

Prospectus Supplement dated January 6, 2025  
(to Prospectus dated July 11, 2022 and Prospectus Supplement dated November 15, 2023)



Acurx Pharmaceuticals, Inc.

### Common Stock

This supplement is part of, and should be read in conjunction with, our prospectus supplement dated November 15, 2023 (the “Prospectus Supplement”), and the accompanying prospectus thereto dated July 11, 2023 (the “Base Prospectus”), all of which are filed as part of our registration statement on Form S-3 (File No. 333- 265956). The Base Prospectus, the Prospectus Supplement, this supplement, and all supplements to or documents incorporated by reference into the Base Prospectus, the Prospectus Supplement and this supplement, are collectively referred to as the “Prospectus.”

The Prospectus relates to the sale of shares of our common stock, par value \$0.001 per share (the “common stock”), in an “at-the-market” offering (the “ATM Program”) pursuant to the at the sales agreement, dated November 15, 2023 (the “Sales Agreement”). In accordance with the terms of the Sales Agreement, we may offer and sell from time-to-time shares of our common stock through A.G.P./Alliance Global Partners, acting as our sales agent. As of the date hereof, we have sold 2,830,328 shares of common stock under the Sales Agreement, raising net proceeds of approximately \$8.8 million. The terms “Company,” “we,” “us” and “our” refer to Acurx Pharmaceuticals, Inc., a Delaware corporation.

We are filing this Prospectus Supplement to amend the Prospectus to reduce the amount of shares registered under the Prospectus to \$0.00 and to suspend the ATM Program. As a result, we may not make any sales of our common stock pursuant to the Sales Agreement unless and until a new prospectus supplement is filed with the Securities and Exchange Commission; however the Sales Agreement remains in full force and effect.

This Prospectus Supplement should be read in conjunction with the Prospectus, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Prospectus. 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.

Our common stock is listed on the Nasdaq Capital Market under the symbol “ACXP.” On January 3, 2025 the last reported sale price of our common stock on the Nasdaq Capital Market was \$0.8899 per share.

**Investing in our securities involves a high degree of risk, including the risk of a substantial loss of investment. Before purchasing any shares of our common stock, you should read the discussion of the principal risks of investing in our securities, which are summarized in “Risk Factors” beginning on page S-8 of the Prospectus Supplement and page 6 of the Base Prospectus, as well as in other documents incorporated by reference into the Prospectus.**

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

The date of this prospectus supplement is January 6, 2025.

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