

As filed with the Securities and Exchange Commission on May 21, 2025

Registration No. 333-

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM S-1

*REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933*

ACURX PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

82-3733567
(I.R.S. Employer
Identification Number)

**259 Liberty Avenue
Staten Island, New York 10305
(917) 533-1469**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**David P. Luci
President and Chief Executive Officer
Acurx Pharmaceuticals, Inc.
259 Liberty Avenue
Staten Island, New York 10305
(917) 533-1469**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Ivan K. Blumenthal
Jeffrey D. Cohan
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
919 Third Avenue, New York
NY 10022
(212) 935-3000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging Growth Company	<input checked="" type="checkbox"/>

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 7(a)(2)(B) of Securities Act.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED MAY 21,
2025**10,899,258 Shares of Common Stock****Acurx Pharmaceuticals, Inc.**

This prospectus relates to the resale, from time to time, of up to 10,899,258 shares of our common stock, par value \$0.001 per share, by Lincoln Park Capital Fund, LLC, which we refer to in this prospectus as “Lincoln Park” or the “selling stockholder.”

The shares of common stock to which this prospectus relates are shares that have been or may be issued to Lincoln Park pursuant to the purchase agreement dated May 8, 2025 that we entered into with Lincoln Park (the “Purchase Agreement”). See “Our Agreements with Lincoln Park” for a description of that agreement and “Selling Stockholder” for additional information regarding Lincoln Park. The prices at which Lincoln Park may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions.

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholder.

The selling stockholder may sell or otherwise dispose of the shares of common stock described in this prospectus in a number of different ways and at varying prices. See “Plan of Distribution” beginning on page 21 of this prospectus for more information about how and the prices at which the selling stockholder may sell or otherwise dispose of the shares of our common stock being offered. The selling stockholder is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended.

The selling stockholder will pay all brokerage fees and commissions and similar expenses. We will pay all expenses (except brokerage fees and commissions and similar expenses) relating to the registration of the shares with the Securities and Exchange Commission.

Our common stock is listed on the Nasdaq Capital Market LLC (“Nasdaq”) under the symbol “ACXP”. The last reported sale price of our common stock on Nasdaq on May 20, 2025 was \$0.42 per share.

We are an “emerging growth company” under applicable Securities and Exchange Commission rules and, as such, we are subject to reduced public company reporting requirements.

Investing in our common stock is highly speculative and involves a significant degree of risk. Please consider carefully the specific factors set forth under “Risk Factors” beginning on page 6 of this prospectus and in our filings with the Securities and Exchange Commission.

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

The date of this prospectus is _____, 2025.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SELLING STOCKHOLDER MAY NOT RESELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS DECLARED EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

TABLE OF CONTENTS

	<u>Page</u>
<u>ABOUT THIS PROSPECTUS</u>	<u>1</u>
<u>PROSPECTUS SUMMARY</u>	<u>2</u>
<u>THE OFFERING</u>	<u>5</u>
<u>RISK FACTORS</u>	<u>6</u>
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	<u>9</u>
<u>OUR AGREEMENTS WITH LINCOLN PARK</u>	<u>11</u>
<u>USE OF PROCEEDS</u>	<u>16</u>
<u>DILUTION</u>	<u>17</u>
<u>MARKET FOR COMMON STOCK AND DIVIDEND POLICY</u>	<u>18</u>
<u>SELLING STOCKHOLDER</u>	<u>19</u>
<u>PLAN OF DISTRIBUTION</u>	<u>21</u>
<u>DESCRIPTION OF SECURITIES TO BE REGISTERED</u>	<u>23</u>
<u>LEGAL MATTERS</u>	<u>26</u>
<u>EXPERTS</u>	<u>26</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>26</u>
<u>INCORPORATION OF DOCUMENTS BY REFERENCE</u>	<u>27</u>

ABOUT THIS PROSPECTUS

The registration statement we filed with the Securities and Exchange Commission (the “SEC”) includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus, the related exhibits filed with the SEC, and the documents incorporated by reference herein before making your investment decision. You should rely only on the information provided in this prospectus or any amendment thereto. In addition, this prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

The selling stockholder named in this prospectus may sell up to 10,899,258 shares of our common stock previously issued and issuable pursuant to the Purchase Agreement from time to time. This prospectus also covers any shares of common stock that may become issuable as a result of share splits, share dividends, or similar transactions. We have agreed to pay the expenses incurred in registering these shares, including legal and accounting fees.

We have not, and the selling stockholder has not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus, the documents incorporated by reference herein or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The information contained in this prospectus, the documents incorporated by reference herein or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The selling stockholder is offering to sell, and seeking offers to buy, shares of our common stock only under circumstances and in jurisdictions where it is lawful to do so. The selling stockholder is not making an offer to sell these securities in any state or jurisdiction where the offer or sale is not permitted.

Unless the context otherwise requires, “Acurx,” “ACXP,” “the Company,” “we,” “us,” “our” and similar terms refer to Acurx Pharmaceuticals, Inc.

Industry and Market Data

This prospectus or the documents incorporated by reference herein includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed audited and unaudited financial statements, notes to the financial statements and other information incorporated by reference from our other filings with the SEC or included in any applicable prospectus supplement. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth in any prospectus supplements and in our most recent annual and quarterly filings with the SEC, as well as other information in this prospectus and any prospectus supplements and the documents incorporated by reference herein or therein, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

Overview

We are a late-stage biopharmaceutical company focused on developing a new class of small molecule antibiotics for difficult-to-treat bacterial infections. Our approach is to develop antibiotic candidates with a Gram-positive selective spectrum (“GPSS[®]”) that block the active site of the Gram positive specific bacterial enzyme deoxyribonucleic acid (“DNA”) polymerase III (“pol III”), inhibiting DNA replication and leading to Gram-positive bacterial cell death. Our research and development (“R&D”) pipeline includes antibiotic product candidates that target Gram-positive bacteria, including *Clostridioides difficile*, methicillin-resistant *Staphylococcus aureus* (“MRSA”), vancomycin resistant *Enterococcus* (“VRE”) and drug-resistant *Streptococcus pneumoniae* (“DRSP”).

These bacterial targets are listed as priority pathogens by the World Health Organization (“WHO”), the United States (“U.S.”) Centers for Disease Control and Prevention (“CDC”) and the U.S. Food and Drug Administration (“FDA”). Priority pathogens are those which require new antibiotics to address the worldwide crisis of antimicrobial resistance (“AMR”) as identified by the WHO, CDC and FDA.

Emerging Growth Company

We are an “emerging growth company”, as defined in the Jumpstart Our Business Startups Act (the “JOBS Act”). As an emerging growth company, we are eligible, and have elected, to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and reduced disclosure obligations regarding executive compensation (to the extent applicable to a foreign private issuer).

We could remain an emerging growth company until the last day of our fiscal year following the fifth anniversary of the consummation of our initial public offering. However, if our annual gross revenue is \$1.235 billion or more, or our non-convertible debt issued within a three year period exceeds \$1 billion, or the market value of our shares of common stock that are held by non-affiliates exceeds \$700 million on the last day of the second fiscal quarter of any given fiscal year, we would cease to be an emerging growth company as of the last day of that fiscal year.

Smaller Reporting Company

We are also currently a “smaller reporting company,” meaning that we are not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent company that is not a smaller reporting company, and have a public float of less than \$250 million or annual revenues of less than \$100 million during the most recently completed fiscal year. In the event that we are still considered a “smaller reporting company,” at such time as we cease being an “emerging growth company,” the disclosure we will be required to provide in our SEC filings will increase, but will still be less than it would be if we were not considered either an “emerging growth company” or a “smaller reporting company.” Specifically, similar to “emerging growth companies,” “smaller reporting companies” are able to provide simplified executive compensation disclosures in their filings; are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting; and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial

statements in annual reports. Decreased disclosures in our SEC filings due to our status as an “emerging growth company” or “smaller reporting company” may make it harder for investors to analyze our results of operations and financial prospects.

Risks Associated with Our Business

Our business and our ability to implement our business strategy are subject to numerous risks, as more fully described in the section entitled “Risk Factors” in this prospectus and in our [Annual Report on Form 10-K for the fiscal year ended December 31, 2024](#) and our [Quarterly Report on Form 10-Q for the period ended March 31, 2025](#) incorporated herein by reference. You should read these risks before you invest in our securities. We may be unable, for many reasons, including those that are beyond our control, to implement our business strategy.

Corporate Information and History

We were organized as a limited liability company in the State of Delaware in July 2017 and we commenced operations in February 2018 upon acquiring the rights to our lead antibiotic product candidate from GLSynthesis, Inc. Our principal executive offices are located at 259 Liberty Avenue, Staten Island, NY 10305 and our telephone number is (917) 533-1469. Our website address is www.acurxpharma.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. On June 23, 2021, we converted from a Delaware limited liability company into a Delaware corporation pursuant to a statutory conversion, and changed its name to Acurx Pharmaceuticals, Inc.

Recent Developments

The Lincoln Park Transaction

On May 8, 2025, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park agreed to purchase from us up to an aggregate of \$12.0 million of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Also on May 8, 2025, we entered into a registration rights agreement with Lincoln Park (the “Registration Rights Agreement”), pursuant to which we filed with the SEC the registration statement of which this prospectus forms a part to register for resale under the Securities Act of 1933, as amended (the “Securities Act”), the shares of common stock that have been or may be issued to Lincoln Park under the Purchase Agreement.

We do not have the right to commence any sales of our common stock to Lincoln Park under the Purchase Agreement until the conditions set forth in the Purchase Agreement, all of which are outside of Lincoln Park’s control, have been satisfied, including that the SEC has declared effective the registration statement of which this prospectus forms a part, which time we refer to in this prospectus as the Commencement. From time to time after the Commencement, at our sole discretion, on any business day selected by us on which the closing sale price of our common stock is not below \$0.25 per share, we may direct Lincoln Park to purchase up to 60,000 shares of our common stock (each, a “Regular Purchase”); provided that the share amount under a Regular Purchase may be increased to up to 90,000 shares or up to 120,000 shares if the closing sale price of our common stock is not below \$2.00 or \$3.00, respectively, on the business day on which we initiate the purchase, subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement. However, Lincoln Park’s maximum commitment in any single Regular Purchase may not exceed \$500,000. The purchase price per share for each Regular Purchase will be 97% of the lower of (i) the lowest sale price of our common stock on the business day on which we initiate the Regular Purchase and (ii) the average of the three lowest closing sale prices of our common stock during the 10-business day period immediately preceding the business day on which we initiate the Regular Purchase. In addition to Regular Purchases, we may also direct Lincoln Park to purchase other amounts of common stock as accelerated purchases and as additional accelerated purchases, subject to limits specified in the Purchase Agreement, at a purchase price per share calculated as specified in the Purchase Agreement. We will control the timing and amount of any sales of our common stock to Lincoln Park.

On May 8, 2025, in consideration for its commitment to purchase shares of our common stock under the Purchase Agreement, we issued 899,258 shares of our common stock to Lincoln Park (the “Commitment Shares”).

We may terminate the Purchase Agreement at any time after the date of Commencement, at no penalty or cost, other than the Commitment Shares. There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, other than a prohibition on our issuing, or entering into any agreement to effect the issuance of, shares of our common stock or common stock equivalents involving a transaction that is defined in the Purchase Agreement as a "Variable Rate Transaction." Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

As of March 31, 2025, there were 22,397,511 shares of our common stock outstanding, of which 19,825,400 shares were held by non-affiliates. Although the Purchase Agreement provides that we may sell up to \$12.0 million of our common stock to Lincoln Park, only 10,899,258 shares of our common stock are being offered under this prospectus, which represents the Commitment Shares and up to 10,000,000 shares which may be issued to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares to Lincoln Park under the Purchase Agreement. If all of the 10,899,258 shares offered by Lincoln Park under this prospectus were issued and outstanding, such shares would represent approximately 33% of the total number of shares of our common stock outstanding and approximately 35% of the total number of outstanding shares held by non-affiliates, in each case as of March 31, 2025. Depending on the price per share at which we sell shares to Lincoln Park under the Purchase Agreement, we may need to sell more shares to Lincoln Park than are offered under this prospectus to receive aggregate gross proceeds equal to the \$12.0 million total commitment of Lincoln Park under the Purchase Agreement, in which case we must first register for resale under the Securities Act additional shares of our common stock. The number of shares ultimately offered for resale by Lincoln Park will depend upon the number of shares we elect to sell to Lincoln Park under the Purchase Agreement. Sales of our common stock to Lincoln Park by us under the Purchase Agreement could result in substantial dilution to our stockholders.

Under applicable rules of The Nasdaq Stock Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement more than 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement, which is 4,406,297 shares (the "Exchange Cap"), unless (i) we obtain stockholder approval to issue shares in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$0.3545 per share (which represents the lower of (A) the official closing price of our common stock on Nasdaq immediately preceding the signing of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement), such that issuances and sales of common stock to Lincoln Park under the Purchase Agreement would not be subject to the Exchange Cap under applicable Nasdaq rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable Nasdaq rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park and its affiliates having beneficial ownership, at any single point in time, of more than 4.99% of the then total outstanding shares of our common stock, as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Rule 13d-3 thereunder, which limitation we refer to as the Beneficial Ownership Cap. Lincoln Park, upon written notice to us, may increase the Beneficial Ownership Cap to up to 9.99%. Any increase in the Beneficial Ownership Cap will not be effective until the 61st day after such written notice is delivered to us.

Issuances of our common stock to Lincoln Park will not affect the rights or privileges of our existing stockholders, except that the economic and voting interests of each of our existing stockholders will be diluted as a result of any such issuance. Although the number of shares of common stock that our existing stockholders own will not decrease, the shares owned by our existing stockholders will represent a smaller percentage of our total outstanding shares after any such issuance to Lincoln Park.

THE OFFERING	
Shares of our common stock offered by the selling stockholder	<p>Up to 10,899,258 shares of common stock consisting of:</p> <ul style="list-style-type: none"> • up to 10,000,000 we may sell to Lincoln Park under the Purchase Agreement from time to time after the date of this prospectus; and • 899,258 shares issued to Lincoln Park in consideration for its commitment to purchase shares of our common stock under the Purchase Agreement.
Selling stockholder	Lincoln Park Capital Fund, LLC. See “Selling Stockholder” on page 19 of this prospectus.
Common stock outstanding prior to this offering	23,481,606 shares, which includes the Commitment Shares.
Common stock outstanding immediately after this offering	33,481,606 shares, assuming the sale of 10,000,000 shares. The actual number of shares issued will vary depending on the sales prices in this offering.
Use of Proceeds	We will receive no proceeds from the sale of shares of our common stock by Lincoln Park pursuant to this prospectus. We may receive up to \$12.0 million aggregate gross proceeds under the Purchase Agreement from any sales of shares of our common stock we make to Lincoln Park pursuant to the Purchase Agreement after the commencement, assuming that we sell the full amount of our common stock that we have the right, but not the obligation to sell to Lincoln Park under the Purchase Agreement. Any proceeds that we receive from sales of shares of our common stock to Lincoln Park under the Purchase Agreement will be used for working capital and general corporate purposes. See “Use of Proceeds.”
Nasdaq Capital Markets Symbols	Our common stock is listed on Nasdaq under the symbol “ACXP”.
Risk Factors	Investment in our securities involves a high degree of risk and could result in a loss of your entire investment. See “Risk Factors” beginning on page 6 , and the other information included in or incorporated by reference in this prospectus for a discussion of the factors you should consider carefully before deciding to invest in our securities.
	<p>The number of shares of our common stock to be outstanding immediately after this offering is based on 23,481,606 shares of our common stock outstanding as of May 15, 2025, including the 899,258 Commitment Shares issued to Lincoln Park Capital on May 8, 2025, and excludes, as of such date, the following:</p> <ul style="list-style-type: none"> • 17,146,786 shares of common stock issuable upon the exercise of outstanding warrants with a weighted average exercise price of \$1.51 per share; • 4,555,500 shares of our common stock issuable upon the exercise of stock options, with a weighted-average exercise price of \$4.42 per share; and • 177,448 shares of common stock reserved for future issuance pursuant to future awards under our 2021 Equity Incentive Plan as of March 31, 2025.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider and evaluate all of the information contained in this prospectus and in the documents we incorporate by reference into this prospectus before you decide to purchase our securities. In particular, you should carefully consider and evaluate the risks and uncertainties described under the heading “Risk Factors” in our [Annual Report on Form 10-K for the year ended December 31, 2024](#) and our [Quarterly Report on Form 10-Q for the period ended March 31, 2025](#). Any of the risks and uncertainties set forth below and in the Annual Report, as updated by annual, quarterly and other reports and documents that we file with the SEC and incorporate by reference into this prospectus, or any prospectus, could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the value of any securities offered by this prospectus. As a result, you could lose all or part of your investment.

The sale of our common stock to Lincoln Park may cause dilution and the subsequent sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall.

On May 8, 2025, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park committed to purchase up to \$12.0 million of our common stock, and we issued the Commitment Shares. Other than the Commitment Shares, the shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park from time to time at our discretion over a 24-month period commencing on the date that the conditions set forth in the Purchase Agreement are satisfied, including that the registration statement of which this prospectus forms a part is declared effective by the SEC. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will vary based on the price of our common stock at the time we initiate the sale. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Sales of shares of our common stock to Lincoln Park under the Purchase Agreement, if any, will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

It is not possible to predict the actual number of shares of common stock we may sell to Lincoln Park under the Purchase Agreement, or the actual gross proceeds resulting from those sales.

Because the purchase price per share to be paid by Lincoln Park for the shares of common stock that we may elect to sell to Lincoln Park under the Purchase Agreement, if any, will fluctuate based on the market prices of our common stock at the time we elect to sell shares to Lincoln Park pursuant to the Purchase Agreement, if any, it is not possible for us to predict, as of the date of this prospectus and prior to any such sales, the number of shares of common stock that we will sell to Lincoln Park under the Purchase Agreement, the purchase price per share that Lincoln Park will pay for shares purchased from us under the Purchase Agreement, or the aggregate gross proceeds that we will receive from those purchases by Lincoln Park under the Purchase Agreement.

Moreover, although the Purchase Agreement provides that we may sell up to an aggregate of \$12.0 million of our common stock to Lincoln Park, only 10,899,258 shares of common stock are being registered under the Securities Act for resale by Lincoln Park under the registration statement of which this prospectus forms a part, consisting of (i) the 899,258 Commitment Shares that we issued to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement and (ii) up to 10,000,000 shares of our common stock that we may elect to sell to Lincoln Park, in our sole discretion, from time to time from and after the Commencement under the Purchase Agreement.

If after the Commencement we elect to sell to the selling stockholder all of the 10,000,000 shares of common stock being registered for resale by Lincoln Park under this prospectus that are available for sale by us to the selling stockholder under the Purchase Agreement, depending on the market prices of our common stock at the time of such sales, the actual gross proceeds from the sale of all such shares of common stock by us to Lincoln Park may be substantially less than the \$12.0 million total purchase commitment available to us under the Purchase Agreement, which could materially adversely affect our liquidity.

If it becomes necessary for us to issue and sell to Lincoln Park shares of common stock in excess of the Exchange Cap under the Purchase Agreement in order to receive aggregate gross proceeds equal to \$12.0 million under the Purchase Agreement, then for so long as the Exchange Cap continues to apply to issuances and sales of common stock under the Purchase Agreement, we must first obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap in accordance with applicable Nasdaq listing rules. Furthermore, if we elect to issue and sell to Lincoln Park more than the 10,000,000 shares of our common stock that we may elect to issue and sell to Lincoln Park under the Purchase Agreement that are being registered for resale by Lincoln Park hereunder, which we have the right, but not the obligation, to do, we must first file with the SEC one or more additional registration statements to register under the Securities Act for resale by Lincoln Park such additional shares of our common stock we wish to sell from time to time under the Purchase Agreement, which the SEC must declare effective, in each case before we may elect to sell any additional shares of our common stock to Lincoln Park under the Purchase Agreement. Any issuance and sale by us under the Purchase Agreement of a substantial amount of shares of common stock in addition to the 10,000,000 shares of common stock that we may elect to issue and sell to Lincoln Park under the Purchase Agreement that are being registered for resale by Lincoln Park hereunder could cause additional substantial dilution to our stockholders. The number of shares of our common stock ultimately offered for sale by Lincoln Park is dependent upon the number of shares of common stock, if any, we ultimately sell to Lincoln Park under the Purchase Agreement, and the sale of common stock under the Purchase Agreement may cause the trading price of our common stock to decline.

Investors who buy shares at different times will likely pay different prices, and the sale of the shares of common stock acquired by Lincoln Park could cause the price of our common stock to decline.

Pursuant to the Purchase Agreement, we will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold to Lincoln Park. If and when we do elect to sell shares of our common stock to Lincoln Park pursuant to the Purchase Agreement, after Lincoln Park has acquired such shares, Lincoln Park may resell all, some or none of such shares at any time or from time to time in its discretion and at different prices. As a result, investors who purchase shares from Lincoln Park in this offering at different times will likely pay different prices for those shares, and so may experience different levels of dilution and in some cases substantial dilution and different outcomes in their investment results. Investors may experience a decline in the value of the shares they purchase from Lincoln Park in this offering as a result of future sales made by us to Lincoln Park at prices lower than the prices such investors paid for their shares in this offering. Further, the sale of a substantial number of shares of our common stock by Lincoln Park, or anticipation of such sales, could cause the trading price of our common stock to decline or make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire.

We may not have access to the full amount available under the Purchase Agreement with Lincoln Park. We may require additional financing to sustain our operations, without which we may not be able to continue operations, and the terms of subsequent financings may adversely impact our stockholders.

We may direct Lincoln Park to purchase up to \$12.0 million worth of shares of our common stock in a Regular Purchase from time to time under the Purchase Agreement over a 24-month period generally in amounts up to 60,000 shares of our common stock, which may be increased to up to 90,000 shares or up to 120,000 shares depending on the closing sale price of our common stock at the time of sale, provided that Lincoln Park's maximum purchase obligation under any single Regular Purchase shall not exceed \$500,000. Moreover, under certain circumstances as set forth in the Purchase Agreement, we may, in our sole discretion, also direct Lincoln Park to purchase additional shares of common stock in "accelerated purchases," and "additional accelerated purchases" as set forth in the Purchase Agreement.

Depending on the prevailing market price of our common stock, we may not be able to sell shares to Lincoln Park for the maximum \$12.0 million over the term of the Purchase Agreement. We will need to seek stockholder approval before issuing more than the Exchange Cap limit of 4,406,297 shares of common stock under the Purchase Agreement, unless the average price per share of common stock for all shares of common stock sold by us to Lincoln Park under the Purchase Agreement equals or exceeds \$0.3545 per share (which represents the lower of (A) the official closing price of our common stock on Nasdaq immediately preceding the signing of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement), such that the Exchange Cap limitation would no longer apply to issuances and sales of common stock by us to Lincoln Park under the Purchase Agreement under applicable Nasdaq listing rules. In addition, Lincoln Park will not be required to purchase any shares of our common stock if such sale would result in Lincoln Park's beneficial ownership of our common stock exceeding the Beneficial Ownership Cap. Our inability to access a portion or the full amount available under the Purchase Agreement, in the absence of any other financing sources, could have a material adverse effect on our business.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors including the prevailing market price of our common stock and the extent to which we are able to raise capital from other sources. Assuming a purchase price of \$0.3545 per share (which represents the closing price of our common stock on May 7, 2025), the purchase by Lincoln Park of the entire 10,000,000 shares of common stock issuable under the Purchase Agreement being registered for resale by Lincoln Park hereunder would result in gross proceeds to us of approximately \$3.5 million. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of capital in order to satisfy our working capital needs. Even if we sell all \$12.0 million of shares of our common stock to Lincoln Park under the Purchase Agreement, we will need to raise substantial additional capital to continue to fund our operations and execute our current business strategy.

Our management will have broad discretion over the use of the net proceeds, if any, from sales of shares of our common stock to Lincoln Park, you may not agree with how we use the proceeds and the proceeds may not be used effectively.

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. We will not receive any proceeds upon the sale of shares by Lincoln Park. However, we may receive gross proceeds of up to \$12.0 million from the sale of shares under the Purchase Agreement to Lincoln Park. The anticipated use of net proceeds from the sale of our common stock to Lincoln Park under the Purchase Agreement represents our intentions based upon our current plans and business conditions. Because we have not designated the amount of net proceeds from the sale of shares under the Purchase Agreement to be used for any particular purpose, our management will have broad discretion as to the use of the net proceeds from our sale of shares of common stock to Lincoln Park. Accordingly, you will be relying on the judgment of our management with regard to the use of those net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that, pending their use, we may invest those net proceeds in a way that does not yield a favorable, or any, return for us. Further, our management may use the net proceeds for corporate purposes that may not improve our financial condition or market value. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flows.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, “believe,” “expect,” “anticipate,” “estimate,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “targets,” “likely,” “will,” “would,” “could,” “should,” “continue,” and similar expressions or phrases, or the negative of those expressions or phrases, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus and incorporated by reference in this prospectus, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The sections in our periodic reports, including our most recent Annual Report on Form 10-K, as revised or supplemented by our subsequent Quarterly Reports on Form 10-Q or our Current Reports on Form 8-K, entitled “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as other sections in this prospectus and the other documents or reports incorporated by reference in this prospectus, discuss some of the factors that could contribute to these differences. These forward-looking statements include, among other things, statements about:

- our ability to obtain and maintain regulatory approval of ibezapolstat and/or our other product candidates;
- our ability to successfully commercialize and market ibezapolstat and/or our other product candidates, if approved;
- our ability to contract with third-party suppliers, manufacturers and other service providers and their ability to perform adequately;
- the potential market size, opportunity and growth potential for ibezapolstat and/or our other product candidates, if approved;
- our ability to build our own sales and marketing capabilities, or seek collaborative partners, to commercialize ibezapolstat and/or our other product candidates, if approved;
- our ability to obtain funding for our operations;
- the initiation, timing, progress and results of our preclinical studies and clinical trials, and our research and development programs;
- the timing of anticipated regulatory filings;
- the timing of availability of data from our clinical trials;
- the accuracy of our estimates regarding expenses, capital requirements and needs for additional financing;
- our ability to retain the continued service of our key professionals and to identify, hire and retain additional qualified professionals;
- our ability to advance product candidates into, and successfully complete, clinical trials;
- our ability to recruit and enroll suitable patients in our clinical trials and the timing of enrollment;
- the timing or likelihood of the accomplishment of various scientific, clinical, regulatory and other product development objectives;
- the pricing and reimbursement of our product candidates, if approved;
- the rate and degree of market acceptance of our product candidates, if approved;

- the implementation of our business model and strategic plans for our business, product candidates and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- developments relating to our competitors and our industry;
- the development of major public health concerns, including the coronavirus outbreak or other pandemics arising globally, and the future impact of it and COVID-19 on our clinical trials, business operations and funding requirements;
- the effects of the recent disruptions to and volatility in the credit and financial markets in the United States and worldwide from the conflict between Russia and Ukraine as well as the conflict in the Middle East between Israel and Hamas;
- the volatility of the price of our common stock;
- our financial performance;
- our ability to comply with the listing requirements of The Nasdaq Capital Market and any delisting or potential delisting of shares of our common stock; and
- other factors described from time to time in documents that we file with the SEC.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this prospectus and in the documents incorporated by reference in this prospectus, particularly in the “Risk Factors” section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. For a summary of such factors, please refer to the section entitled “Risk Factors” in this prospectus, as updated and supplemented by the discussion of risks and uncertainties under “Risk Factors” contained in any supplements to this prospectus and in our most recent Annual Report on Form 10-K, as revised or supplemented by our subsequent Quarterly Reports on Form 10-Q or our Current Reports on Form 8-K, as well as any amendments thereto, as filed with the SEC and which are incorporated herein by reference. The information contained in this document is believed to be current as of the date of this document. We do not intend to update any of the forward-looking statements after the date of this document to conform these statements to actual results or to changes in our expectations, except as required by law.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus or in any document incorporated herein by reference might not occur. Investors are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference in this prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

OUR AGREEMENTS WITH LINCOLN PARK**Overview**

On May 8, 2025, we entered into the Purchase Agreement and the Registration Rights Agreement with Lincoln Park. Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to \$12.0 million of our common stock (subject to certain limitations) from time to time during the 24-month term of the Purchase Agreement. Pursuant to the terms of the Registration Rights Agreement, we filed with the SEC the registration statement of which this prospectus forms a part to register for resale under the Securities Act shares that have been or may be issued to Lincoln Park under the Purchase Agreement.

We do not have the right to commence sales of our shares of common stock to Lincoln Park under the Purchase Agreement until the Commencement has occurred, which is the time at which all of the conditions set forth in the Purchase Agreement, all of which are outside of Lincoln Park's control, have been satisfied, including that the SEC has declared effective the registration statement of which this prospectus forms a part. On or after the Commencement, from time to time, at our sole discretion, we may direct Lincoln Park to purchase shares of our common stock in amounts of up to 60,000 shares on any single business day as a Regular Purchase. The amount of a Regular Purchase may be increased to up to 90,000 or 120,000 shares depending on the market price of our common stock at the time we initiate the sale, subject to a maximum commitment by Lincoln Park of \$500,000 per single Regular Purchase. In addition, at our discretion, Lincoln Park has committed to purchase other "accelerated amounts" and/or "additional accelerated amounts" under certain circumstances. The purchase price per share sold in any Regular Purchase will be 97% of the lower of (i) the lowest sale price of our common stock on the business day on which we initiate the purchase and (ii) the average of the three lowest closing sale prices of our common stock during the 10 consecutive business day period immediately preceding the business day on which we initiate the purchase. The purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute such price. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

Under applicable rules of The Nasdaq Stock Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement more than 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement (which is 4,406,297 shares), unless (i) we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap or (ii) the average price per share of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$0.3545 (which represents the lower of (A) the official closing price of our common stock on Nasdaq immediately preceding the signing of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement), such that issuances and sales of our common stock to Lincoln Park under the Purchase Agreement would not be subject to the Exchange Cap under applicable Nasdaq rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable Nasdaq rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park exceeding the Beneficial Ownership Cap.

On May 8, 2025, the day we entered into the Purchase Agreement, we issued the Commitment Shares to Lincoln Park in consideration for its commitment to purchase shares of our common stock under the Purchase Agreement.

Purchase of Shares Under the Purchase Agreement

On or after the Commencement, from time to time, at our sole discretion, on any business day selected by us on which the closing sale price of the common stock is not below \$0.25 per share, we may direct Lincoln

Park to purchase shares of our common stock in amounts up to 60,000 shares on any single business day as a Regular Purchase; provided that such share limit increases to up to 90,000 shares if the closing sale price of our common stock is not below \$2.00 per share on the business day on which we initiate the purchase, and to up to 120,000 shares if the closing sale price of our common stock is not below \$3.00 per share on the business day on which we initiate the purchase. We refer to such share amount limitation in this prospectus as the “Regular Purchase Share Limit.” In any case, Lincoln Park’s maximum commitment in any single Regular Purchase may not exceed \$500,000. The Regular Purchase Share Limit is subject to proportionate adjustment in the event of a reorganization, recapitalization, non-cash dividend, stock split, reverse stock split, or other similar transaction; provided, that if, after giving effect to such full proportionate adjustment, the adjusted Regular Purchase Share Limit would preclude us from requiring Lincoln Park to purchase common stock at an aggregate purchase price equal to or greater than \$60,000 in any single Regular Purchase, then the Regular Purchase Share Limit will not be fully adjusted, but rather the Regular Purchase Share Limit for such Regular Purchase shall be adjusted as specified in the Purchase Agreement, such that, after giving effect to such adjustment, the Regular Purchase Share Limit will be equal to (or as close as can be derived from such adjustment without exceeding) \$60,000.

The purchase price per share for the shares that may be sold to Lincoln Park in any Regular Purchase will be 97% of the lesser of:

- the lowest sale price of our common stock on the business day on which we initiate the purchase; or
- the arithmetic average of the three lowest closing sale prices for our common stock during the 10-consecutive-business-day period immediately preceding the business day on which we initiate the purchase.

In addition to Regular Purchases, on any business day on which we have properly submitted a notice directing Lincoln Park to purchase the then applicable Regular Purchase Share Limit and properly delivered all the shares purchased in all prior purchases under the Purchase Agreement, we may direct Lincoln Park to purchase an additional amount of shares of our common stock, which we refer to as an “Accelerated Purchase,” not to exceed the lesser of:

- 30% of the total volume of shares of our common stock traded during the Accelerated Purchase Period (as defined in the Purchase Agreement); and
- three times the number of shares of common stock purchased pursuant to the corresponding Regular Purchase.

We may also direct Lincoln Park, by notice delivered before 1:00 p.m. Eastern time on a business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement prior to such time on such business day, to purchase an additional amount of shares of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- 30% of the total volume of shares of our common stock traded during the Additional Accelerated Purchase Period (as defined in the Purchase Agreement); and
- three times the number of shares of common stock purchased pursuant to the corresponding Regular Purchase.

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each Accelerated Purchase and each Additional Accelerated Purchase will be equal to 97% of the lesser of:

- the volume weighted average price of our common stock during the applicable Accelerated Purchase Period or Additional Accelerated Purchase Period; and

- the closing sale price of our common stock on the applicable Accelerated Purchase date.

In the case of any Regular Purchase, Accelerated Purchase and Additional Accelerated Purchase, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute such price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

Suspension Events

Suspension Events under the Purchase Agreement include, among others, the following:

- a lapse in the effectiveness of the registration statement of which this prospectus forms a part for any reason (including, without limitation, the issuance of a stop order or similar order) or any required prospectus is unavailable for the resale by Lincoln Park of the shares of our common stock offered hereby and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period, subject to certain exceptions described in the Purchase Agreement;
- the suspension of our common stock from trading on The Nasdaq Capital Market (or such other nationally recognized market or exchange on which our common stock may be listed or traded) for a period of one business day;
- the delisting of our common stock from The Nasdaq Capital Market, unless our common stock is immediately thereafter trading or quoted on the New York Stock Exchange, The Nasdaq Global Market, The Nasdaq Global Select Market, the NYSE American, the NYSE Arca, the OTCQX Best Market or the OTCQB Venture Market operated by OTC Markets Group, Inc. (or any nationally recognized successor to any of the foregoing);
- the failure by our transfer agent to issue to Lincoln Park the shares purchased by Lincoln Park under the Purchase Agreement within two business days after the applicable date on which Lincoln Park is entitled to receive such shares;
- any breach by us of any of our representations, warranties or covenants in the Purchase Agreement or Registration Rights Agreement if such breach would reasonably be expected to have a Material Adverse Effect (as defined in the Purchase Agreement) and, in the case of a breach of a covenant that is reasonably curable, only if such breach continues for a period of at least five business days;
- we, voluntarily or involuntarily, become the subject of any insolvency or bankruptcy proceeding or any such proceeding is threatened against us, as more fully described in the Purchase Agreement;
- if at any time we are not eligible to transfer shares of our stock electronically through the Depository Trust Company's ("DTC") Deposit and Withdrawal at Custodian ("DWAC") service, or any similar program hereafter adopted by DTC performing substantially the same function; or
- if at any time the Exchange Cap is reached (to the extent applicable) and our stockholders have not approved the issuance and sale to Lincoln Park of shares in excess of the Exchange Cap.

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the Suspension Events set forth above. During a Suspension Event, or if any event has occurred which, after notice and/or lapse of time, would reasonably be expected to become a Suspension Event under the Purchase Agreement, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

Term of the Purchase Agreement; Termination Rights

The Purchase Agreement will automatically terminate upon the earlier of (a) the date we sell all \$12.0 million in shares of our common stock to Lincoln Park under the Purchase Agreement, and (b) the

first day of the month immediately following the 24-month anniversary of the Commencement. The Purchase Agreement will also automatically terminate upon commencement of a voluntary or involuntary bankruptcy proceeding by or against us, as more fully described in the Purchase Agreement.

If the Commencement shall not have occurred on or before July 31, 2025 due to the failure to satisfy the conditions required for the Commencement to occur, subject to customary exceptions, either we or Lincoln Park may terminate the Purchase Agreement at the close of business on such date or thereafter.

After the Commencement, we may, at any time, for any reason or for no reason, terminate the Purchase Agreement upon one business day prior notice to Lincoln Park.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has represented to us that at no time prior to the time of execution of the Purchase Agreement has Lincoln Park or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO under the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our Common Stock. Lincoln Park agreed that during the term of the Purchase Agreement, it, its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

Prohibitions on Variable Rate Transactions

There are no restrictions or limitations on our ability to raise capital from other sources at our sole discretion, except that, until the twenty-four-month anniversary of the date of the Purchase Agreement, we agreed not to effect any issuance of, or enter into any agreement to effect any issuance of, shares of common stock or common stock equivalents involving a “variable rate transaction,” which is defined in the Purchase Agreement as an “equity line of credit” or substantially similar transaction whereby an investor is irrevocably bound to purchase securities over a period of time from us at a price based on the market price of our common stock at the time of each such purchase; provided that the foregoing prohibition does not prohibit the issuance and sale of our common stock pursuant to an “at-the-market offering” by us exclusively through a registered broker-dealer acting as agent of ours pursuant to a written agreement between us and such registered broker-dealer.

Effect of Performance of the Purchase Agreement on Our Stockholders

All shares registered in this offering which have been or may be issued or sold by us to Lincoln Park under the Purchase Agreement are expected to be freely tradable. Other than the Commitment Shares, which were issued to Lincoln Park on May 8, 2025, the shares registered in this offering may be sold to Lincoln Park at our discretion over a period of up to 24-months commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement of which this prospectus forms a part. The sale by Lincoln Park of a significant amount of the shares registered in this offering at any given time could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock to Lincoln Park, if any, will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares to Lincoln Park under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our shares to Lincoln Park and the Purchase Agreement may be terminated by us at any time at our discretion without any additional cost to us.

Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell more shares to Lincoln Park than are offered under this prospectus to receive aggregate gross proceeds equal to the \$12.0 million total commitment of Lincoln Park under the Purchase Agreement, which could cause additional substantial dilution to our stockholders. If we choose to sell more shares to Lincoln Park than are offered under this prospectus, we must first register for resale under the Securities Act such additional shares of our common stock. The number of shares ultimately offered for resale by Lincoln Park will depend upon the number of shares we elect to sell to Lincoln Park under the Purchase Agreement.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of up to 10,000,000 shares of our common stock (which excludes the Commitment Shares that we issued to Lincoln Park for which we will receive no cash proceeds) that we are registering hereby that we may issue and sell to Lincoln Park in the future under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price Per Share	Number of Registered Shares of our Common Stock to be Issued if Full Purchase⁽¹⁾	Percentage of Outstanding Shares of our Common Stock After Giving Effect to the Issuance to Lincoln Park⁽²⁾	Gross Proceeds from the Sale of Shares of our Common Stock to Lincoln Park Under the Purchase Agreement⁽¹⁾
\$0.25	10,000,000	33%	\$2,500,000
\$0.3545 ⁽³⁾	10,000,000	33%	\$3,545,000
\$0.50	10,000,000	33%	\$5,000,000
\$0.75	10,000,000	33%	\$7,500,000
\$1.00	10,000,000	33%	\$10,000,000
\$1.20	10,000,000	33%	\$12,000,000

- (1) Although the Purchase Agreement provides that we may sell up to \$12.0 million of our common stock to Lincoln Park, we are only registering the Commitment Shares (899,258 shares) and 10,000,000 shares that may be sold to Lincoln Park under this prospectus, which may or may not cover all the shares we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share. The number of shares included in this column reflects only those shares that we are registering in this offering, excluding the Commitment Shares because no proceeds are attributable to the Commitment Shares, giving effect to the Exchange Cap, and without regard for the Beneficial Ownership Cap.
- (2) The denominator is based on 23,481,606 shares of our common stock outstanding as of May 15, 2025 (including the 899,258 Commitment Shares), adjusted to include the number of shares set forth in the adjacent column which we would have sold to Lincoln Park, assuming the purchase price in the adjacent column. The numerator reflects the number of shares set forth in the adjacent column which we would have sold under the Purchase Agreement at the corresponding assumed average purchase price set forth in the adjacent column, and the Commitment Shares.
- (3) The closing sale price per share of our common stock on May 7, 2025.

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. See “Plan of Distribution” elsewhere in this prospectus for more information. We are not selling any securities under this prospectus and we will not receive any proceeds from the sale of shares by Lincoln Park under this prospectus.

We may receive up to \$12.0 million in aggregate gross proceeds from sales of shares of our common stock we make to Lincoln Park under the Purchase Agreement. We may choose to sell fewer than \$12.0 million in shares of our common stock, or, due to the Exchange Cap and/or the Beneficial Ownership Cap, we may not be able to sell all \$12.0 million in shares of our common stock under the Purchase Agreement, in which case we would raise less than \$12.0 million in aggregate gross proceeds under the Purchase Agreement. It is also possible that we do not sell any shares under the Purchase Agreement. We did not and will not receive any proceeds from the issuance of the Commitment Shares to Lincoln Park.

We will have broad discretion in the use of the net proceeds from any sale of shares of our common stock to Lincoln Park under the Purchase Agreement. Based upon our current plans and business conditions, we intend to use net proceeds from such sales for working capital and general corporate purposes, which include, but are not limited to, research and development expenses and general and administrative expenses. We have not determined the amount of net proceeds to be used specifically for such purposes. The amounts and timing of our actual expenditures may vary significantly and will depend on numerous factors, including market conditions, cash generated or used by our operations, business developments and opportunities that may arise. We may find it necessary or advisable to use portions of the proceeds we receive from our sale of shares of common stock to Lincoln Park under the Purchase Agreement for other purposes. Pending the use of any net proceeds, we expect to invest the net proceeds in interest-bearing, marketable securities.

We will bear all of the costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, the registration and filing fees, printing fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants, but all selling and other expenses incurred by the selling stockholder will be paid by the selling stockholder.

DILUTION

The sale of common stock to Lincoln Park pursuant to the Purchase Agreement will have a dilutive impact on our stockholders. In addition, the lower our stock price is at the time we elect to sell shares to Lincoln Park under the Purchase Agreement, the more shares of our common stock we will have to sell to Lincoln Park to achieve the same gross proceeds amount, in which case our existing stockholders would experience greater dilution.

The amount that Lincoln Park will receive for our common stock when resold pursuant to this prospectus will depend upon the timing of sales and will fluctuate based on the trading price of our common stock.

As of March 31, 2025, we had a net tangible book value of \$2.3 million, or \$0.10 per share of common stock. Our net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding as of March 31, 2025.

After giving effect to (i) the sale of 10,000,000 shares of common stock to Lincoln Park pursuant to the Purchase Agreement at an assumed price of \$0.3545 per share, the closing price of our common stock on Nasdaq on May 7, 2025, (ii) the issuance of 899,258 Commitment Shares and (iii) deducting estimated offering expenses of \$150,617 payable by us, and without giving effect to the Beneficial Ownership Cap under the Purchase Agreement, our as adjusted net tangible book value as of March 31, 2025, would have been approximately \$5.7 million, or \$0.17 per share. This represents an immediate increase in net tangible book value of \$0.07 per share to existing stockholders and an immediate dilution of \$0.18 per share to new investors.

The following table illustrates this dilution on a per share basis:

Assumed public offering price per share	\$0.35
Net tangible book value per share of common stock as of March 31, 2025	\$0.10
Increase in net tangible book value per share attributable to this offering	\$0.07
As adjusted, net tangible book value per share after this offering	\$0.17
Dilution per share to new investors purchasing shares in this offering	\$0.18

The foregoing table is based on 22,397,511 shares of our Common Stock outstanding as of March 31, 2025, and excludes, as of such date, the following:

- 899,258 shares issued to Lincoln Park on May 8, 2025 in consideration for its commitment to purchase shares under the Purchase Agreement;
- 17,146,786 shares of common stock issuable upon the exercise of outstanding warrants with a weighted average exercise price of \$1.51 per share;
- 4,555,500 shares of our common stock issuable upon the exercise of stock options, with a weighted-average exercise price of \$4.42 per share;
- 177,448 shares of common stock reserved for future issuance pursuant to future awards under our 2021 Equity Incentive Plan as of March 31, 2025; and
- 184,837 additional shares of our common stock issued subsequent to March 31, 2025.

To the extent that outstanding options or warrants have been or may be exercised, new equity awards were or are issued, or we otherwise issued or issue additional shares of common stock, including in our “at the market” offering program, investors purchasing our common stock in this offering may experience further dilution

MARKET FOR COMMON STOCK AND DIVIDEND POLICY

Our common stock is traded on the Nasdaq Capital Market under the symbol “ACXP.” The last reported sale price of our common stock on May 20, 2025 on the Nasdaq Capital Market was \$0.42 per share. As of May 20, 2025, there were 370 stockholders of record of our common stock.

We have never declared or paid any cash dividend on our common stock. We intend to retain any future earnings and do not expect to pay dividends in the foreseeable future.

SELLING STOCKHOLDER

This prospectus relates to the possible resale by the selling stockholder, Lincoln Park, of shares of our common stock that have been and may be issued to Lincoln Park pursuant to the Purchase Agreement. We are filing the registration statement of which this prospectus is a part pursuant to the provisions of the Registration Rights Agreement, which we entered into with Lincoln Park on May 8, 2025 concurrently with our execution of the Purchase Agreement, in which we agreed to provide certain registration rights with respect to sales by Lincoln Park of the shares of our common stock that have been and may be issued to Lincoln Park under the Purchase Agreement.

Lincoln Park, as the selling stockholder, may, from time to time, offer and sell pursuant to this prospectus up to 10,899,258 shares of our common stock that we have issued or may issue to Lincoln Park (including the Commitment Shares). The selling stockholder may sell some, all or none of the shares of common stock. We do not know how long the selling stockholder will hold the shares of our common stock before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholder regarding the sale of any of the shares of common stock. See “Plan of Distribution.”

The table below sets forth, to our knowledge, information concerning the beneficial ownership of shares of our common stock by the selling stockholder as of May 15, 2025. The percentages of shares owned before and after the offering are based on shares of common stock outstanding as of May 15, 2025, which includes the 899,258 Commitment Shares. The information in the table below with respect to the selling stockholder has been obtained from the selling stockholder. Other than as described under “Our Agreements With Lincoln Park,” above, neither Lincoln Park nor any of its affiliates has held a position or office, or had any other material relationship, with us or any of our predecessors or affiliates. Beneficial ownership is determined in accordance with Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.

Throughout this prospectus, when we refer to the shares of common stock being offered for resale by the selling stockholder through this prospectus, we are referring to the shares of common stock that have been and may be issued and sold by us to Lincoln Park pursuant to the Purchase Agreement, unless otherwise indicated.

Name of Selling Stockholder	Number of Shares of common stock Owned Prior to Offering ⁽²⁾		Maximum Number of Shares of common stock to be Offered Pursuant to this Prospectus ⁽³⁾	Number of Shares of common stock Owned After Offering ⁽⁴⁾	
	Number	Percent		Number	Percent
Lincoln Park Capital Fund, LLC ⁽¹⁾	899,258	3.8%	10,899,258	—	—%

- (1) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, the manager of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under this prospectus. Neither Lincoln Park Capital, LLC nor Lincoln Park Capital Fund, LLC is a licensed broker dealer or an affiliate of a licensed broker dealer.
- (2) Represents the 899,258 Commitment Shares already issued to Lincoln Park on May 8, 2025 in consideration for its commitment to purchase shares of our common stock under the Purchase Agreement. In accordance with Rule 13d-3(d) of the Exchange Act, we have excluded from the number of shares beneficially owned prior to this offering all the shares of common stock that we may issue and sell to Lincoln Park under the Purchase Agreement from and after the Commencement that are being registered for resale under the registration statement of which this prospectus forms a part, because the issuance of such shares is solely at our discretion and is subject to certain conditions, the satisfaction of all of which are outside of Lincoln Park’s control, including the registration statement of which this prospectus forms a part becoming and remaining effective. Furthermore, under the terms of the Purchase Agreement, issuances and sales of shares of our common stock to Lincoln Park are subject to certain limitations on the amounts we may sell to Lincoln Park at any time, including the Exchange Cap and the Beneficial Ownership Cap. See the description under the heading “Our Agreements with Lincoln Park” for more information about the Purchase Agreement.

- (3) Assumes issuance of the maximum 10,899,258 shares being registered hereby, 899,258 of which were issued to Lincoln Park on May 8, 2025. Although the Purchase Agreement provides that we may sell up to \$12.0 million in shares of our common stock to Lincoln Park, only 10,000,000 shares of our common stock are being offered under this prospectus that may be sold by us to Lincoln Park at our discretion from time to time over a 24-month period following the Commencement. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus to receive aggregate gross proceeds equal to the \$12.0 million total commitment of Lincoln Park under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares. The number of shares ultimately offered for resale by Lincoln Park will depend upon the number of shares we elect to sell to Lincoln Park under the Purchase Agreement.
- (4) Assumes the sale by Lincoln Park of all 10,899,258 shares of our common stock registered hereby, although the selling stockholder is under no obligation known to us to sell any shares of common stock at any particular time.

PLAN OF DISTRIBUTION

The shares of our common stock offered by this prospectus are being offered by the selling stockholder, Lincoln Park Capital Fund, LLC. The shares may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for the shares of our common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares of our common stock offered by this prospectus may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares of our common stock offered by this prospectus may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park has informed us that it intends to use an unaffiliated broker-dealer to effectuate all sales, if any, of our common stock that it has acquired and may in the future acquire from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that each such broker-dealer will receive commissions from Lincoln Park that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or the purchasers, for whom the broker-dealers may act as agent. The compensation paid to any such particular broker-dealer may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive from the selling stockholder or from any purchasers of shares of our common stock sold by Lincoln Park.

We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement that includes this prospectus to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares of our common stock offered by this prospectus by the selling stockholder, including the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares of our common stock by the selling stockholder, any compensation paid by Lincoln Park to any such brokers, dealers, underwriters or agents, and any other required information.

We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our common stock included in this prospectus by Lincoln Park. We estimate that the total expenses for the offering will be approximately \$150,000. We have agreed to indemnify Lincoln Park and

certain other persons against certain liabilities in connection with the offering of shares of our common stock offered by this prospectus, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Lincoln Park has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Lincoln Park specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Lincoln Park has represented to us that at no time prior to the Purchase Agreement has Lincoln Park or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Lincoln Park agreed that during the term of the Purchase Agreement, it, its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

We have advised Lincoln Park that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the earlier of (i) termination of the Purchase Agreement or (ii) the date that all shares offered by this prospectus have been sold by Lincoln Park.

DESCRIPTION OF OUR SECURITIES TO BE REGISTERED

The securities to be registered on this registration statement on Form S-1 include up to an aggregate amount of 10,899,258 shares of our common stock. As of May 20, 2025, there were 23,481,606 shares of our common stock issued and outstanding, including the Commitment Shares. The authorized and unissued shares of common stock and the authorized and undesignated shares of preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. Unless approval of our stockholders is so required, our board of directors does not intend to seek stockholder approval for the issuance and sale of our common stock or preferred stock.

General

The following is a summary of material characteristics of our capital stock as set forth in our certificate of incorporation and bylaws, and certain provisions of Delaware law. The following description does not purport to be complete and is subject to and qualified in its entirety by, and should be read in conjunction with, our certificate of incorporation and bylaws, each of which are filed as exhibits to this Registration Statement and are incorporated herein by reference. The summaries and descriptions below do not purport to be complete statements of the Delaware General Corporation Law (“DGCL”).

Authorized Capital Stock

Our certificate of incorporation authorizes us to issue 200,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share.

Common Stock

Voting. The holders of our common stock are entitled to one vote for each share held of record on all matters on which the holders are entitled to vote (or consent to).

Dividends. The holders of our common stock are entitled to receive, ratably, dividends only if, when and as declared by our board of directors out of funds legally available therefor and after provision is made for each class of capital stock having preference over the common stock.

Liquidation Rights. In the event of our liquidation, dissolution or winding-up, the holders of our common stock may be entitled to share, ratably, in all assets remaining available for distribution after payment or provision for payment of all debts and other liabilities and subject to the rights of each class or series of capital stock having preference over, or right to participate with, the common stock.

Preemptive and Similar Rights. The holders of our common stock have no preemptive or similar rights.

Forum Selection

Our certificate of incorporation and our bylaws provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL, our certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Notwithstanding the foregoing, the exclusive forum provision does not apply to suits brought to enforce any liability or duty created by the Exchange Act, the Securities Act or any other claim for which the federal courts have exclusive jurisdiction. Unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall, to the fullest extent permitted by applicable law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. The choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees.

Anti-Takeover Provisions

Our certificate of incorporation and bylaws contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor.

Authorized but unissued shares. The authorized but unissued shares of our common stock and our preferred stock are available for future issuance without stockholder approval, subject to the requirements of any national securities exchange on which our common stock is listed, should we so qualify for listing. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Elimination of Stockholder Action by Written Consent. Our certificate of incorporation will eliminate the right of stockholders to act by written consent without a meeting.

Special meetings of stockholders. Our certificate of incorporation and bylaws provide that, except as otherwise required by law or provided by the resolution or resolutions adopted by our board of directors designating the rights, powers and preferences of any series of preferred stock, special meetings of our stockholders may be called only by (a) our board of directors pursuant to a resolution approved by a majority of the total number of our directors that we would have if there were no vacancies or (b) the chair of our board of directors, and any power of our stockholders to call a special meeting is specifically denied.

Advance notice requirements for stockholder proposals and director nominations. Our bylaws provide for an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of candidates for election to our board of directors. In order for any matter to be “properly brought” before a meeting, a stockholder must comply with advance notice and duration of ownership requirements and provide us with certain information. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder’s intention to bring such business before the meeting. These provisions could have the effect of delaying stockholder actions that are favored by the holders of a majority of our outstanding voting securities until the next stockholder meeting.

Amendment of Certificate of Incorporation or Bylaws. The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation’s certificate of incorporation, unless a corporation’s certificate of incorporation requires a greater percentage. Our certificate of incorporation provides that certain provisions of our certificate of incorporation (namely, those provisions relating to (i) directors; (ii) limitation of director liability, indemnification and advancement of expenses and renunciation of corporate opportunities; (iii) meetings of stockholders; and (iv) certain amendments to our certificate of incorporation and bylaws) may not be altered, amended or repealed in any respect (including by merger, consolidation or otherwise), nor may any provision inconsistent therewith be adopted, unless such alteration, amendment, repeal or adoption is approved by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66⅔%) of the voting power of all of our then-outstanding shares then entitled to vote generally in an election of directors, voting together as a single class. Our certificate of incorporation and bylaws also provide that approval of stockholders holding sixty-six and two-thirds percent (66⅔%) of the voting power of all of our then-outstanding shares entitled to vote generally in an election of directors, voting together as a single class, is required for stockholders to make, alter, amend, or repeal any provision of our bylaws. Our board of directors retains the right to alter, amend or repeal our bylaws.

Classified Board of Directors. Our certificate of incorporation provides for a classified board of directors consisting of three classes of approximately equal size, each serving staggered three-year terms.

Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms. Stockholders do not have the ability to cumulate votes for the election of directors.

Limitations on Liability and Indemnification of Officers and Directors

Our certificate of incorporation and bylaws provide indemnification for our directors and officers to the fullest extent permitted by the DGCL. We have entered into Indemnification Agreements with each of our directors that may be, in some cases, broader than the specific indemnification provisions contained under the DGCL. In addition, as permitted by the DGCL, our certificate of incorporation and bylaws includes provisions that eliminate the personal liability of our directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of this provision is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director. These provisions may be held not to be enforceable for violations of the federal securities laws of the United States.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that such stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation’s voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or
- at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

A Delaware corporation may “opt out” of these provisions with an express provision in its original certificate of incorporation or an express provision in its amended and restated certificate of incorporation or by-laws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Listing

Our common stock is listed on The Nasdaq Capital Market under the symbol “ACXP.”

Transfer Agent and Registrar

The transfer agent and registrar of our common stock is VStock Transfer, LLC. They are located at 18 Lafayette Place, Woodmere, New York 11598. Their telephone number is (212) 828-8436.

LEGAL MATTERS

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York, will pass upon the validity of the issuance of the securities to be offered by this prospectus.

EXPERTS

The financial statements of Acurx Pharmaceuticals, Inc. for the two years ended December 31, 2024 have been audited by CohnReznick LLP, independent registered public accounting firm, as set forth in their report thereon appearing in Acurx Pharmaceuticals, Inc.'s [Annual Report on Form 10-K for the year ended December 31, 2024](#), and incorporated by reference herein. Such financial statements are incorporated by reference herein in reliance upon such report, which includes an explanatory paragraph on Acurx Pharmaceuticals, Inc.'s ability to continue as a going concern, given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with respect to the shares of common stock offered by this prospectus with the SEC in accordance with the Securities Act and the rules and regulations enacted under its authority. This prospectus, which constitutes a part of the registration statement, does not contain all of the information included in the registration statement and its exhibits and schedules. Any statement made in this prospectus concerning the contents of any contract, agreement or other document is only a summary of the actual contract, agreement or other document. If we have filed or incorporated by reference any contract, agreement or other document as an exhibit to the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement regarding a contract, agreement or other document is qualified by reference to the actual document. For further information regarding us and the shares of common stock offered by this prospectus, we refer you to the full registration statement, including its exhibits and schedules, filed under the Securities Act.

The SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. Our registration statement, of which this prospectus constitutes a part, can be downloaded from the SEC's website.

We also file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings on the SEC's website at <http://www.sec.gov>.

Our website address is <http://www.acurxpharma.com>. There we make available free of charge, on or through the investor relations section of our website, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with the SEC. The information contained on, or that can be accessed through, our website is not a part of this prospectus, and our reference to the address for our website is intended to be an inactive textual reference only.

INCORPORATION OF DOCUMENTS BY REFERENCE

The rules of the SEC allow us to incorporate by reference into this prospectus the information we file with the SEC. This means that we are disclosing important information to you by referring to other documents. The information incorporated by reference is considered to be part of this prospectus, except for any information superseded by information contained directly in this prospectus. We incorporate by reference the documents listed below (other than any portions thereof, which under the Exchange Act, and applicable SEC rules, are not deemed “filed” under the Exchange Act):

- our [Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on March 17, 2025](#);
- our [Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, filed with the SEC on May 12, 2025](#);
- our Current Reports on Form 8-K, filed on [January 7, 2025](#), [February 26, 2025](#), [March 10, 2025](#), [March 18, 2025](#), [March 28, 2025](#), [May 8, 2025](#) and [May 13, 2025](#) (other than any portions thereof deemed furnished and not filed); and
- the description of our common stock contained in our Registration Statement on [Form 8-A initially filed on June 23, 2021](#), including any amendment or report filed for the purpose of updating such description.

The SEC file number for each of the documents listed above is 001-40536.

In addition, all documents subsequently filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of the offering, shall be deemed to be incorporated by reference into this prospectus; provided, however, that all reports, exhibits and other information that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. If we have incorporated by reference any statement or information in this prospectus and we subsequently modify that statement or information with information contained in this prospectus, the statement or information previously incorporated in this prospectus is also modified or superseded in the same manner.

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting:

Acurx Pharmaceuticals, Inc.
259 Liberty Avenue
Staten Island, NY 10305
Telephone: (917) 533-1469

You may also access these documents on our website, <http://www.acurxpharma.com>. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

10,899,258 Shares of common stock

ACURX PHARMACEUTICALS, INC.

PROSPECTUS

, 2025

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, payable by the Company in connection with the registration and sale of the Common Stock being registered. All amounts are estimates except the SEC registration fee.

	<u>Amount</u>
SEC registration fee	\$ 617.08
Printing expenses	25,000.00
Accounting fees and expenses	10,000.00
Legal fees and expenses	75,000.00
Miscellaneous	382.92
Total expenses	<u>\$111,000.00</u>

ITEM 14. Indemnification of Directors and Officers.

The Delaware General Corporation Law and certain provisions of our certificate of incorporation and bylaws under certain circumstances provide for indemnification of our officers, directors and controlling persons against liabilities which they may incur in such capacities. A summary of the circumstances in which such indemnification is provided for is contained herein, but this description is qualified in its entirety by reference to our certificate of incorporation, bylaws and to the statutory provisions.

In general, any officer, director, employee or agent may be indemnified against expenses, fines, settlements or judgments arising in connection with a legal proceeding to which such person is a party, if that person's actions were in good faith, were believed to be in our best interest, and with respect to any criminal action or proceeding, such person had no reasonable cause to believe their actions were unlawful. Unless such person is successful upon the merits in such an action, indemnification may be awarded only after a determination by independent decision of the board of directors, by legal counsel, or by a vote of the stockholders, that the applicable standard of conduct was met by the person to be indemnified.

The circumstances under which indemnification is granted in connection with an action brought on our behalf is generally the same as those set forth above; however, with respect to such actions, indemnification is granted only with respect to expenses actually incurred in connection with the defense or settlement of the action. In such actions, unless the court determines otherwise, the person to be indemnified must have acted in good faith and in a manner believed to have been in our best interest, and have not been adjudged liable to the corporation.

Indemnification may also be granted pursuant to the terms of agreements which we are currently party to with each of our directors and executive officers, agreements which we may enter into in the future or pursuant to a vote of stockholders or directors. Delaware law and our certificate of incorporation also grant the power to us to purchase and maintain insurance which protects our officers and directors against any liabilities incurred in connection with their service in such a position, and such a policy may be obtained by us.

A stockholder's investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. There is no pending litigation or proceeding involving any of our directors, officers or employees regarding which indemnification by us is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

ITEM 15. Recent Sales of Unregistered Securities.

In the three years preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act:

Private Placement Issuances

On May 8, 2025, we issued 899,258 shares of our common stock to Lincoln Park Capital Fund, LLC in consideration for its commitment to purchase shares under the Purchase Agreement, dated May 8, 2025, by and between us and Lincoln Park Capital Fund, LLC.

On March 10, 2025, we issued (i) to an institutional investor in a private placement series F warrants to purchase 8,235,000 shares of common stock with an exercise price of \$0.40 per share and (ii) to designees of the placement agent placement agent warrants to purchase 164,700 shares of common stock with an exercise price of \$0.50 per share. The exercise of the series F warrants and placement agent warrants is subject to stockholder approval of the issuance of shares of common stock issuable upon exercise of the series F warrants and the placement agent warrants.

On January 7, 2025, we issued (i) to institutional investors and affiliate investors in a private placement series E warrants to purchase 2,463,058 shares of common stock with an exercise price of \$0.90 per share and (ii) to designees of the placement agent placement agent warrants to purchase 147,783 shares of common stock with an exercise price of \$1.2688 per share.

On May 18, 2023, we issued to an investor in a private placement series C warrants to purchase 1,333,333 shares of common stock and series D warrants to purchase 1,333,333 shares of common stock, each with an exercise price of \$3.26 per share.

On July 27, 2022, we issued to investors in a private placement series A warrants to purchase 1,289,980 shares of common stock and series B warrants to purchase 1,289,980 shares of common stock. An aggregate of 59,211 series A warrants and an aggregate of 59,211 series B warrants were issued to certain affiliates with an exercise price of \$3.80 per share and an aggregate of 1,230,769 series A warrants and an aggregate of 1,230,769 series B warrants were issued to an investor with an exercise price of \$3.25 per share.

On July 27, 2022, we issued to the Placement Agents placement agent warrants to purchase 63,018 shares of common stock with an exercise price of \$3.60.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. We believe the offers, sales and issuances of the above securities were exempt from registration under the Securities Act (or Regulation D or Regulation S promulgated thereunder) by virtue of Section 4(a)(2) of the Securities Act because the issuance of securities to the recipients did not involve a public offering. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Service-Related Issuances

The Company granted shares of common stock to certain vendors in the ordinary course of business in exchange for consulting services. The Company granted 353,170 and 140,186 shares of common stock for the years ended December 31, 2024, and 2023, respectively.

No underwriters were used in the foregoing transactions, and no discounts or commissions were paid. All sales of securities described above were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act, Rule 701 promulgated under the Securities Act or Regulation D promulgated under the Securities Act, relating to transactions by an issuer not involving a public offering. All of the foregoing securities are deemed restricted securities for purposes of the Securities Act.

Item 16. Exhibits

(a) The following exhibits are filed herewith or incorporated herein by reference:

EXHIBIT INDEX

EXHIBIT NUMBER	EXHIBIT DESCRIPTION	FILED HEREWITH	INCORPORATED BY REFERENCE HEREIN FROM FORM OR SCHEDULE	FILING DATE	SEC FILE/ REG. NUMBER
3.1	Certificate of Incorporation of Acurx Pharmaceuticals, Inc.		10-K (Exhibit 3.1)	March 15, 2024	001-40536
3.2	Bylaws of Acurx Pharmaceuticals, Inc.		10-K (Exhibit 3.2)	March 15, 2024	001-40536
4.1	Form of Series A Warrant		8-K (Exhibit 4.1)	July 25, 2022	001-40536
4.2	Form of Series B Warrant		8-K (Exhibit 4.2)	July 25, 2022	001-40536
4.3	Form of Placement Agent Warrant		8-K (Exhibit 4.4)	July 25, 2022	001-40536
4.5	Form of Series C Warrant		8-K (Exhibit 4.1)	May 17, 2023	001-40536
4.6	Form of Series D Warrant		8-K (Exhibit 4.2)	May 17, 2023	001-40536
4.7	Form of 2023 Pre-Funded Warrant		8-K (Exhibit 4.3)	May 17, 2023	001-40536
4.8	Form of Series E Warrant		8-K (Exhibit 4.1)	January 7, 2025	001-40536
4.9	Form of January 2025 Wainwright Warrant		8-K (Exhibit 4.2)	January 7, 2025	001-40536
4.10	Form of Series F Warrant		8-K (Exhibit 4.1)	March 10, 2025	001-40536
4.11	Form of Pre-Funded Warrant		8-K (Exhibit 4.2)	March 10, 2025	001-40536
4.12	Form of March 2025 Wainwright Warrant		8-K (Exhibit 4.3)	March 10, 2025	001-40536
4.13	Form of Common Stock Certificate		S-1 (Exhibit 4.1)	May 27, 2021	333-256516
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.	X			
10.1	Form of Indemnification Agreement		S-1 (Exhibit 10.1)	May 27, 2021	333-256516
10.2	Form of Securities Purchase Agreement		S-1 (Exhibit 10.2)	May 27, 2021	333-25651
10.3	Form of Warrant		S-1 (Exhibit 10.3)	May 27, 2021	333-256516
10.4	Form of Common Stock Purchase Warrant		S-1 (Exhibit 10.4)	May 27, 2021	333-256516
10.5	Form of Investor Rights Agreement, by and between the Registrant and certain purchasers		S-1 (Exhibit 10.5)	May 27, 2021	333-256516
10.6.1+	Acurx Pharmaceuticals, Inc. 2021 Equity Incentive Plan		S-1 (Exhibit 10.9)	May 27, 2021	333-256516
10.6.2+	Form of Stock Option Agreement under the 2021 Equity Incentive Plan		S-8 (Exhibit 99.2)	July 19, 2021	333-258026

<u>EXHIBIT NUMBER</u>	<u>EXHIBIT DESCRIPTION</u>	<u>FILED HEREWITH</u>	<u>INCORPORATED BY REFERENCE HEREIN FROM FORM OR SCHEDULE</u>	<u>FILING DATE</u>	<u>SEC FILE/ REG. NUMBER</u>
10.6.3+	Form of Restricted Stock Agreement under the 2021 Equity Incentive Plan.		S-8 (Exhibit 99.3)	July 19, 2021	333-258026
10.6.4+	Form of Recapitalization Exchange Option Agreement		S-8 (Exhibit 99.4)	July 19, 2021	333-258026
10.7+	Amended and Restated Employment Agreement, by and between Acurx Pharmaceuticals, Inc. and Robert J. DeLuccia, dated May 25, 2021		S-1 (Exhibit 10.6)	May 27, 2021	333-256516
10.8+	Amended and Restated Employment Agreement, by and between Acurx Pharmaceuticals, Inc. and David P. Luci, dated May 25, 2021		S-1 (Exhibit 10.7)	May 27, 2021	333-256516
10.9+	Amended and Restated Employment Agreement, by and between Acurx Pharmaceuticals, Inc. and Robert Shawah, dated May 25, 2021		S-1 (Exhibit 10.8)	May 27, 2021	333-256516
10.10	Master Clinical Services Agreement, dated October 11, 2019, by and between Acurx Pharmaceuticals, Inc. and Syneos Health, LLC.		S-1 (Exhibit 10.10)	May 27, 2021	333-256516
10.11#	Asset Purchase Agreement, dated February 5, 2018, by and between Acurx Pharmaceuticals, Inc. and GLSynthesis Inc.		S-1 (Exhibit 10.11)	May 27, 2021	333-256516
10.12	Form of Securities Purchase Agreement, dated as of May 16, 2023, by and among Acurx Pharmaceuticals, Inc. and the purchasers party thereto		8-K (Exhibit 10.1)	May 17, 2023	001-40536
10.13	Form of Warrant Amendment Agreement, dated May 16, 2023, by and between Acurx Pharmaceuticals, Inc. and the Investor		8-K (Exhibit 10.2)	May 17, 2023	001-40536

<u>EXHIBIT NUMBER</u>	<u>EXHIBIT DESCRIPTION</u>	<u>FILED HEREWITH</u>	<u>INCORPORATED BY REFERENCE HEREIN FROM FORM OR SCHEDULE</u>	<u>FILING DATE</u>	<u>SEC FILE/ REG. NUMBER</u>
10.14	Sales Agreement, dated as of November 15, 2023, between Acurx Pharmaceuticals, Inc. and A.G.P./Alliance Global Partners.		8-K (Exhibit 1.1)	November 15, 2023	001-40536
10.15	Form of Securities Purchase Agreement, dated as of January 6, 2025, by and among Acurx Pharmaceuticals, Inc. and the purchasers party thereto.		8-K (Exhibit 10.1)	January 7, 2025	001-40536
10.16	Form of Securities Purchase Agreement, dated as of March 6, 2025, by and between Acurx Pharmaceuticals, Inc. and the purchaser party thereto.		8-K (Exhibit 10.1)	March 10, 2025	001-40536
10.17	Purchase Agreement, dated as of May 8, 2025, by and between Acurx Pharmaceuticals, Inc. and Lincoln Park Capital Fund, LLC.		8-K (Exhibit 10.1)	May 8, 2025	001-40536
10.18	Registration Rights Agreement, dated as of May 8, 2025, by and between Acurx Pharmaceuticals, Inc. and Lincoln Park Capital Fund, LLC.		8-K (Exhibit 10.2)	May 8, 2025	001-40536
21.1	Subsidiaries		10-K (Exhibit 21.1)	March 17, 2025	001-40536
23.1	Consent of CohnReznick LLP, independent registered public accounting firm	X			
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1)	X			
24.1	Power of attorney (included on the signature page)	X			
107	Filing Fee Table	X			

Certain confidential portions of this Exhibit were omitted by means of marking such portions with brackets (“[***]”) because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed.

+ Denotes management compensation plan or contract.

Item 17. Undertakings

We hereby undertake:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933 (the “Securities Act”);

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser,

(i) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for purposes of determining any liability under the Securities Act, each filing of the registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated

by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this post-effective amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on May 21, 2025.

ACURX PHARMACEUTICALS, INC.

By: /s/ David P. Luci
 David P. Luci
 President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned directors and officers of Acurx Pharmaceuticals, Inc., hereby severally constitute and appoint David P. Luci and Robert Shawah, and each of them singly, our true and lawful attorneys, with full power to them, and to each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-1 filed herewith, and any and all pre-effective and post-effective amendments to said registration statement, and any registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, in connection with the registration under the Securities Act of 1933, as amended, of equity securities of Acurx Pharmaceuticals, Inc., and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as each of us might or could do in person, and hereby ratifying and confirming all that said attorneys, and each of them, or their substitute or substitutes, shall do or cause to be done by virtue of this Power of Attorney.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
<u>/s/ David P. Luci</u> David P. Luci	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	May 21, 2025
<u>/s/ Robert G. Shawah</u> Robert G. Shawah	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	May 21, 2025
<u>/s/ Robert J. DeLuccia</u> Robert J. DeLuccia	Executive Chairman	May 21, 2025
<u>/s/ Carl V. Sailer</u> Carl V. Sailer	Director	May 21, 2025
<u>/s/ Joseph C. Scodari</u> Joseph C. Scodari	Director	May 21, 2025
<u>/s/ Thomas Harrison</u> Thomas Harrison	Director	May 21, 2025

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Jack H. Dean</u> Jack H. Dean	Director	May 21, 2025
<u>/s/ James Donohue</u> James Donohue	Director	May 21, 2025



919 Third Avenue
New York, NY 10022
212 935 3000
mintz.com

May 21, 2025

Acurx Pharmaceuticals, Inc.
259 Liberty Avenue
Staten Island, New York 10305
Ladies and Gentlemen:

We have acted as legal counsel to Acurx Pharmaceuticals, Inc., a Delaware corporation (the “Company”), in connection with the preparation and filing with the Securities and Exchange Commission (the “Commission”) of a Registration Statement on Form S-1 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Securities Act”). The Registration Statement relates to the registration for resale by the selling stockholder named in the Registration Statement of up to an aggregate of 10,899,258 shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”), which includes (i) up to 10,000,000 shares of Common Stock (the “Purchase Shares”) of Common Stock issuable pursuant to that certain purchase agreement, dated May 8, 2025 (the “Purchase Agreement”), between the Company and Lincoln Park Capital Fund, LLC (“Lincoln Park”); and (ii) 899,258 shares of Common Stock (the “Commitment Shares”) issued to Lincoln Park in consideration for its commitment to purchase shares of our Common Stock under the Purchase Agreement. The Commitment Shares and the Purchase Shares are referred to herein as the “Shares.” All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company’s Certificate of Incorporation and Bylaws, each as currently in effect; such other records of the corporate proceedings of the Company and certificates of the Company’s officers as we have deemed relevant; and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies.

Our opinion is limited to the United States federal laws and the state laws of Delaware, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

Based upon the foregoing, as subject to the limitations set forth herein, we are of the opinion that (i) the Commitment Shares have been duly authorized and are validly issued, fully paid and non-assessable and (ii) the Purchase Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Purchase Agreement, will be validly issued, fully paid and non-assessable.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b) (5) of Regulation S-K promulgated under the Securities Act and to reference the firm’s name under the caption “Legal Matters” in the prospectus which forms part of the Registration Statement, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 and related Prospectus, of our report dated March 17, 2025, with respect to the financial statements of Acurx Pharmaceuticals, Inc. as of December 31, 2024 and 2023, and for the years then ended, which report is included in Acurx Pharmaceuticals, Inc.'s Annual Report on Form 10K for the year ended December 31, 2024, filed with the Securities and Exchange Commission. Our audit report includes an explanatory paragraph relating to the Acurx Pharmaceuticals, Inc.'s ability to continue as a going concern.

We also consent to the reference to our firm under the caption "Experts."

/s/ CohnReznick LLP

Parsippany, New Jersey
May 20, 2025

CALCULATION OF FILING FEE TABLE

FORM S-1
(Form Type)

ACURX PHARMACEUTICALS, INC.
(Exact Name of Registrant as Specified in its Charter)

Table I: Newly Registered and Carry Forward Securities

Line Item Type	Security Type	Security Class Title	Notes	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
<i>Newly Registered Securities</i>									
Fees to be Paid	Equity	Common Stock, \$0.001 par value per share	(1)	457(c)	10,899,258	\$ 0.3698	\$ 4,030,545.61	0.0001531	\$ 617.08
							Total Offering Amounts:	\$ 4,030,545.61	\$ 617.08
							Total Fees Previously Paid:		\$ —
							Total Fee Offsets:		\$ —
							Net Fee Due:		\$ 617.08

- (1) (A) Pursuant to Rule 416 under the Securities Act of 1933 (the "Securities Act"), the securities being registered hereunder also include such indeterminate number of additional shares of common stock as may from time to time be issued after the date hereof as a result of stock splits, stock dividends, recapitalizations or similar transactions; (B) amount registered is consists of 899,258 shares of common stock issued on May 8, 2025 pursuant to the purchase agreement between the registrant and the selling stockholder and up to 10,000,000 shares of common stock that the registrant may sell to the selling stockholder pursuant to such purchase agreement; and (C) pursuant to Rules 457(c) promulgated under the Securities Act and solely for the purpose of calculating the registration fee, the proposed maximum aggregate offering price is calculated as the product of (i) 10,899,258 shares of our common stock and (ii) \$0.3698, the average of the high and low trading prices of common stock on The Nasdaq Capital Market on May 15, 2025 (a date within five business days prior to the date of this registration statement).