

**PROSPECTUS SUPPLEMENT**  
**(To Prospectus dated August 23, 2023)**

**Up to \$11,200,000**  
**Common Stock**



**MAIA Biotechnology, Inc.**

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This prospectus supplement amends and supplements the information in the prospectus, dated August 23, 2023, filed as a part of our registration statement on Form S-3 (File No. 333-273984), as supplemented by our prospectus supplements dated February 14, 2024, March 25, 2024, May 15, 2024, December 23, 2024 and March 28, 2025, or the Prior Prospectuses. This prospectus supplement should be read in conjunction with the Prior Prospectuses, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Prior Prospectuses. This prospectus supplement is not complete without, and may only be delivered or utilized in connection with, the Prior Prospectuses, and any future amendments or supplements thereto.

We filed the Prior Prospectuses to register the offer and sale of our common stock, par value \$0.0001 per share, from time to time pursuant to the terms of that certain At The Market Offering Agreement dated February 24, 2024, or the sales agreement, between H.C. Wainwright & Co., LLC, or Wainwright, acting as the agent, and us.

Since filing of the March 28, 2025 prospectus supplement for up to \$11,200,000, we have offered and sold 3,116,012 shares of common stock for gross proceeds of approximately \$5,680,924 pursuant to the sales agreement.

On May 14, 2026, we suspended sales of our common stock pursuant to the Sales Agreement and provided notice to the Agent that we are terminating the sales agreement and the “at-the-market” offering to which it relates, which termination will be effective 7-business days after May 14, 2026 in accordance with the terms of the sales agreement. We are filing this Supplement to amend and supplement the information in the Prior Prospectuses to report the termination of the sales agreement and the “at-the-market” offering to which it relates and to terminate the Prior Prospectuses, which termination will be effective 7-business days after May 14, 2026 in accordance with the terms of the sales agreement.

Our common stock is listed on the NYSE American under the symbol “MAIA.” On May 14, 2026, the last reported sale price of our common stock on the NYSE American was \$1.36 per share.

**NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS SUPPLEMENT AND THE ACCOMPANYING PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.**

**H.C. Wainwright & Co.**

The date of this prospectus supplement is May 14, 2026

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