

PROSPECTUS SUPPLEMENT
(To Prospectus dated April 2, 2025)



Tectonic Therapeutic, Inc.

Up to 3,689,465 Shares of Common Stock

This prospectus supplement supplements the prospectus dated April 2, 2025 (the “Prospectus”), which forms a part of our registration statement on Form S-1 (No. 333-286133). This prospectus supplement is being filed to update and supplement the information in the Prospectus with certain information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission on June 6, 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 3,689,465 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 June 10, 2025, the last reported sales price of our Common Stock was \$25.16 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 June 11, 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): June 6, 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
(IRS 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 (see General Instruction A.2. below):

- ☐ 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	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 5.07 Submission of Matters to a Vote of Security Holders.

On June 6, 2025, Tectonic Therapeutic, Inc. (the “Company”) held its 2025 Annual General Meeting of Stockholders (the “Annual General Meeting”). As of April 14, 2025, the record date for the Annual General Meeting, 18,671,229 shares of common stock were outstanding and entitled to vote at the Annual General Meeting. A summary of the matters voted upon by stockholders at the Annual General Meeting is set forth below.

Proposal 1: Election of Directors

Alise Reicin, M.D. and Praveen Tipirneni, M.D. were elected as a Class I directors, to hold office until the 2028 Annual General Meeting of Stockholders and their successors are duly elected and qualified, or until their earlier death, resignation or removal. The final voting results are as follows:

<u>Name of Director Elected</u>	<u>Votes For</u>	<u>Votes Withheld</u>	<u>Broker Non-Votes</u>
Alise Reicin, M.D.	14,469,766	432,093	1,351,739
Praveen Tipirneni, M.D.	14,452,647	449,212	1,351,739

Proposal 2: Ratification of Appointment of the Company’s Independent Registered Public Accounting Firm

The Company’s stockholders ratified the appointment by the Audit Committee of the Company’s Board of Directors of Deloitte & Touche LLP as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2025. The final voting results are as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstentions</u>	<u>Broker Non-Votes</u>
16,249,011	3,867	720	0

Proposal 3: Advisory Approval on the Compensation of the Company’s Named Executive Officers

On an advisory basis, the stockholders approved the compensation of the Company’s named executive officers, as disclosed in the Company’s proxy statement for the Annual General Meeting. The voting results are as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstentions</u>	<u>Broker Non-Votes</u>
14,819,757	66,777	15,325	1,351,739

Proposal 4: Advisory Vote on the Frequency of Stockholder Advisory Votes on Executive Compensation

The stockholders indicated, on an advisory basis, that the preferred frequency of the advisory vote on the compensation of the Company’s named executive officers (“Say on Frequency”) occur every year. The voting results were as follows:

<u>1 Year</u>	<u>2 Years</u>	<u>3 Years</u>	<u>Abstentions</u>	<u>Broker Non-Votes</u>
14,878,746	2,679	19,029	1,405	1,351,739

Consistent with the recommendation of the Company’s Board of Directors, as set forth in the Company’s proxy statement for the Annual General Meeting, and based on the results of this non-binding advisory vote, it is the Company’s intent that future advisory stockholder votes on the compensation of the Company’s named executive officers will be held annually and included in the Company’s proxy materials for each annual meeting until the next required vote on Say on Frequency.

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.

Date: June 6, 2025

By: /s/ Daniel Lochner

Daniel Lochner
Chief Financial Officer