible into or exchangeable for Common Stock, the ownership interest of our shareholders will be diluted, and the terms of these new securities may include liquidation or other preferences that materially adversely affect the rights of our shareholders. Debt financing, if available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third-parties, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research programs or current or future therapeutic candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, scale back or discontinue the development and commercialization of one or more of our therapeutic candidates, delay our pursuit of potential licenses or acquisitions, or grant rights to develop and market current or future therapeutic candidates that we would otherwise prefer to develop and market ourselves.

In addition, we have a significant number of stock options, convertible notes and warrants to purchase shares of our Common Stock outstanding. To the extent that outstanding stock options, convertible preferred stock or warrants have been or may be exercised or other shares issued, you may experience dilution.

Risks Related to Ownership of Our Common Stock

If we fail to regain compliance with the NYSE American continued listing standards, our Common Stock may be delisted, which could adversely affect the liquidity and market price of our Common Stock and our ability to raise capital.

Our Common Stock is currently listed on the NYSE American. We have received written notices from the NYSE American that we are not in compliance with certain continued listing standards under Section 1003(a) of the NYSE American Company Guide relating to stockholders' equity. Although the NYSE American has accepted our plan to regain compliance and granted us a period through August 3, 2026 to do so, we remain subject to ongoing review by the NYSE American and must make sufficient progress toward regaining compliance within the applicable plan period.

There can be no assurance that we will be able to regain compliance with the NYSE American's continued listing standards within the required timeframe or at all. If we do not regain compliance, or if the NYSE American determines that we are not making sufficient progress under our plan, the NYSE American may initiate delisting proceedings. If our Common Stock were delisted, it could result in reduced liquidity, limited availability of market quotations, increased price volatility, and a decline in the market price of our Common Stock. Delisting could also impair our ability to raise additional capital, limit our ability to use equity-based financing strategies, and reduce investor confidence. Any of these events could have a material adverse effect on our business, financial condition, and results of operations.

FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which are intended to be covered by the safe harbor created by those sections.

All statements other than statements of historical facts contained in this prospectus or incorporated by reference herein, including statements concerning possible or assumed future actions, business strategies, events or results of operations, and any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential,” or “continue,” or the negative of these terms or other comparable terminology.

These forward-looking statements are based on our current expectations, assumptions, estimates and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These statements are only predictions and involve known and unknown risks, uncertainties and other important factors, many of which are beyond our control, that may cause our actual results, performance or achievements to differ materially from any future results, performance or achievements expressed or implied by the forward-looking statements.

Forward-looking statements include, without limitation, statements regarding:

- our projected financial information, anticipated growth rate and market opportunities;
- our expectations regarding the regulatory strategy, pricing, reimbursement, ASP treatment, provider economics, and commercial adoption of ABP-450, including our plans to seek approval of ABP-450 pursuant to a Section 351(k) biologics license application for therapeutic indications only, the potential impact of such strategy on ASP calculations, Medicare Part B reimbursement dynamics, provider margins, payor contracting flexibility, and market uptake, and the risk that our ultimate pricing, reimbursement, or formulary positioning may differ materially from our current expectations;
- our ability to consummate and close this offering on the anticipated terms, within the expected timeframe, or at all, including our ability to satisfy applicable closing conditions and market requirements;
- our ability to regain compliance with the continued listing requirements of, and maintain the listing of our Class A Common Stock on, the NYSE American;
- the liquidity and trading of our public securities;
- our ability to raise financing in the future and to continue as a going concern;
- our success in retaining or recruiting, or changes required in, officers, key employees, scientific personnel or directors;
- factors relating to our business, operations and financial performance;
- the initiation, cost, timing, progress and results of research and development activities, preclinical studies or clinical trials with respect to our current and potential future product candidates;
- our ability to identify, develop and commercialize our lead product candidate, ABP-450 injection;
- our ability to obtain and maintain regulatory approvals, including a biologics license application, for therapeutic uses of ABP-450;
- our ability to obtain and maintain intellectual property protection for our technologies and product candidates;
- the rate and degree of market acceptance of our current and potential future product candidates;
- regulatory developments in the United States and other jurisdictions;

- potential liability, litigation and penalties related to our technologies, product candidates and relationships with third parties;
- our ability to contract with and rely on third-party suppliers and manufacturers, including under our license and supply agreement with Daewoong Pharmaceutical Co., Ltd.;
- our future financial performance and capital requirements;
- our ability to implement and maintain effective internal controls; and
- the impact of macroeconomic developments beyond our control, including supply chain disruptions, public health events, geopolitical instability or other catastrophic events, on our business.

The foregoing list is not intended to be exhaustive. We have based these forward-looking statements on our current expectations and assumptions. While we believe these expectations and assumptions are reasonable, forward-looking statements are inherently uncertain and involve risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements.

Important factors that could cause actual results to differ materially include those discussed in this prospectus under the heading “Risk Factors” and in the documents incorporated by reference herein, including our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the SEC. We encourage you to read those risks carefully.

You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Except as required by law, we do not undertake any obligation to update or revise any forward-looking statements to reflect events or circumstances after the date of this prospectus.

USE OF PROCEEDS

The net proceeds that we will receive from the sale of our Common Stock (and Pre-Funded Warrants in lieu thereof) in this offering, together with the accompanying Two-Year Milestone Warrants and Five-Year Milestone Warrants, will be approximately \$12.2 million, or approximately \$14.1 million if the Representative exercises its over-allotment option in full for shares of Common Stock only, in each case after deducting the underwriting discounts and commissions and other estimated offering expenses payable by us. We will not receive any proceeds from the sale of the Milestone Warrants at closing (other than the nominal purchase price attributable thereto); however, we may receive additional gross proceeds of up to approximately \$29.6 million in the aggregate if all of the Milestone Warrants are exercised for cash at the applicable exercise price.

We expect to use any net proceeds that we receive from this offering for working capital and general corporate purposes, including conducting comparative analytical testing on ABP-450 to support biosimilarity to BOTOX[®]. The amounts and timing of these expenditures will depend on a number of factors, including the timing and progress of our research and development and clinical activities, regulatory actions affecting our product candidates and our business, the results of our preclinical and clinical studies, technological advances, and the competitive environment for our product candidates. As a result, we cannot specify with certainty all of the particular uses for the net proceeds that we will receive from this offering. Accordingly, our management will have broad discretion in the application of the net proceeds. We may also use a portion of the net proceeds to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. We may use the net proceeds for purposes not contemplated at the time of this offering. Pending the use of the net proceeds as described above, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

CAPITALIZATION

The following table sets forth our cash and capitalization as of March 31, 2026 as follows:

- on an actual basis;
- on a pro forma basis to give effect to the issuance and sale of 1,004,153 shares of Common Stock since March 31, 2026 pursuant to the ATM for aggregate net proceeds of \$0.9 million (the “2026 ATM Issuances”); and
- on a pro forma as adjusted basis to give further effect to the issuance and sale by us in this offering of 17,851,599 shares of Common Stock and Pre-Funded Warrants to purchase 24,837,008 shares of Common Stock, together with accompanying Two-Year Milestone Warrants to purchase up to 42,688,607 shares of Common Stock (or Pre-Funded Warrants in lieu thereof) and Five-Year Milestone Warrants to purchase up to 42,688,607 shares of Common Stock (or Pre-Funded Warrants in lieu thereof), at the combined public offering price of \$0.3221 per share of Common Stock (or \$0.3220 per Pre-Funded Warrant) and accompanying Milestone Warrants, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and assuming (i) full exercise of the Pre-Funded Warrants, (ii) no exercise of the Representative’s over-allotment option and (iii) no exercise of any Milestone Warrants issued in this offering.

You should read this table together with “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*,” as well as our financial statements and related notes and the other financial information appearing elsewhere in this prospectus. The information presented in the capitalization table has been adjusted to reflect the effect of this current offering.

(in thousands, except share and per share amounts)	As of March 31, 2026		
	Actual	Pro Forma	Pro Forma As adjusted
Cash and cash equivalents	\$ 6,243	\$ 7,129	\$ 19,336
Stockholders’ equity			
Class A common stock, par value \$0.0001 per share; 1,040,000,000 shares authorized at March 31, 2026; 25,303,058 shares issued and outstanding, actual; 26,307,211 shares issued and outstanding, pro forma; and 68,995,818 shares issued and outstanding, pro forma as adjusted	\$ 10	\$ 10	\$ 14
Additional paid-in capital	\$ 465,850	\$ 466,736	\$ 478,939
Accumulated other comprehensive loss	\$ —		—
Accumulated deficit	\$(482,612)	\$(482,612)	\$(482,612)
Total stockholders’ equity	\$ (16,752)	\$ (15,866)	\$ (3,659)
Total capitalization	\$ 8,630	\$ 9,516	\$ 21,723

Unless otherwise noted, the number of shares of Common Stock to be outstanding immediately after this offering is based on 25,303,058 shares outstanding as of March 31, 2026 and excludes, as of March 31, 2026:

- 158,005 shares of Common Stock issuable upon the exercise of options outstanding, with a weighted-average exercise price of \$296.85 per share;
- 11,623,766 shares of Common Stock issuable upon the vesting and settlement of RSUs;
- 1,635 shares of Common Stock issuable pursuant to vested RSUs that have not been issued as of March 31, 2026, of which 274 shares of Common Stock will be withheld to satisfy tax obligations;
- 8,188,097 shares of Common Stock that were reserved for future issuance under our 2023 Plan and 2025 EIP, as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the 2023 Plan;

- 149,036 shares of Common Stock that were reserved for future issuance under our ESPP, as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the ESPP;
- an aggregate of 18,389,740 shares of Common Stock issuable upon the exercise of private placement warrants, at a weighted average exercise price of \$4.97 per share, and an aggregate of 24,400,289 shares of Common Stock issuable upon the exercise of pre-funded warrants, at a weighted average exercise price of \$0.0001 per share, in each case to purchase shares of our Common Stock;
- 3,268,860 shares of Common Stock issuable upon conversion of the Convertible Note, assuming at a conversion price of \$1.00 per share and the maximum accrued interest prior to the maturity date of the Convertible Note; and
- 208,657 Contingent Consideration Shares issuable subject to achievement of certain milestone provisions set forth in our Business Combination Agreement.

DILUTION

If you invest in our securities in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share of our Common Stock and the pro forma as adjusted net tangible book value per share of our Common Stock immediately after this offering.

As of March 31, 2026, our historical net tangible book value (deficit), was \$(16.8) million, or \$(0.66) per share of our Common Stock. Net tangible book value (deficit) per share represents our total tangible assets (total assets less intangible assets) less total liabilities, divided by the total number of our outstanding shares of Common Stock as of March 31, 2026. After giving effect to the 2026 ATM Issuances, our pro forma net tangible book value (deficit) as of March 31, 2026, would have been approximately \$(15.9) million, or \$(0.60) per share of our Common Stock.

After giving further effect to the issuance and sale of 17,851,599 shares of Common Stock and Pre-Funded Warrants to purchase 24,837,008 shares of Common Stock in this offering, together with the accompanying Two-Year Milestone Warrants and Five-Year Milestone Warrants, based on the public offering price of \$0.3221 per share of Common Stock, and assuming full exercise of the Pre-Funded Warrants and no exercise of any Milestone Warrants, and our receipt of the net proceeds from such issuance and sale, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2026 would have been approximately \$(3.7) million, or \$(0.05) per share of our Common Stock. This represents an immediate increase in pro forma net tangible book value of approximately \$0.55 per share to our existing stockholders and an immediate dilution of \$0.37 per share to new investors participating in this offering.

Dilution per share to investors participating in this offering is determined by subtracting the pro forma as adjusted net tangible book value per share after this offering from the public offering price per share paid by investors participating in this offering. The following table illustrates this dilution:

Public offering price per share	\$0.3221
Historical net tangible book value per share as of March 31, 2026	\$ (0.66)
Increase in historical net tangible book value per share attributable to the ATM Issuances	\$ 0.06
Pro forma net tangible book value per share attributable to our existing stockholders	\$ (0.60)
Increase in pro forma net tangible book value per share attributable to our existing stockholders	\$ 0.55
Pro forma as adjusted net tangible book value per share immediately after this offering	\$ (0.05)
Dilution in pro forma as adjusted net tangible book value per share to new investors participating in this offering	\$ 0.37

To the extent that our outstanding exercisable stock options are exercised you could experience further dilution. To the extent that we raise additional capital through the sale of additional equity, the issuance of any of our shares of common stock could result in further dilution to our stockholders.

Unless otherwise noted, the above is based on 25,303,058 shares outstanding as of March 31, 2026 and excludes as of March 31, 2026:

- 158,005 shares of Common Stock issuable upon the exercise of options outstanding, with a weighted-average exercise price of \$296.85 per share;
- 11,623,766 shares of Common Stock issuable upon the vesting and settlement of RSUs;
- 1,635 shares of Common Stock issuable pursuant to vested RSUs that have not been issued as of March 31, 2026, of which 274 shares of Common Stock will be withheld to satisfy tax obligations;
- 8,188,097 shares of Common Stock that were reserved for future issuance under our 2023 Plan and 2025 EIP, as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the 2023 Plan;
- 149,036 shares of Common Stock that were reserved for future issuance under our ESPP, as well as any automatic increases in the number of shares of our Common Stock reserved for future issuance under the ESPP;

- an aggregate of 18,389,740 shares of Common Stock issuable upon the exercise of private placement warrants, at a weighted average exercise price of \$4.97 per share, and an aggregate of 24,400,289 shares of Common Stock issuable upon the exercise of pre-funded warrants, at a weighted average exercise price of \$0.0001 per share, in each case to purchase shares of our Common Stock;
- 3,268,860 shares of Common Stock issuable upon conversion of the Convertible Note, assuming at a conversion price of \$1.00 per share and the maximum accrued interest prior to the maturity date of the Convertible Note; and
- 208,657 Contingent Consideration Shares issuable subject to achievement of certain milestone provisions set forth in our Business Combination Agreement.

MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS**Market Information**

Our Common Stock is listed on the NYSE American under the symbol “AEON”. On July 10, 2026, the closing price of our Common Stock as reported on the NYSE American was \$0.4830 per share. There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the pre-funded warrants on any national securities exchange.

Holders

As of July 10, 2026, there were approximately 464 registered holders of our Common Stock. This number does not include stockholders for whom shares were held in “nominee” or “street name.”

Dividend Policy

We have never declared or paid cash dividends on our Common Stock. We currently intend to retain all available funds and any future earnings to use in the operation of our business and do not anticipate paying any cash dividends on our Common Stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

DESCRIPTION OF OUR SECURITIES

The following description summarizes some of the terms of our certificate of incorporation and bylaws and the General Corporation Law of the State of Delaware (the “DGCL”). This description is summarized from, and qualified in its entirety by reference to, our certificate of incorporation and bylaws, each of which has been publicly filed with the SEC, as well as the relevant provisions of the DGCL.

General

Our purpose is to engage in any lawful act or activity for which corporations may be organized under the DGCL. The certificate of incorporation authorizes the issuance of 1,041,000,000 shares, consisting of 1,040,000,000 shares of Class A Common Stock, and 1,000,000 shares of preferred stock, \$0.0001 par value (“Preferred Stock”). As of the date of this prospectus, no shares of Preferred Stock are issued or outstanding. Unless our board of directors (the “Board”) determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of Preferred Stock, the holders of our Common Stock possess all voting power for the election of directors and all other matters requiring stockholder action. Holders of Common Stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of Common Stock will be entitled to receive such dividends, if any, as may be declared from time to time by our Board in accordance with applicable law. Any payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial conditions.

Liquidation, Dissolution and Winding Up

In the event of our voluntary or involuntary liquidation, dissolution or winding-up, our net assets will be distributed pro rata to the holders of our Common Stock, subject to the rights of the holders of Preferred Stock, if any.

Preemptive or Other Rights

There are no sinking fund provisions applicable to our Common Stock. Holders of shares of our Common Stock do not have subscription, redemption or conversion rights. All of the outstanding shares of Common Stock will be validly issued, fully paid and non-assessable. Each holder of Common Stock is subject to, and may be adversely affected by, the rights of the holders of any series of our Preferred Stock that we may designate and issue in the future.

Preferred Stock

The certificate of incorporation provides that shares of Preferred Stock may be issued from time to time in one or more series. Our Board will be authorized to fix designations to determine and fix the number of shares of such series and such powers, including voting powers, full or limited, or no voting powers, and such designations, preferences and relative participating, optional or other special rights, and any qualifications, limitations or restrictions thereof, including without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, and to increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series. Our Board will be able to, without stockholder approval, issue Preferred Stock with voting and other rights that could adversely affect the voting power and other rights of the holders of our Common Stock, which could have anti-takeover effects. The ability of our Board to issue Preferred Stock without stockholder approval could have the effect of delaying,

deferring or preventing a change of control of AEON or the removal of existing management. We have no Preferred Stock currently outstanding.

Exclusive Jurisdiction of Certain Actions

Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, in the event that the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) will, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action, suit or proceeding brought on our behalf; (ii) any action, suit or proceeding asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers or stockholders to us or our stockholders; (iii) any action, suit or proceeding arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws (as either may be amended from time to time); or (iv) any action, suit or proceeding asserting a claim against us governed by the internal affairs doctrine. This exclusive forum provision will not apply to any causes of action arising under the Securities Act, or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Stockholders cannot waive compliance with the Securities Act, the Exchange Act or any other federal securities laws or the rules and regulations thereunder. Unless we consent in writing to the selection of an alternative forum, the United States federal district courts shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. In addition, our certificate of incorporation provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to these exclusive forum provisions. These forum selection provisions may limit our stockholders' ability to litigate disputes with us in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our stockholders. In addition, these forum selection provisions may impose additional litigation costs for stockholders who determine to pursue any such lawsuits against us.

Nothing in our certificate of incorporation or bylaws precludes stockholders that bring suit to enforce any liability or duty under Exchange Act from bringing such claims in federal court to the extent that the Exchange Act confers exclusive federal jurisdiction over such claims, subject to applicable law. Although our certificate of incorporation contains the choice of forum provisions described above, it is possible that a court could find that these provisions are inapplicable for a particular claim or action or that such provisions are unenforceable. For example, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, there is uncertainty as to whether a court would enforce such forum selection provisions as written in connection with claims arising under the Securities Act.

Dissenters' Rights of Appraisals and Payment

Under the DGCL, with certain exceptions, our stockholders have appraisal rights in connection with a merger or consolidation of the Company. Pursuant to Section 262 of the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Election of Directors and Vacancies

Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances and subject to the certificate of incorporation, the number of directors of our Board shall be fixed from time to time by resolution duly adopted by the Board. The Board is divided into three classes, designated Class I, II and III with Class I consisting of three directors and next up for re-election in 2027, Class II consisting of two directors and next up for re-election in 2028, and Class III consisting of two directors and next up for re-election in 2029. Each class of directors will be elected by our stockholders upon the expiration of the applicable class's three-year term.

Under our bylaws, except as otherwise provided by the certificate of incorporation, at all meetings of stockholders called for the election of directors, a plurality of the votes properly cast will be sufficient to elect such directors to our Board. Except as the DGCL may otherwise require and subject to the rights, if any, of

the holders of any series of Preferred Stock, in the interim between annual meetings of stockholders or special meetings of stockholders called for the election of directors and/or the removal of one or more directors and the filling of any vacancy in connection therewith, newly created directorships, death, resignation or disqualification, and any vacancies on our Board, including unfilled vacancies resulting from the removal of directors, may be filled only by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum, or by a sole remaining director. All directors will hold office until the expiration of their respective terms of office and until their successors will have been elected and qualified. Subject to the rights, if any, of any series of Preferred Stock, any director may be removed from office only with cause and only by the affirmative vote of the holders of at least two-thirds of the voting power of all of the then outstanding shares of our voting stock then entitled to vote at an election of directors. A director elected or appointed to fill a vacancy resulting from the death, resignation or removal of a director or a newly created directorship will serve for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred.

Notwithstanding the foregoing provisions, any director elected pursuant to the right, if any, of the holders of Preferred Stock to elect additional directors under specified circumstances will serve for such term or terms and pursuant to such other provisions as specified in the relevant certificate of designations related to such Preferred Stock.

Quorum

The holders of 33.34% of the voting power of the capital stock issued and outstanding and entitled to vote thereat, present in person, or by remote communication, if applicable, or represented by proxy, will constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise required by law or provided by the certificate of incorporation. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum will not be present or represented at any meeting of the stockholders, then either (i) the person presiding over the meeting or (ii) the holders of a majority of the voting power of the stockholders entitled to vote at the meeting, present in person, or by remote communication, if applicable, or represented by proxy, will have power to recess the meeting, or to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum will be present or represented. At such recessed or adjourned meeting at which a quorum will be present or represented, any business may be transacted which might have been transacted at the meeting as originally noticed. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting will be given to each stockholder entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

Anti-Takeover Provisions

Certain provisions of our certificate of incorporation, bylaws, and laws of the State of Delaware, where we are incorporated, may delay, discourage or make more difficult a takeover attempt that a stockholder might consider in his, her or its best interest. These provisions may also adversely affect prevailing market prices for the Common Stock. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unsolicited proposal to acquire or restructure AEON and outweigh the disadvantage of discouraging those proposals because negotiation of the proposals could result in an improvement of their terms. However, they also give our Board the power to discourage mergers that some stockholders may favor.

Among other things, the certificate of incorporation and bylaws (as amended from time to time):

- permit the Board to issue shares of Preferred Stock, with any rights, preferences and privileges as they may designate;
- provide that the number of directors of our Board may be changed only by resolution of our Board;
- provide that, subject to the rights of any series of Preferred Stock to elect directors, directors may be removed only with cause by the holders of at least two-thirds of the voting power of all of AEON's then-outstanding shares of voting stock entitled to vote at an election of directors;

- provide that all vacancies, subject to the rights of any series of Preferred Stock, including newly created directorships, may, except as otherwise required by law, be filled exclusively by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;
- provide that, subject to the rights of any series of Preferred Stock, special meetings of our stockholders may be called only by or at the direction of our Board, the chairperson of our Board, the Chief Executive Officer, the President or the Secretary;
- provide that our Board will be divided into three classes of directors, with the directors serving three-year terms, therefore making it more difficult for stockholders to change the composition of the board of directors; and
- not provide for cumulative voting rights, therefore allowing the holders of a majority of the shares of Common Stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose.

The combination of these provisions make it more difficult for the existing stockholders to replace our Board as well as for another party to obtain control of AEON by replacing our Board. Because our Board will have the power to retain and discharge its officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated Preferred Stock will make it possible for our Board to issue Preferred Stock with voting or other rights or preferences that could impede the success of any attempt to change the control of AEON.

These provisions are intended to enhance the likelihood of continued stability in the composition of our Board and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock.

Certain Anti-Takeover Provisions of Delaware Law

We are subject to the provisions of Section 203 of the DGCL. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a "business combination" with: a stockholder who owns 15% or more of the pertinent corporation's outstanding voting stock (otherwise known as an "interested stockholder"), or an affiliate or associate of the interested stockholder, for three years following the date that the stockholder became an interested stockholder.

Per DGCL Section 203, "business combination" includes, among other things, a merger or sale of more than 10% of a corporation's assets. However, Section 203 would not apply if:

- the relevant board of directors approves either the business combination or the transaction that made the stockholder an "interested stockholder" prior to the date of the business combination or transaction, as applicable;
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of the corporation's voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of Common Stock; or
- on or subsequent to the date of the business combination, such business combination is approved by our Board and authorized at an annual or special meeting of stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

These provisions may have the effect of delaying, deferring, or preventing changes in control of AEON.

Cumulative Voting

Under Delaware law, the right to vote cumulatively does not exist unless the certificate of incorporation specifically authorizes cumulative voting. Our certificate of incorporation does not authorize cumulative voting.

Limitations on Liability and Indemnification of Officers

The DGCL authorizes corporations to limit or eliminate the personal liability of directors of corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties, subject to certain exceptions. Our certificate of incorporation provides that we will indemnify our officers and directors to the fullest extent authorized or permitted by applicable law. We have entered into agreements to indemnify our directors, executive officers and other employees as determined by AEON. Under our bylaws, we are required to indemnify each of our directors and officers if the basis of the indemnitee's involvement was by reason of the fact that the indemnitee is or was a director or officer of ours or was serving at our request as a director, officer, employee or agent for another entity. We must indemnify our officers and directors against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the indemnitee in connection with such action, suit or proceeding if the indemnitee acted in good faith and in a manner the indemnitee reasonably believed to be in or not opposed to the best interests of AEON, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the indemnitee's conduct was unlawful. Our bylaws also require us to advance expenses (including attorneys' fees) incurred by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding, provided that such person undertakes to repay any such advance if it is ultimately determined that such person is not entitled to indemnification by us. Any claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Corporate Opportunities

Our certificate of incorporation does not expressly renounce the doctrine of corporate opportunity.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our stock at the time of the transaction to which the action relates.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Continental Stock Transfer & Trust Company. The transfer agent's address is One State Street, 30th Floor, New York, NY, 10004.

Listing

Our Common Stock is listed on the NYSE American under the symbol "AEON".

DESCRIPTION OF THE SECURITIES WE ARE OFFERING

The following is a summary of the material terms of the securities we are offering. For additional information about our authorized capital, we refer you to our third amended and restated certificate of incorporation (including any amendments thereto), amended and restated bylaws (including any amendments thereto), and our filings with the SEC that are incorporated by reference into this prospectus, including our [Annual Report on Form 10-K for the year ended December 31, 2025](#). For instructions on how to find copies of these documents, please read “Where You Can Find More Information” and “Incorporation by Reference.”

Common Stock

The material terms and provisions of our Common Stock and each other class of our securities which qualifies or limits our Common Stock are described under the caption “Description of Our Securities” in this prospectus.

Pre-Funded Warrants

The following summary of certain terms and provisions of the Pre-Funded Warrants is not complete and is subject to, and qualified in its entirety by, the provisions of the Pre-Funded Warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

Duration, Exercise Price and Form

The Pre-Funded Warrants are being offered in lieu of shares of our Class A Common Stock. Each Pre-Funded Warrant is exercisable for one share of Common Stock at an exercise price of \$0.0001 per share. The Pre-Funded Warrants are immediately exercisable after issuance and may be exercised at any time until all of the Pre-Funded Warrants are exercised in full.

The exercise price and the number of shares of Common Stock issuable upon exercise of the Pre-Funded Warrants are subject to customary adjustments in the event of stock dividends, stock splits, pro rata distributions and similar events affecting the Common Stock.

Exercisability

The Pre-Funded Warrants are exercisable, at the option of the holder, in whole or in part, by delivering to us a duly executed exercise notice and payment in full of the exercise price for the number of shares of Common Stock purchased upon such exercise, except in the case of a cashless exercise as described below.

A holder (together with its affiliates) may not exercise any portion of a Pre-Funded Warrant to the extent that, after giving effect to such exercise, the holder would beneficially own more than 4.99% (or at the election of such holder, 9.99%) of the outstanding shares of Common Stock immediately after exercise. The beneficial ownership limitation may be increased or decreased at the holder’s election to a percentage not in excess of 19.99%, upon at least 61 days’ prior written notice to us, subject to the terms of the Pre-Funded Warrants.

Cashless Exercise

At the option of the holder, the Pre-Funded Warrants may be exercised on a cashless basis, in whole or in part, in lieu of making the cash payment otherwise required upon exercise. In such event, the holder will receive the net number of shares of Common Stock determined in accordance with the formula set forth in the Pre-Funded Warrants.

Fundamental Transactions

In the event of a fundamental transaction (as defined in the Pre-Funded Warrants), including any reorganization, recapitalization or reclassification of the Common Stock, the sale or transfer of all or substantially all of our assets, a merger or consolidation, or any person or group becoming the beneficial

owner of more than 50% of the voting power of our outstanding Common Stock, the holder of the Pre-Funded Warrants will be entitled, upon exercise of the Pre-Funded Warrants, to receive the kind and amount of securities, cash or other property that the holder would have received had the holder exercised the Pre-Funded Warrants immediately prior to the occurrence of such fundamental transaction.

Transferability

Subject to applicable securities laws, the Pre-Funded Warrants may be transferred at the option of the holder upon surrender of the Pre-Funded Warrants to us together with the appropriate instruments of transfer.

Fractional Shares

No fractional shares of Common Stock will be issued upon exercise of the Pre-Funded Warrants. In lieu of any fractional share otherwise issuable, we will either round up to the nearest whole share or pay a cash adjustment equal to such fractional amount multiplied by the exercise price, at our election.

Trading Market

There is no established trading market for the Pre-Funded Warrants, and we do not expect a market to develop. We do not intend to apply for listing of the Pre-Funded Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Pre-Funded Warrants will be limited. The shares of Common Stock issuable upon exercise of the Pre-Funded Warrants are listed on the NYSE American under the symbol “AEON.”

Rights as a Stockholder

Except as otherwise provided in the Pre-Funded Warrants or by virtue of a holder’s ownership of shares of Common Stock, holders of the Pre-Funded Warrants do not have the rights or privileges of holders of Common Stock, including voting rights, until such holders exercise their Pre-Funded Warrants.

Waivers and Amendments

No term of the Pre-Funded Warrants may be amended or waived without the written consent of the holders of the Pre-Funded Warrants.

Two-Year Milestone Warrants

The following summary of certain terms and provisions of the Two-Year Milestone Warrants offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Two-Year Milestone Warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Two-Year Milestone Warrant for a complete description of the terms and conditions of the Two-Year Milestone Warrants.

Duration and Exercise Price

The Two-Year Milestone Warrants have an exercise price of \$0.3221 per share of Common Stock or \$0.3220 per Pre-Funded Warrant (representing 100% of the public offering price, less the \$0.0001 per share exercise price in the case of the Pre-Funded Warrant). The Two-Year Milestone Warrants will be exercisable immediately upon issuance and will expire on the earlier of (i) 5:00 p.m. (New York City time) on the second anniversary of the date of issuance and (ii) the 45th day following our public announcement that we have received Type 2B meeting minutes from the FDA that do not preclude advancement of ABP-450 toward a Biologics License Application under the Section 351(k) biosimilar pathway. At the option of the holder, each Two-Year Milestone Warrant may be exercised for either one share of Common Stock or one Pre-Funded Warrant. The exercise price and the number of shares of Common Stock (or Pre-Funded Warrants) issuable upon exercise of the Two-Year Milestone Warrants are subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our Common Stock. Subject to the rules

and regulations of the applicable trading market, we may, at any time during the term of the Two-Year Milestone Warrants and with the prior written consent of the holders, reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our board of directors.

Exercise for Common Stock or Pre-Funded Warrants

Each Two-Year Milestone Warrant is exercisable, at the option of the holder, for either (i) shares of Common Stock at the applicable exercise price or (ii) an equivalent number of pre-funded warrants substantially in the form of the Pre-Funded Warrant described above under “— Pre-Funded Warrants,” at a per-warrant exercise price equal to the applicable exercise price minus \$0.0001. If the holder elects to exercise for pre-funded warrants, no beneficial ownership limitation will apply to such exercise.

Exercisability

The Two-Year Milestone Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of Common Stock or pre-funded warrants purchased upon such exercise (except in the case of a cashless exercise as described below). A holder (together with its Attribution Parties) may not exercise any portion of a Two-Year Milestone Warrant for shares of Common Stock to the extent that the holder would beneficially own more than 4.99% of the outstanding shares of Common Stock immediately after exercise, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase such percentage to any percentage not to exceed 19.99% of the number of our shares outstanding immediately after giving effect to the exercise. Purchasers of Two-Year Milestone Warrants in this offering may also elect prior to the issuance of the Two-Year Milestone Warrants to have the initial beneficial ownership limitation set at 9.99% of our outstanding shares of Common Stock.

Cashless Exercise

If, at the time a holder exercises its Two-Year Milestone Warrants after the initial exercise date, a registration statement registering the issuance of the shares of Common Stock underlying such warrant under the Securities Act is not then effective or the prospectus contained therein is not available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Two-Year Milestone Warrant. A cashless exercise is not available for exercises for pre-funded warrants.

Fundamental Transaction

In the event of a fundamental transaction (as defined in the Two-Year Milestone Warrants) generally including (i) our merger or consolidation with or into another person in which the Company is not the surviving entity and in which the pre-transaction stockholders of the Company do not own at least 50% of the voting power of the surviving entity, (ii) any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of our assets in one or a series of related transactions, (iii) any purchase offer, tender offer or exchange offer accepted by the holders of 50% or more of our outstanding Common Stock or 50% or more of the voting power of our common equity, (iv) any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which our Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock), or (v) a stock or share purchase agreement or other business combination whereby another person or group acquires 50% or more of our outstanding Common Stock or 50% or more of the voting power of our common equity, then upon any subsequent exercise of the Two-Year Milestone Warrants, holders will be entitled to receive for each share that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, at the option of the holder, the number of shares of Common Stock of the successor or acquiring corporation, or the Company if it is the surviving corporation, and any additional consideration receivable as a result of the fundamental transaction. Notwithstanding the foregoing, in the event of a fundamental transaction, the holders of the Two-Year Milestone Warrants have the right to require us or a successor entity to purchase such

warrants for cash in an amount equal to the Black Scholes Value (as defined in the Two-Year Milestone Warrant) of the unexercised portion of such warrant, exercisable at any time concurrently with, or within 30 days following, the consummation of the fundamental transaction.

However, in the event of a fundamental transaction which is not within our control, including a fundamental transaction not approved by our board of directors, the holders of the Two-Year Milestone Warrants will only be entitled to receive from us or our successor entity, as of the date of consummation of such fundamental transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of such warrants, that is being offered and paid to the holders of our Common Stock in connection with the fundamental transaction, whether that consideration is in the form of cash, stock or any combination of cash and stock.

Fractional Shares

No fractional shares of Common Stock or scrip representing fractional shares will be issued upon the exercise of the Two-Year Milestone Warrants. Rather, the number of shares of Common Stock to be issued will, at our election, either be rounded up to the next whole share or we will pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

Transferability

Subject to applicable laws, a Two-Year Milestone Warrant may be transferred at the option of the holder upon surrender of such warrant to us together with the appropriate instruments of transfer and funds sufficient to pay any transfer taxes payable upon such transfer.

Trading Market

There is no trading market available for the Two-Year Milestone Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list such warrants on any securities exchange or nationally recognized trading market. Without a trading market, the liquidity of such warrants will be extremely limited. The shares of Common Stock issuable upon exercise of the Two-Year Milestone Warrants are listed on the NYSE American under the symbol "AEON."

Rights as a Stockholder

Except as otherwise provided in the Two-Year Milestone Warrant or by virtue of a holder's ownership of Common Stock, the holders of Two-Year Milestone Warrants do not have the rights or privileges of holders of shares of Common Stock, including any voting rights, until they exercise their warrants.

Five-Year Milestone Warrants

The following summary of certain terms and provisions of the Five-Year Milestone Warrants offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Five-Year Milestone Warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Five-Year Milestone Warrant for a complete description of the terms and conditions of the Five-Year Milestone Warrants.

Duration and Exercise Price

The Five-Year Milestone Warrants have an exercise price of \$0.3704 per share of Common Stock or \$0.3703 per Pre-Funded Warrant (representing 115% of the public offering price, less the \$0.0001 per share exercise price of the Pre-Funded Warrant). The Five-Year Milestone Warrants will be exercisable immediately upon issuance and will expire on the earlier of (i) 5:00 p.m. (New York City time) on the fifth anniversary of the date of issuance and (ii) 45 days following our public announcement that we have initiated a Phase 3 clinical equivalence trial of ABP-450 as a biosimilar to BOTOX[®]. At the option of the holder, each Five-Year Milestone Warrant may be exercised for either one share of Common Stock or one Pre-Funded Warrant. The exercise price and the number of shares of Common Stock (or Pre-Funded Warrants) issuable upon exercise

of the Five-Year Milestone Warrants are subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our Common Stock. Subject to the rules and regulations of the applicable trading market, we may, at any time during the term of the Five-Year Milestone Warrants and with the prior written consent of the holders, reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our board of directors.

Exercise for Common Stock or Pre-Funded Warrants

Each Five-Year Milestone Warrant is exercisable, at the option of the holder, for either (i) shares of Common Stock at the applicable exercise price or (ii) an equivalent number of pre-funded warrants substantially in the form of the Pre-Funded Warrant described above under “— Pre-Funded Warrants,” at a per-warrant exercise price equal to the applicable exercise price minus \$0.0001. If the holder elects to exercise for pre-funded warrants, no beneficial ownership limitation will apply to such exercise.

Exercisability

The Five-Year Milestone Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of Common Stock or pre-funded warrants purchased upon such exercise (except in the case of a cashless exercise as described below). A holder (together with its Attribution Parties) may not exercise any portion of a Five-Year Milestone Warrant for shares of Common Stock to the extent that the holder would beneficially own more than 4.99% of the outstanding shares of Common Stock immediately after exercise, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase such percentage to any percentage not to exceed 19.99% of the number of our shares outstanding immediately after giving effect to the exercise. Purchasers of Five-Year Milestone Warrants in this offering may also elect prior to the issuance of the Five-Year Milestone Warrants to have the initial beneficial ownership limitation set at 9.99% of our outstanding shares of Common Stock.

Cashless Exercise

If, at the time a holder exercises its Five-Year Milestone Warrants after the initial exercise date, a registration statement registering the issuance of the shares of Common Stock underlying such warrant under the Securities Act is not then effective or the prospectus contained therein is not available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Five-Year Milestone Warrant. A cashless exercise is not available for exercises for pre-funded warrants.

Fundamental Transaction

In the event of a fundamental transaction (as defined in the Five-Year Milestone Warrants), the same rights and cash-out mechanics described above under “— Two-Year Milestone Warrants — Fundamental Transaction” will apply to the Five-Year Milestone Warrants, including the holder’s right to require us or a successor entity to purchase the Five-Year Milestone Warrants for cash in an amount equal to the Black Scholes Value (as defined in the Five-Year Milestone Warrant) of the unexercised portion of such warrant.

Fractional Shares

No fractional shares of Common Stock or scrip representing fractional shares will be issued upon the exercise of the Five-Year Milestone Warrants. Rather, the number of shares of Common Stock to be issued will, at our election, either be rounded up to the next whole share or we will pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

Transferability

Subject to applicable laws, a Five-Year Milestone Warrant may be transferred at the option of the holder upon surrender of such warrant to us together with the appropriate instruments of transfer and funds sufficient to pay any transfer taxes payable upon such transfer.

Trading Market

There is no trading market available for the Five-Year Milestone Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list such warrants on any securities exchange or nationally recognized trading market. Without a trading market, the liquidity of such warrants will be extremely limited. The shares of Common Stock issuable upon exercise of the Five-Year Milestone Warrants are listed on the NYSE American under the symbol “AEON.”

Rights as a Stockholder

Except as otherwise provided in the Five-Year Milestone Warrant or by virtue of a holder’s ownership of Common Stock, the holders of Five-Year Milestone Warrants do not have the rights or privileges of holders of shares of Common Stock, including any voting rights, until they exercise their warrants.

Warrant Agency Agreement

The Milestone Warrants and the Pre-Funded Warrants will be issued to purchasers in this offering in certificated form. The Company has appointed Continental Stock Transfer & Trust Company as warrant agent for the Milestone Warrants and the Pre-Funded Warrants. The Company and the warrant agent will enter into the Warrant Agency Agreement that will set forth the rights and duties of the warrant agent and the procedural mechanics for the issuance, exercise, transfer and cancellation of the Milestone Warrants and the Pre-Funded Warrants. The form of Warrant Agency Agreement is filed as an exhibit to the registration statement of which this prospectus forms a part. To the extent any provision of a Milestone Warrant or a Pre-Funded Warrant conflicts with the express provisions of the Warrant Agency Agreement, the provisions of the Milestone Warrant or the Pre-Funded Warrant will govern and be controlling. Prospective investors should carefully review the terms and provisions of the form of Warrant Agency Agreement for a complete description of the terms of the warrant agency arrangements.

UNDERWRITING

We are offering the Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants described in this prospectus through the Underwriters listed below. Lake Street Capital Markets, LLC is acting as the representative of the Underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the Underwriters, and each Underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants listed opposite such Underwriter's name below. The Underwriters are committed to purchase and pay for all of the shares of Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants offered by this prospectus if any such securities are purchased, other than those securities covered by the over-allotment option described below.

Underwriter	Number of Shares and Accompanying Milestone Warrants	Number of Pre-Funded Warrants and Accompanying Milestone Warrants
Lake Street Capital Markets, LLC	15,173,860	21,111,457
Laidlaw & Company (UK) Ltd.	2,677,739	3,725,551
Total	17,851,599	24,837,008

The Underwriters have advised us that they propose to offer the shares of Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants to the public at the offering prices set forth on the cover page of this prospectus. The Underwriters propose to offer the shares of Common Stock and Pre-Funded Warrants to certain dealers at the same price less a concession of not more than \$0.0135 per share of Common Stock (and per Pre-Funded Warrant). After the offering, these figures may be changed by the Underwriters.

The shares of Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants sold in this offering are expected to be ready for delivery on or about July 15, 2026, against payment in immediately available funds. The Underwriters may reject all or part of any order.

We have granted the Representative a 30-day option to purchase from us up to an additional 6,403,291 shares of Common Stock and/or Pre-Funded Warrants to purchase up to 6,403,291 shares of Common Stock (or any combination thereof), representing 15% of the total number of shares of Common Stock and Pre-Funded Warrants sold in this offering, and/or Two-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock and/or Five-Year Milestone Warrants to purchase up to 6,403,291 shares of Common Stock, solely to cover over-allotments, if any. The purchase price to be paid per additional share of Common Stock or per additional Pre-Funded Warrant will be equal to the public offering price per share of Common Stock or per Pre-Funded Warrant, as applicable, less the underwriting discounts and commissions and less the \$0.000001 price per additional Milestone Warrant, and the purchase price per additional Milestone Warrant is \$0.000001.

The Underwriters will purchase the shares of our Common Stock, Pre-Funded Warrants, Two-Year Milestone Warrants and Five-Year Milestone Warrants from us at the public offering prices set forth on the cover page of this prospectus, less the underwriting discounts and commissions. We have agreed to pay the Underwriters an underwriting discount equal to 7.0% of the gross proceeds of this offering; provided, however, that with respect to any proceeds raised from certain specified investors, the underwriting discount will be equal to 5.0% of such gross proceeds. No separate underwriting discount or commission is being paid to the Underwriters in connection with the issuance of the Two-Year Milestone Warrants or the Five-Year Milestone Warrants.

The table below summarizes the underwriting discounts that we will pay to the Underwriters. These amounts are shown assuming both no exercise and full exercise of the over-allotment option. In addition to the underwriting discount, we have agreed to pay up to \$125,000 of the fees and expenses of the Underwriters, which may include the fees and expenses of counsel to the Underwriters. The fees and expenses of the Underwriters that we have agreed to reimburse are not included in the underwriting discounts set forth in the

table below. The underwriting discount and reimbursable expenses the Underwriters will receive were determined through arms'-length negotiations between us and the Underwriters.

Underwriting Discount to be paid by us	Total with no Over-Allotment	Total with Over-Allotment
Per Share and Accompanying Milestone Warrants	\$ 0.0225	\$ 0.0225
Per Pre-Funded Warrant and Accompanying Milestone Warrants	\$ 0.0225	\$ 0.0225
Total ⁽¹⁾	\$867,351	\$1,011,726

- (1) Totals reflect that the Company has agreed to pay to the Underwriters an underwriting discount equal to 7.0% of the gross proceeds of this offering; provided, however, that the total amount of underwriting discounts and commissions set forth in the table above has been reduced to reflect that the Underwriters will receive an underwriting discount of 5.0% with respect to 2,328,469 shares of Common Stock and Pre-Funded Warrants to purchase 12,418,504 shares of Common Stock.

We estimate that the total expenses of this offering, excluding underwriting discounts, will be approximately \$676,083. This includes \$125,000 of the fees and expenses of the Underwriters. These expenses are payable by us.

We also have agreed to indemnify the Underwriters against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended, or to contribute to payments that the Underwriters may be required to make in respect of those liabilities.

Warrant Agent

The Milestone Warrants and the Pre-Funded Warrants will be issued in accordance with, and subject to the terms of the Warrant Agency Agreement to be entered into with Continental Stock Transfer & Trust Company, as warrant agent. Continental Stock Transfer & Trust Company will act as the warrant agent for the Milestone Warrants and the Pre-Funded Warrants pursuant to the Warrant Agency Agreement. The address of the warrant agent is One State Street, 30th Floor, New York, NY, 10004.

Warrant Solicitation Agreement

We have entered into a warrant solicitation agreement with Lake Street Capital Markets, LLC and Laidlaw & Company (UK) Ltd., pursuant to which they have agreed to act as our solicitation agents in connection with the exercise of the Milestone Warrants. As compensation for such services, we have agreed to pay the solicitation agents, in certain circumstances, a cash fee based on the aggregate number of shares underlying the Milestone Warrants (the "Milestone Warrant Securities") issued upon the cash exercise of the Milestone Warrants. The applicable fee will be equal to (i) 3.0% of the cash exercise proceeds received by us with respect to Milestone Warrant Securities issued upon cash exercise of Milestone Warrants for up to 24,545,948 Milestone Warrant Securities, (ii) 3.75% of the cash exercise proceeds received by us with respect to Milestone Warrant Securities issued upon cash exercise of Milestone Warrants for 24,545,949 to 49,091,896 Milestone Warrant Securities and (iii) 4.50% of the cash exercise proceeds received by us with respect to Milestone Warrant Securities issued upon cash exercise of Milestone Warrants for 49,091,897 to 98,183,796 Milestone Warrant Securities, in each case subject to adjustment as provided in the warrant solicitation agreement and in accordance with FINRA Rule 5110(g)(10). If a cash exercise results in Milestone Warrant Securities being issued across more than one fee tier, the applicable fee will be allocated on a pro rata basis among the applicable tiers.

No Sales of Similar Securities

In connection with this offering, we and all of our executive officers and directors and certain of our stockholders have agreed, for a period of 90 days from the date of this prospectus, not to, without the prior written approval of the Representative, offer, sell, contract to sell or otherwise dispose of or hedge Common Stock or securities convertible into or exchangeable for Common Stock, subject to certain exceptions including (i) the issuance of shares of Common Stock upon the exercise of the Warrants following the date of this prospectus or (ii) issuances of Common Stock or securities convertible into or exchangeable for Common

Stock by us to the extent we determine in good faith that such issuances are reasonably necessary to regain or maintain compliance with the continued listing standards of the NYSE American.

Price Stabilization, Short Positions and Penalty Bids

To facilitate this offering, the Underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of our Common Stock during and after the offering. Specifically, the Underwriters may over-allot or otherwise create a short position in our Common Stock for its own account by selling more shares of Common Stock than we have sold to the Underwriters. The Representative may close out any short position by either exercising its option to purchase additional shares or purchasing shares in the open market.

In addition, the Underwriters may stabilize or maintain the price of our Common Stock by bidding for or purchasing shares in the open market and may impose penalty bids. If penalty bids are imposed, selling concessions allowed to broker-dealers participating in this offering are reclaimed if shares previously distributed in this offering are repurchased, whether in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of our Common Stock at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of our Common Stock to the extent that it discourages resales of our Common Stock. The magnitude or effect of any stabilization or other transactions is uncertain. These transactions may be effected on the NYSE American or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the Underwriters and selling group members may also engage in passive market making transactions in our Common Stock on the NYSE American. Passive market making consists of displaying bids on the NYSE American limited by the prices of independent market makers and effecting purchases limited by those prices in response to order flow. Rule 103 of Regulation M promulgated by the Securities and Exchange Commission limits the amount of net purchases that each passive market maker may make and the displayed size of each bid. Passive market making may stabilize the market price of our Common Stock at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the Underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our Common Stock. In addition, neither we nor the Underwriters make any representation that the Underwriters will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Affiliations

The Underwriters and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The Underwriters may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The Underwriters may in the future receive customary fees and commissions for these transactions.

In the ordinary course of its various business activities, the Underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for its own account and for the accounts of its customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The Underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Electronic Offer, Sale and Distribution

In connection with this offering, the Underwriters or certain of the securities dealers may distribute prospectuses by electronic means, such as e-mail. In addition, the Underwriters may facilitate Internet distribution for this offering to certain of its Internet subscription customers. The Underwriters may allocate a limited number of shares for sale to its online brokerage customers. An electronic prospectus is available on

the Internet websites maintained by the Underwriters. Other than the prospectus in electronic format, the information on the website of the Underwriters is not part of this prospectus.

Listing

Our Common Stock is listed on the NYSE American under the symbol “AEON.” We do not intend to list the Warrants on the NYSE American or any other nationally recognized securities exchange or any other nationally recognized trading system.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Continental Stock Transfer & Trust Company. The transfer agent’s address is One State Street, 30th Floor, New York, NY, 10004.

Selling Restrictions

Canada.

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the Underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “Relevant Member State”) an offer to the public of any shares of our Common Stock or Warrants may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our Common Stock or Warrants may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our Common Stock or Warrants shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares of our Common Stock or Warrants in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our Common Stock or Warrants to be offered so as to enable an investor to decide to purchase any shares of our Common Stock or Warrants, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that

Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

United Kingdom.

The Underwriters have represented and agreed that:

- they have only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the “FSMA”)) received in connection with the issue or sale of the shares of our Common Stock or Warrants in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- they have complied and will comply with all applicable provisions of the FSMA with respect to anything done in relation to the shares of our Common Stock or Warrants in, from or otherwise involving the United Kingdom.

Switzerland.

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the “SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for prospectuses under the Swiss Financial Services Act (“FinSA”) or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (“CISA”). Accordingly, no public distribution, offering or advertising, as defined in CISA, its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA, its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of shares.

Australia.

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (“ASIC”), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the “Corporations Act”), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the “Exempt Investors”) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption

under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

LEGAL MATTERS

The validity of any securities offered by this prospectus has been passed upon for us by Sullivan & Worcester LLP, New York, New York. Faegre Drinker Biddle & Reath LLP is acting as counsel for the Underwriters in connection with this offering.

EXPERTS

The consolidated financial statements of AEON Biopharma, Inc. as of December 31, 2025 and 2024 and for each of the years in the two-year period ended December 31, 2025 have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2025 consolidated financial statements contains an explanatory paragraph that states that the Company's recurring losses from operations, net capital deficiency and negative cash flows from operations raise substantial doubt about the entity's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Common Stock and Warrants offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the shares of Common Stock and Warrants offered hereby, we refer you to the registration statement and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. We file periodic reports, proxy statements, and other information with the SEC pursuant to the Exchange Act. The SEC maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that site is www.sec.gov.

INCORPORATION BY REFERENCE

The SEC permits us to "incorporate by reference" the information contained in documents we have filed with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. We have filed with the SEC, and incorporate by reference in this prospectus:

- our [Annual Report on Form 10-K for the year ended December 31, 2025 \(filed with the SEC on March 30, 2026\)](#);
- our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2026 \(filed with the SEC on May 14, 2026\)](#);
- our Current Reports on Form 8-K filed with the SEC on [January 21, 2026](#), [March 9, 2026](#), [April 3, 2026](#), [May 14, 2026 \(Two Filings\)](#), and [June 17, 2026](#);
- the information specifically incorporated by reference into our Annual Report on Form 10-K from our definitive proxy statement on Schedule 14A filed with the SEC on [April 29, 2026](#);
- the description of our Common Stock contained in [Exhibit 4.5](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on August 12, 2024; and
- the description of our Common Stock contained in our [Registration Statement on Form 8-A \(File No. 001-40021\), filed with the SEC on February 8, 2021](#), as amended by our [Registration Statement on Form 8-A \(File No. 001-40021\), filed with the SEC on July 21, 2023](#), and any amendment or report filed with the Commission for the purpose of updating such description.

We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

We also incorporate by reference into this prospectus additional documents we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act: (i) on or after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of the registration statement, and (ii) on or after the date of this prospectus but before the completion or termination of this offering (excluding any information not deemed “filed” with the SEC). Any statement contained in a previously filed document is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in a subsequently filed document incorporated by reference herein modifies or supersedes the statement, and any statement contained in this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in a subsequently filed document incorporated by reference herein modifies or supersedes the statement.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates. You should direct oral or written requests by one of the following methods: Attention: Investor Relations, AEON Biopharma, Inc., 5 Park Plaza, Suite 1750, Irvine, California 92614, (949) 354-6499. You may also access these documents, free of charge, on the SEC’s website at www.sec.gov or on the “Investors” page of our website at <https://www.aeonbiopharma.com>. The information found on our website, or that may be accessed by links on our website, is not part of this prospectus. We have included our website address solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our Common Stock.



17,851,599 Shares of Common Stock

**Pre-Funded Warrants to Purchase 24,837,008 Shares of Common Stock
Two-Year Milestone Warrants to Purchase (i) 42,688,607 Shares of
Common Stock or (ii) Pre-Funded Warrants to Purchase 42,688,607 Shares of
Common Stock in Lieu Thereof Five-Year Milestone Warrants to Purchase
(i) 42,688,607 Shares of Common Stock or (ii) Pre-Funded Warrants to
Purchase 42,688,607 Shares of Common Stock in Lieu Thereof**

**110,214,222 Shares of Common Stock Underlying the Pre-Funded Warrants,
the Two-Year Milestone Warrants (or Underlying the Pre-Funded Warrants
Issued Upon Exercise Thereof) and the Five-Year Milestone Warrants (or
Underlying the Pre-Funded Warrants Issued Upon Exercise Thereof)**

PROSPECTUS

Sole Book-Runner

Lake Street

Lead Manager

Laidlaw & Company (UK) Ltd.

July 13, 2026
