

**PROSPECTUS SUPPLEMENT**  
**To Prospectus dated February 7, 2025**

**Up to 73,333 Shares of Common Stock**  
**Up to 31,145,319 Shares of Common Stock Issuable Upon Conversion of Notes**  
**Up to 600,000 Shares of Common Stock Issuable Upon Exercise of Warrants**

**Adagio Medical Holdings, Inc.**

This prospectus supplement updates and supplements the information contained in the prospectus dated February 7, 2025 (as may be supplemented or amended from time to time, the “Prospectus”), which forms part of our registration statement on Form S-1 (File No. 333-284263) with the information contained in our Current Report on Form 8-K that was filed with the Securities and Exchange Commission on March 17, 2025 (the “Current Report”). Accordingly, we have attached the Current Report to this prospectus supplement.

The Prospectus and this prospectus supplement relate to the offer, sale or other disposition from time to time of up to 31,818,652 shares of our common stock, \$0.0001 par value per share (the “Common Stock”), by the selling stockholders named in this prospectus or their permitted transferees (the “selling stockholders”), consisting of (i) 73,333 shares of Common Stock (the “Registration Delay Shares”) issued pursuant to the terms of the Convert Waivers (as defined below), (ii) up to 31,145,319 shares of Common Stock (excluding the shares of Common Stock underlying the Warrants (as defined below)) (the “Convertible Note Shares”) issuable upon the conversion of those certain 13% senior secured convertible notes, with a conversion price of \$10.00 per share, subject to adjustment (the “Convertible Notes”) issuable pursuant to that certain securities purchase agreement, dated February 13, 2024, by and among us and those certain investors (the “Convert Investors”), and any assignment thereunder (the “Convertible Security Subscription Agreement”), and that certain note purchase agreement, dated February 13, 2024, by and among us, Adagio Medical, Inc., a Delaware corporation, and that certain investor party thereto, and (iii) up to 600,000 shares of Common Stock (the “Warrant Shares”) issuable upon exercise of those warrants to purchase shares of Common Stock, with an exercise price of \$24.00 per share (the “Warrants”), issued pursuant to the Convertible Security Subscription Agreement.

You should read this prospectus supplement in conjunction with the Prospectus. This prospectus supplement is qualified by reference to the Prospectus except to the extent that the information in this prospectus supplement supersedes the information contained in the Prospectus. This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus. If there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement. Terms used in this prospectus supplement but not defined herein shall have the meanings given to such terms in the Prospectus.

Our Common Stock is listed on The Nasdaq Capital Market under the symbol “ADGM”. On March 17, 2025, the last reported sales price of our Common Stock was \$1.00 per share.

We are an “emerging growth company” as defined under U.S. federal securities laws and, as such, have elected to comply with reduced public company reporting requirements. This prospectus complies with the requirements that apply to an issuer that is an emerging growth company.

**Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described in the section titled “Risk Factors” beginning on page 10 of the prospectus, and under similar headings in any amendments or supplements to the prospectus.**

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

**The date of this prospectus supplement is March 17, 2025.**

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

**FORM 8-K**

**CURRENT REPORT**  
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **March 11, 2025**

**ADAGIO MEDICAL HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of incorporation)

**001-42199**  
(Commission File Number)

**99-1151466**  
(I.R.S. Employer Identification No.)

**26051 Merit Circle, Suite 102**  
**Laguna Hills, CA**  
(Address of principal executive offices)

**92653**  
(Zip Code)

**(949) 348-1188**  
(Registrant's telephone number, including area code)

**Not Applicable**  
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

<b>Title of each class</b>	<b>Trading Symbol(s)</b>	<b>Name of each exchange on which registered</b>
Common Stock, par value \$0.0001 per share	ADGM	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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**Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers**

On March 11, 2025, John Dahldorf, the Chief Financial Officer of Adagio Medical Holdings, Inc. (the “Company”) announced his decision to resign as Chief Financial Officer, effective March 21, 2025.

Mr. Dahldorf’s resignation was not the result of any dispute or disagreement with the Company on any matter related to the Company’s financial reporting or accounting policies, procedures, estimates, or judgments.

The Company has initiated a search for a new Chief Financial Officer.

**Item 7.01. Regulation FD Disclosure.**

On March 17, 2025, the Company issued a press release regarding Mr. Dahldorf’s departure and certain business updates. A copy of the press release is being furnished as Exhibit 99.1 and is incorporated herein by reference.

The information in this Item 7.01 of this Current Report on Form 8-K is being “furnished” and shall not be deemed “filed” for the purposes of Section 18 of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), and shall not be incorporated or deemed to be incorporated by reference into any filing by the Company under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language contained in such filing, unless otherwise expressly stated in such filing.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
<a href="#">99.1</a>	<a href="#">Press Release, dated March 17, 2025</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: March 17, 2025

**Adagio Medical Holdings, Inc.**

By: /s/ John Dahldorf  
Name: John Dahldorf  
Title: Chief Financial Officer

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**Adagio Medical Provides Clinical and Business Updates**

**LAGUNA HILLS, CA, March 17, 2025** – Adagio Medical Holdings, Inc. (Nasdaq: ADGM; the “Company”), a leading innovator in catheter ablation technologies, provided updates today on the progress in its streamlined focus on leadership in ventricular tachycardia (“VT”) solutions.

## Recent Business Highlights:

- The Company will participate in the scientific program of the 2025 European Heart Rhythm Association (the “Association”) Annual Meeting to be held from March 30 through April 1 in Vienna, Austria.
  - o At the Association’s Ablation Innovation Summit, Dr. Tom De Potter, MD, PhD Associate Director, Cardiovascular Center at AZORG hospital in Aalst, Belgium will deliver a lecture on the use of the Company’s proprietary ultra-low temperature cryoablation (“ULTC”) technology for treatment of scar-related monomorphic ventricular tachycardia.
  - o In addition, Professor Mark Gallagher, MD from St. George’s University Hospital in London, UK, will present a first-in-human case series using ULTC for ablation of premature ventricular complexes (“PVC”). The ablations of idiopathic PVCs constitute over half of current VT ablation cases. ULTC uniquely addresses some of the procedural challenges associated with these ablations.
- The Company announced that the FULCRUM-VT (Feasibility of Ultra-Low Temperature Cryoablation in Recurring Monomorphic Ventricular Tachycardia, NCT05675865) IDE Pivotal Study is over 40% enrolled. The trial, designed to support US premarket approval of the VT Cryoablation System with the vCLAS™ catheter is on track for completion of full patient enrollment in the second half of 2025. FULCRUM-VT is a prospective, multi-center, open-label, single-arm study, enrolling 206 patients with structural heart disease of both ischemic and non-ischemic cardiomyopathy, indicated for catheter ablation of drug refractory ventricular tachycardia in accordance with current treatment guidelines.
- In alignment with its key initiatives, prioritizing the FULCRUM VT US pivotal trial and product design optimization, the Company announced that John Dahldorf, the Company’s CFO, has decided to leave the Company, effective March 21, 2025. Mr. Dahldorf will be replaced by a transitional CFO.

“I’m extremely pleased with the FULCRUM-VT enrollment progress and the expanded use of the vCLAS™ catheter by European thought leaders. This speaks to how effectively our Company’s products address a universally recognized market need for purpose-built VT ablation technology,” said Todd Usen, Chief Executive Officer (“CEO”) of the Company. “I’d also like to thank John for his support as I took over the CEO position at the Company, and I sincerely wish him the best. We are confident we have the financial resources and the corporate structure to achieve our goals and drive the most meaningful impact for physicians, patients, and shareholders.”

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## **About Adagio Medical Holdings, Inc.**

Adagio Medical Holdings, Inc. (Nasdaq: ADGM) is an early commercial stage medical device company located in Laguna Hills, California focused on developing proprietary Ultra-Low Temperature Cryoablation technology that creates contiguous, transmural lesions to treat cardiac arrhythmias, with an emphasis on ventricular tachycardia.

## **Forward-Looking Statements**

Certain statements in this press release (this “Press Release”) may be considered “forward-looking statements” within the meaning of the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements generally relate to future events or future financial or operating performance of the Company. For example, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “forecast,” “future,” “intend,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “propose,” “seek,” “should,” “strive,” “will,” or “would” or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which may be beyond the control of the Company and could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by the Company and its management, are inherently uncertain. The Company cautions you that these statements are based on a combination of facts and factors currently known and projections of the future, which are inherently uncertain. There are risks and uncertainties described in the documents and reports, which was filed by the Company with the U.S. Securities and Exchange Commission (the “SEC”) and will be filed by the Company from time to time with the SEC. These filings may identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. The Company cannot assure you that the forward-looking statements in this communication will prove to be accurate.

Nothing in this Press Release should be regarded as a representation or warranty by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved, in any specified time frame, or at all. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made in this Press Release. Subsequent events and developments may cause those views to change. The Company does not undertake any duty to update these forward-looking statements.

## **Media Contact**

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## **Investor Contact**

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