

PROSPECTUS SUPPLEMENT
(To Prospectus Supplement dated July 23, 2021
To Prospectus dated July 23, 2021)

TEMPEST THERAPEUTICS, INC.

Up to \$6,600,000

Common Stock

This prospectus supplement amends and supplements the information in the prospectus, dated July 23, 2021, filed with the Securities and Exchange Commission as a part of our registration statement on [Form S-3 \(File No. 333-257990\)](#), as previously supplemented by our prospectus supplement dated July 23, 2021 (the “Prior Prospectus”), relating to the offer and sale of up to \$100,000,000 of shares of our common stock, \$0.001 par value per share, pursuant to the Open Market Sale AgreementSM (the “Sales Agreement”) we previously entered into with Jefferies LLC (“Jefferies”). This prospectus supplement should be read in conjunction with the Prior Prospectus, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Prior Prospectus. This prospectus supplement is not complete without, and may only be delivered or utilized in connection with, the Prior Prospectus and any future amendments or supplements thereto.

Through April 14, 2022, we have sold 510,930 shares of our common stock for gross proceeds of approximately \$5,307,415 in accordance with the Sales Agreement under the Prior Prospectus. We are filing this prospectus supplement to amend the Prior Prospectus because 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 prospectus supplement and the Prior Prospectus are a part. After giving effect to these limitations and the current public float of our common stock, and after giving effect to the terms of the Sales Agreement, we currently may offer and sell shares of our common stock having an aggregate offering price of up to \$6,656,171 under the Sales Agreement. If our public float increases such that we may sell additional amounts under the Sales Agreement and the registration statement of which this prospectus supplement and the Prior Prospectus are a part, we will file another prospectus supplement prior to making additional sales.

Our common stock is listed on The Nasdaq Capital Market under the symbol “TPST.” The aggregate market value of our common stock held by non-affiliates as of April 14, 2022 pursuant to General Instruction I.B.6 of Form S-3 is \$19,968,513, which was calculated based on 4,811,690 shares of our common stock outstanding held by non-affiliates and at a price of \$4.15 per share, the closing price of our common stock on April 6, 2022. As of the date hereof, we have not offered or sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12 calendar month period that ends on and includes the date hereof. As a result of the limitations of General Instruction I.B.6 of Form S-3, 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 \$6,600,000 from time to time through Jefferies.

Investing in our securities involves risks. See “Risk Factors” on page S-3 of the Prior Prospectus and in the documents incorporated by reference into the Prior Prospectus and in our most recent Annual Report on Form 10-K and in our most recent Quarterly Reports on Form 10-Q, and any amendments thereto, which are incorporated by reference into the Prior Prospectus, and under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus supplement and the Prior Prospectus for a discussion of the factors you should carefully consider before deciding to purchase our common stock.

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 the Prior Prospectus, this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

Jefferies

The date of this prospectus supplement is April 14, 2022.