

PROSPECTUS SUPPLEMENT
(To Prospectus dated July 30, 2024)



Tectonic Therapeutic, Inc.
Up to 2,969,583 Shares of Common Stock

This prospectus supplement supplements the prospectus dated July 30, 2024 (the “Prospectus”), which forms a part of our registration statement on Form S-1 (No. 333-280909). 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 July 30, 2024 (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 the Prospectus of up to an aggregate of 2,969,583 shares of common stock, par value \$0.0001 per share (“Common Stock”), of Tectonic Therapeutic, Inc.

Our Common Stock is listed on the Nasdaq Global Market under the ticker symbol “TECX.” On July 29, 2024, the last reported sales price of our Common Stock was \$18.13 per share.

This prospectus supplement should be read in conjunction with the Prospectus, including any amendments or supplements to it, 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 provided by this prospectus supplement supersedes information contained in the Prospectus.

This prospectus supplement is not complete without, and may not be delivered or used except in conjunction with, the Prospectus, including any amendments or supplements to it.

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. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is July 30, 2024

**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): July 30, 2024

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, MA**
(Address of principal executive offices)

02472
(Zip Code)

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

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.):

- 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, par value \$0.0001 per share	TECX	Nasdaq Global Market

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.

The Company announced today that the U.S. Food and Drug Administration (the “FDA”) has cleared its Investigational New Drug (“IND”) application for TX45, an Fc-relaxin fusion protein being evaluated for the treatment of patients with Group 2 Pulmonary Hypertension (“PH”) due to Heart Failure with Preserved Ejection Fraction (“HFpEF”).

The Company is also updating its guidance in regard to the TX45 program as follows:

- Topline trial results of the Phase 1a clinical trial of TX45 in healthy volunteers is expected to be released in September 2024.
- Phase 1b hemodynamic trial evaluating single doses of TX45 in subjects with Group 2 PH due to HFpEF continues to enroll as planned, with topline trial results expected in mid-2025.
- The Company expects to initiate a global, 24-week Phase 2 clinical trial to evaluate TX45 administered subcutaneously in subjects with Group 2 PH due to HFpEF in the third quarter of 2024.

Forward-Looking Statements

Statements contained in this Current Report on Form 8-K regarding matters that are not historical facts are “forward looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. The Company may, in some cases, use terms such as “aims”, “anticipates”, “believes”, “could”, “estimates”, “expects”, “forecasts”, “goal”, “intends”, “may”, “plans”, “possible”, “potential”, “seeks”, “will” and variations of these words or similar expressions that are intended to identify forward-looking statements, although not all forward-looking statements contain these words. Forward-looking statements include, but are not limited to, statements regarding: the design, objectives, initiation, timing, progress and results of current and future clinical trials of the Company’s product candidate, TX45, including the ongoing Phase 1a and Phase 1b clinical trials of TX45 and initiation of the Phase 2 clinical trial of TX45. These forward-looking statements are based on the Company’s expectations and assumptions as of the date of this filing. Each of these forward-looking statements involves risks and uncertainties that could cause the Company’s clinical development programs, future results or performance to differ materially from those expressed or implied by the forward-looking statements. Many factors may cause differences between current expectations and actual results, including: the potential that success in preclinical testing and earlier clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate; the impacts of macroeconomic conditions, including the conflict in Ukraine and the conflict between Israel and Hamas, heightened inflation and uncertain credit and financial markets, on the Company’s business, clinical trials and financial position; unexpected safety or efficacy data observed during preclinical studies or clinical trials; clinical trial site activation or enrollment rates that are lower than expected; the Company’s ability to realize the benefits of its collaborations and license agreements; changes in expected or existing competition; changes in the regulatory environment; the uncertainties and timing of the regulatory approval process; and unexpected litigation or other disputes. Other factors that may cause the Company’s actual results to differ from those expressed or implied in the forward-looking statements are identified in the section titled “Risk Factors” in the final prospectus on Form 424(b)(3) filed by AVROBIO with the Securities and Exchange Commission on May 3, 2024, and in other filings that the Company makes and will make with the Securities and Exchange Commission in the future. The Company expressly disclaims any obligation to update any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise, except as otherwise required by law.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
104	Cover Page Interactive Data File (formatted as Inline XBRL).

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: July 30, 2024

By: /s/ Daniel Lochner

Daniel Lochner

Chief Financial Officer