

PROSPECTUS SUPPLEMENT
(To Prospectus dated November 13, 2023)



This prospectus supplement (this “**Supplement**”) amends and supplements the information in our sales agreement prospectus, dated November 13, 2023 (the “**Sales Agreement Prospectus**”), contained in the shelf registration statement on Form S-3 of which the Sales Agreement Prospectus is a part (the “**Registration Statement**”), relating to the offer and sale of shares of common stock, par value \$0.0001 per share (“**Common Stock**”), of Atara Biotherapeutics, Inc. (the “**Company**”) having an aggregate offering price of up to \$100,000,000 from time to time through TD Securities (USA) LLC (as successor to Cowen and Company, LLC (“**TD Cowen**” or the “**Sales Agent**”). This Supplement should be read in conjunction with the Sales Agreement Prospectus, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Sales Agreement Prospectus. This Supplement is not complete without, and may only be delivered or utilized in connection with, the Sales Agreement Prospectus and any future amendments or supplements thereto.

In accordance with the terms of the sales agreement, dated November 1, 2023 (the “**Sales Agreement**”), by and between the Company and TD Cowen, we may offer and sell shares of our Common Stock from time to time through TD Cowen, acting as sales agent.

We are now subject to General Instruction I.B.6 of Form S-3, which limits the amounts that we may sell under the Registration Statement of which this Supplement and the Sales Agreement Prospectus form a part.

The aggregate market value of our Common Stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 is \$33,407,943.90, which was calculated based on 4,841,731 shares of our outstanding Common Stock held by non-affiliates on March 10, 2026, at a price of \$6.90 per share, on March 12, 2026. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities pursuant to this Supplement with a value of more than one-third of the aggregate market value of our Common Stock held by non-affiliates in any twelve calendar month period, so long as the aggregate market value of our Common Stock held by non-affiliates is less than \$75,000,000. We have not offered any securities pursuant to Instruction I.B.6 during the prior twelve calendar month period that ends on and includes the date of this Supplement. As a result of the limitations of General Instruction I.B.6, and in accordance with the terms of the Sales Agreement, we are registering the offer and sale of shares of our Common Stock having an aggregate offering price of up to \$11,135,981 from time to time through the Sales Agent. If our public float increases such that we may sell additional amounts under the Sales Agreement and the Registration Statement of which this Supplement and Sales Agreement Prospectus are a part, we may file another prospectus supplement in order to make sales of such additional amounts.

Our Common Stock is listed on the Nasdaq Global Market under the symbol “**ATRA**.” On March 13, 2026, the last reported sales price of our Common Stock was \$6.50 per share.

Investing in our Common Stock involves risks. Before buying any shares, you should read the discussion of material risks of investing in our Common Stock in “Risk Factors” beginning on page SA-5 of the Prospectus, and in the risks discussed under similar headings in the documents incorporated by reference in this prospectus supplement and the Prospectus, as they may be amended, updated or modified periodically in our reports filed with the Securities and Exchange Commission.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement and the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

TD Cowen

The date of this prospectus supplement is March 16, 2026.
