

PROSPECTUS SUPPLEMENT
(To Prospectus dated April 3, 2025)



Tectonic Therapeutic, Inc.

Up to 2,969,583 Shares of Common Stock

This prospectus supplement supplements the prospectus dated April 3, 2025 (the "Prospectus"), which forms a part of our registration statement on Form S-1 (No. 333-280909), as amended. This prospectus supplement is being filed to update and supplement the information in the Prospectus with certain information contained in our Quarterly Report on Form 8-K, filed with the Securities and Exchange Commission on May 19, 2025 (the "Current Report"). Accordingly, we have attached the Current Report in relevant part to this prospectus supplement.

The Prospectus and this prospectus supplement relate to the proposed offer and resale or other disposition from time to time by the selling stockholders identified in this prospectus of up to an aggregate of 2,969,583 shares of common stock, par value \$0.0001 per share (the "Common Stock"), of Tectonic Therapeutic, Inc.

Our Common Stock is listed on the Nasdaq Global Market under the ticker symbol "TECX." On May 16, 2025, the last reported sales price of our Common Stock was \$20.99 per share.

This prospectus supplement should be read in conjunction with the Prospectus, including any amendments or supplements thereto, which is to be delivered with this prospectus supplement. This prospectus supplement is qualified by reference to the Prospectus, including any amendments or supplements thereto, except to the extent that the information in this prospectus supplement updates and supersedes the information contained therein.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any amendments or supplements thereto.

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 9 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 this prospectus supplement or the Prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is May 19, 2025

**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): May 17, 2025

Tectonic Therapeutic, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(state or other jurisdiction
of incorporation)

001-38537
(Commission
File Number)

81-0710585
(I.R.S. Employer
Identification No.)

**490 Arsenal Way, Suite 210
Watertown, Massachusetts**
(Address of principal executive offices)

02472
(Zip Code)

Registrant's telephone number, including area code: (339) 666-3320

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:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	TECX	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 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

Item 8.01 Other Events.

On May 17, 2025, the Company issued a press release titled “Tectonic Therapeutic Presents Complete Results for Positive Phase 1b Clinical Trial of TX45 in Patients with Group 2 Pulmonary Hypertension in HFpEF in Late-Breaking Presentation at ESC Heart Failure 2025.” A copy of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and, other than the quotes contained therein, is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release dated May 17, 2025.
104	Cover Page Interactive Data File (the cover page XBRL tags are embedded within the Inline XBRL document)

SIGNATURES

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.

TECTONIC THERAPEUTIC, INC.

By: /s/ Daniel Lochner
Daniel Lochner
Chief Financial Officer

Dated: May 19, 2025