



**Up to \$50,000,000 of Shares of Common Stock
and 246,792 Shares of Common Stock**

This purchase agreement prospectus relates to the issuance and sale of up to \$50,000,000 of shares of our common stock ("Purchase Shares") that we may sell to Lincoln Park Capital Fund, LLC ("Lincoln Park"), from time to time pursuant to a purchase agreement, dated August 10, 2023 (the "Purchase Agreement"), that we have entered into with Lincoln Park, and an additional 246,792 shares of our common stock (the "Commitment Shares") issued to Lincoln Park as commitment shares under the Purchase Agreement. Under the previously filed Form S-3 shelf registration statement (File No. 333-252715) (the "Prior S-3 Shelf") and the prior prospectus supplement, dated August 11, 2023 (the "Prior Prospectus"), the Company registered the offer and sale of up to \$50,000,000 of shares of our common stock and an additional 246,792 Commitment Shares under the Purchase Agreement. Since August 11, 2023, the Company issued the 246,792 Commitment Shares and sold 1.3 million shares to Lincoln Park under the Purchase Agreement. Because the Prior S-3 Shelf expires on February 12, 2024, the Company has filed this Shelf Registration Statement on Form S-3 (the "New Form S-3 Shelf"), which includes this prospectus as a part thereof (the final form of which to be filed with the SEC under Rule 424(b), the "Prospectus"), which Prospectus supersedes and replaces the Prior Prospectus, registering the offer and sale of up to \$50,000,000 shares of our common stock and the Commitment Shares under the Purchase Agreement.

This prospectus also covers the resale of these shares by Lincoln Park to the public. See "Lincoln Park Transaction" for a description of the Purchase Agreement and additional information regarding Lincoln Park. Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the "Securities Act").

The purchase price for the Purchase Shares will be based upon formulas set forth in the Purchase Agreement depending on the type of purchase notice we submit to Lincoln Park from time to time. We will pay the expenses incurred in registering the shares of our common stock, including legal and accounting fees. See "Plan of Distribution" for more information.

Our common stock is listed on the Nasdaq Capital Market under the symbol "OCUP." On January 9, 2024, the last reported sale price of our common stock on the Nasdaq Capital Market was \$3.25 per share.

We are a "smaller reporting company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and the documents incorporated by reference herein and may elect to comply with reduced public company reporting requirements in future filings. See "Prospectus Summary-Implications of Being a Smaller Reporting Company."

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in this prospectus on page S-7, on page 0 of the base prospectus, in our most recent Annual Report on Form 10-K incorporated by reference into this prospectus, and under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is January 23, 2024.

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This prospectus relates to the offering of our common stock. Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus, together with the information incorporated by reference as described under the headings “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference” in this prospectus. These documents contain important information that you should consider when making your investment decision.

This prospectus describes the terms of this offering of our common stock and also adds to and updates information contained in the documents incorporated by reference into this prospectus. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference into this prospectus that was filed with the SEC before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in one of these documents is inconsistent with a statement in another document having a later date (for example, a document incorporated by reference into this prospectus) the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained in or incorporated by reference in this prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and Lincoln Park has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and Lincoln Park is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, the documents incorporated by reference in this prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus, the documents incorporated by reference in this prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

“Ocuphire Pharma, Inc.” the “Ocuphire” logo and other trademarks, trade names or service marks of Ocuphire Pharma, Inc. appearing in this prospectus are the property of Ocuphire Pharma, Inc. All other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert their rights thereto.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information you should consider in making your investment decision. You should carefully read the entire prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus are a part. Unless the context otherwise requires, the terms “Ocuphire” “the Company,” “we,” “us,” “our” and similar references in this prospectus refer to Ocuphire Pharma, Inc.

Overview

We are a clinical-stage ophthalmic biopharmaceutical company focused on developing novel therapies for the treatment of unmet needs of patients with retinal and refractive eye disorders.

APX3330

Our lead retinal product candidate, APX3330, is a first-in-class small-molecule inhibitor of Ref-1 (reduction oxidation effector factor-1 protein). Ref-1 is a regulator of transcription factors such as HIF-1 α and NF-kB. Inhibiting REF-1 reduces levels of vascular endothelial growth factor (“VEGF”) and inflammatory cytokines which are known to play key roles in ocular angiogenesis and inflammation. Through inhibition of Ref-1, APX3330 normalizes the levels of VEGF to physiologic levels, unlike biologics that deplete VEGF below the levels required for normal function. APX3330 is an oral tablet administered twice per day for the treatment of diabetic retinopathy (“DR”).

DR affects approximately 10 million people with diabetes and is projected to impact over 14 million Americans by 2050. DR is classified as Non-Proliferative Diabetic Retinopathy (“NPDR”), the early stage of the disease in which symptoms may be mild or nonexistent or Proliferative Diabetic Retinopathy (“PDR”) which is the more advanced stage of diabetic eye disease that can be highly symptomatic with loss of vision. Approximately 80% of the DR patients have NPDR that will progress to PDR if left untreated. Despite the risk for visual loss associated with this disease, over 90% of NPDR patients currently receive no course of treatment apart from observation by their eye care specialist until they develop sight-threatening complications. This is due to the treatment burden of the frequent eye injections required with currently approved therapies for this disease. APX3330 as an oral tablet has the potential to be an early, non-invasive treatment for the 8 million NPDR patients in the US.

In January 2023, we reported top-line efficacy and safety results from the ZETA-1 Phase 2 trial conducted in 103 subjects (51 treated with 600 mg daily dose of APX3330) in DR, including moderately severe and severe NPDR and mild PDR, as well as patients with diabetic macular edema without loss of central vision. Although administration of APX3330 daily did not meet the study’s primary endpoint of percentage of patients with a ≥ 2 -step improvement in Early Treatment of Diabetic Retinopathy Study (“ETDRS”) diabetic retinopathy severity scale (“DRSS”) in the study eye at week 24 compared to placebo, efficacy was seen on the FDA agreed upon registration endpoint of ≥ 3 -step worsening on a binocular DRSS Person Scale. Prevention or slowing of progression of DR to vision-threatening complication such as PDR is a clinically meaningful endpoint. APX3330 also demonstrated favorable safety and tolerability in diabetic patients. A successful End-of-Phase 2 (“EOP2”) meeting with the U.S. Food and Drug Administration (the “FDA”) was held in October 2023 at which we obtained agreement on the Phase 3 registration endpoint supporting the advancement of APX3330 into Phase 3. Ocuphire plans to submit a Special Protocol Assessment (“SPA”) to agree on the clinical trial protocol and statistical analysis plan for the Phase 3 trials.

Prior to Ocuphire in-licensing the APX3330 product candidate, it had been studied by other sponsors in a total of 11 clinical trials (6 Phase 1 and 5 Phase 2) in a total of over 420 healthy volunteers or patients (with over 340 APX3330-treated) for inflammatory (hepatic) and oncology indications, and had demonstrated evidence of target engagement, consistent pharmacokinetics, durability, and favorable safety and tolerability. Treatment-related adverse events were uncommon, and most were mild in severity. No clinically significant changes were observed in liver, kidney, or heart function. There were no treatment-related effects on hematologic or blood chemistry evaluations. APX3330 demonstrated favorable safety and tolerability in the ZETA-1 trial, consistent with the safety data from the prior 11 clinical trials.

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We also in-licensed APX2009 and APX2014, which are second-generation analogs of APX3330. The unique mechanism of action of these Ref-1 inhibitors of reducing angiogenesis and inflammation could potentially be beneficial in treating other retinal diseases such as age-related macular degeneration (“AMD”), and geographic atrophy (“GA”).

We are currently evaluating local delivery routes of APX3330 and its second-generation analogs in addition to the systemic (oral) route as part of its pipeline expansion in retinal therapies.

Phentolamine Ophthalmic Solution 0.75% (POS)

In November 2022, we entered into a license and collaboration agreement (the “Nyxol License Agreement”) with FamyGen Life Sciences, Inc. (acquired by Viatris, Inc. (“Viatris”) in January 2023) pursuant to which we granted Viatris an exclusive license to develop, manufacture, import, export and commercialize our refractive product candidate Phentolamine Ophthalmic Solution 0.75%, formerly known as Nyxol (“POS”) for treating (a) reversal of pharmacologically-induced mydriasis, (b) night vision disturbances or dim light vision (“DLD”), and (c) presbyopia, and (ii) POS and low dose pilocarpine for treating presbyopia (together, the “Nyxol Products”) worldwide except for certain countries and jurisdictions in Asia (the “Viatris Territory”).

Under the terms of the Nyxol License Agreement, Ocuphire in partnership with Viatris, will develop the Nyxol Products in the United States. Viatris agreed to reimburse us for budgeted costs related to the development of the Nyxol Products through each applicable FDA approval. Viatris is responsible for developing the Nyxol Products in countries and jurisdictions in the Viatris Territory outside of the United States.

POS is a once-daily eye drop formulation of phentolamine mesylate designed to reduce pupil diameter and improve visual acuity. POS can potentially be used across multiple indications such as treatment of pharmacologically-induced mydriasis (“RM”) (dilation of the pupil), presbyopia (age-related blurry near vision) and DLD (halos, glares and starbursts). Our management believes these multiple indications potentially represent a significant market opportunity. POS has been studied in a total of 12 clinical trials (3 Phase 1, 5 Phase 2 and 4 Phase 3) in a total of over 1100 patients (with over 650 POS-treated) and has demonstrated promising clinical data across the three targeted refractive indications.

We submitted a new drug application (“NDA”) to the U.S. Food and Drug Administration (“FDA”) in November 2022 under the 505(b)(2) pathway for POS for RM; the FDA approved the NDA in September 2023 under the brand name RYZUMVI™, which triggered a \$10 million milestone payment under the Nyxol License Agreement.

We reported positive top-line data from multiple late-stage clinical trials for POS in RM, presbyopia and DLD. We reported positive top-line data from Phase 3 trials in RM: MIRA-2 in March 2021, MIRA-3 in March 2022 and MIRA-4 in April 2022. We also reported positive top-line data from a Phase 2 trial of POS for treatment of presbyopia, both as monotherapy and with low-dose pilocarpine (pilocarpine hydrochloride ophthalmic solution 0.4%, “LDP”) as adjunctive therapy (VEGA-1). We reported top-line data from a Phase 3 trial in DLD in May 2022 (LYNX-1). The VEGA-2 Phase 3 study in presbyopia achieved its primary endpoint and Viatris, our development and commercial partner, is expected to continue Phase 3 development in the first half of 2024. For DLD, a SPA has been submitted and Viatris is also expected to continue Phase 3 development in the first half of 2024 following FDA agreement.

Recent Developments

Clinical Milestones

APX3330

In January 2023, we announced top-line efficacy and safety results from ZETA-1, a Phase 2b trial of APX3330 in diabetic retinopathy patients. In ZETA-1, APX3330 demonstrated favorable safety and tolerability and exhibited efficacy in slowing or prevention of DR worsening on a binocular DRSS Person Scale. The FDA agreed this was an approvable registration endpoint at our EOP2 meeting.

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Phentolamine Ophthalmic Solution 0.75% (POS)

In January 2023, we announced the initiation of the VEGA-2 Phase 3 pivotal trial, the first of two Phase 3 registration trials intended to support a presbyopia indication for POS alone and POS with LDP. The VEGA-2 Phase 3 study achieved its primary endpoint and Viatriis, our development and commercial partner, is expected to continue Phase 3 development in the first half of 2024.

Regulatory Update

In September 2023, we announced FDA approval of POS under the brand name RYZUMVI™ for the treatment of RM; for this approval we received a \$10 million milestone payment under the Nyxol License Agreement.

In October 2023, a SPA was submitted to the FDA for DLD and Viatriis, our development and commercial partner, is expected to continue Phase 3 development in the first half of 2024 following FDA agreement.

In November 2023, we announced the successful outcome of the EOP2 meeting with the FDA, at which we obtained agreement on the registration endpoint supporting the advancement of APX3330 into Phase 3. Ocuphire plans to submit a SPA to agree on the clinical trial protocol and statistical analysis plan for the Phase 3 trials and will share specifics on the study design parameters and anticipated timing once agreed with the FDA.

Management Transitions

On November 1, 2023, the Company announced the appointment of George Magrath, M.D., M.B.A., M.S., as Chief Executive Officer and member of the Board of Directors. As a result of such appointment, Richard Rodgers, who was serving as Interim President and Chief Executive Officer, resigned from such position and remains on the Board.

On November 27, 2023, the Company announced the appointment of Joseph K. Schachle, as Chief Operating Officer.

Purchase Agreement with Lincoln Park Capital Fund, LLC (“Lincoln Park”)

On August 10, 2023, we entered into a common stock purchase agreement (the “Purchase Agreement”) with Lincoln Park, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Ocuphire has the sole right, but not the obligation, to direct Lincoln Park to purchase up to \$50 million of shares of our common stock, par value \$0.0001 (the “Common Stock”), from time to time over the 30-month term of the Purchase Agreement. Concurrently with entering into the Purchase Agreement, Ocuphire also entered into a registration rights agreement with Lincoln Park (the “Registration Rights Agreement”), pursuant to which we agreed to register the resale of the shares of our Common Stock that have been and may be issued to Lincoln Park under the Purchase Agreement pursuant to a registration statement. Upon the execution of the Purchase Agreement, we issued 246,792 shares of Common Stock to Lincoln Park as consideration for its commitment to purchase shares of our Common Stock under the Purchase Agreement. Lincoln Park has agreed not to cause or engage in any manner whatsoever in any direct or indirect short selling or hedging of our Common Stock.

Global Economic Conditions

Generally, worldwide economic conditions remain uncertain, particularly due to the effects of the conflict between Russia and Ukraine and between Israel and Hamas, disruptions in the banking system and financial markets, lingering COVID-19 pandemic, increased inflation and increased interest rates. The general economic and capital market conditions, both in the U.S. and worldwide, have been volatile in the past and at times have adversely affected our access to capital and increased the cost of capital. The capital and credit markets may not be available to support future capital raising activity on favorable terms. If economic conditions decline, our future cost of equity or debt capital and access to the capital markets could be adversely affected.

Additionally, our operating results could be materially impacted by changes in the overall macroeconomic environment and other economic factors. Changes in economic conditions, supply chain constraints, logistics challenges, labor shortages, the conflicts in Ukraine and the Middle East, disruptions in the banking system and financial markets, and steps taken by governments and central banks, particularly in response to the COVID-19 pandemic as well as other stimulus and spending programs, have led to higher inflation, which has led to an increase in costs and has caused changes in fiscal and monetary policy, including increased interest rates.

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Corporate Information

Our principal executive offices are located at 37000 Grand River Avenue, Suite 120, Farmington Hills, MI 48335. Our telephone number is (248) 957-9024. Our website address is www.ocuphire.com. The information contained in, or accessible through, our website does not constitute part of this prospectus, and should not be relied on in determining whether to make an investment decision. The inclusion of our website address in this prospectus is an inactive textual reference only.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” under federal securities laws. For as long as we continue to be a smaller reporting company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies, including, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million. As long as we remain a smaller reporting company and non-accelerated filer, we are exempt from the attestation requirement in the assessment of our internal control over financial reporting by our independent auditors pursuant to section 404(b) of the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”) but are required to make our own internal assessment of the effectiveness of our internal controls over financial reporting.

	The Offering
<p>Common stock offered by us pursuant to this prospectus</p>	<p>246,792 shares of our common stock issued to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement (the “Commitment Shares”). We will not receive any cash proceeds from the issuance of these Commitment Shares.</p> <p>Up to \$50,000,000 of shares of our common stock we may issue and sell to Lincoln Park from time to time over 30 months, commencing on August 11, 2023, at our sole discretion, in accordance with the Purchase Agreement.</p>
<p>Common stock to be outstanding immediately after this offering</p>	<p>38,060,477 shares, based on 24,058,725 shares outstanding as of January 9, 2024, assuming sale of 14,001,752 shares at a price of \$3.25 per share, which was the closing price of our common stock on The Nasdaq Capital Market on January 9, 2024. The actual number of shares issued will vary depending on the sales prices under this offering, but will not be greater than 4,195,058 shares, representing 19.99% of the shares of our common stock outstanding on the date of the Purchase Agreement (the “Exchange Cap”), unless, in accordance with the rules of The Nasdaq Stock Market LLC, unless we obtain stockholder approval of the issuance of shares of our common stock under the Purchase Agreement in excess of the Exchange Cap, or the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement is equal to or greater than the \$4.399 (which represents the lower of (A) the official closing price of the Company’s Common Stock on Nasdaq on the date of the Purchase Agreement and (B) the average official closing price of the Company’s Common Stock on Nasdaq for the five consecutive trading days ending on the date of the Purchase Agreement, as adjusted to take into account the issuance of the Commitment Shares to Lincoln Park for non-cash consideration), such that the Exchange Cap will not apply under applicable Nasdaq listing rules to limit issuances and sales of Common Stock to Lincoln Park pursuant to the Purchase Agreement. The Purchase Agreement also provides that Lincoln Park will not purchase or acquire any shares of common stock under the Purchase Agreement which, when aggregated with all other shares of common stock beneficially owned by Lincoln Park to beneficially own more than 4.99% of our outstanding shares of common stock (the “Beneficial Ownership Cap”), which Lincoln Park may, in its sole discretion, increase to up to 9.99% of our outstanding shares of common stock by delivering written notice thereof to us, which shall not be effective until the 61st day after such written notice is delivered to us.</p>

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Use of Proceeds

We may receive up to \$50,000,000 in aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement. We intend to use the net proceeds from this offering, if any, for clinical development of our product candidates and for working capital and general corporate purposes. We do not currently have specific plans or commitments with respect to the net proceeds from this offering and, accordingly, we are unable to quantify the allocations of such proceeds among various potential uses. See “Use of Proceeds” on page S-13 of this prospectus.

Risk factors

You should read the section entitled “Risk Factors” beginning on page S-7 and the documents incorporated by reference in this prospectus for a discussion of factors to consider carefully before deciding to invest in our common stock.

Nasdaq Capital Market listing

“OCUP”

The number of shares of our common stock to be outstanding after this offering is based on 22,610,131 shares of common stock outstanding as of September 30, 2023, adjusted to include the issuance of 246,792 Commitment Shares issued to Lincoln Park and excludes:

- 3,469,389 shares of common stock issuable upon the exercise of outstanding stock options with a weighted-average exercise price of \$3.01 per share;
- 5,665,838 shares of common stock issuable upon the exercise of outstanding warrants with an exercise price of \$4.48 per share;
- 1,538,461 shares of common stock issuable upon the exercise of outstanding warrants with an exercise price of \$6.09 per share;
- 58,597 shares of common stock issuable upon the exercise of outstanding warrants with an exercise price of \$38.40 per share;
- 282,008 unvested restricted stock units; and
- 1,016,033 shares available for future issuance under the Ocuphire 2020 Equity Incentive Plan and the Ocuphire 2021 Inducement Plan.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, and those discussed under the section entitled “Risk Factors” contained in our 2022 Annual Report on Form 10-K and our 2023 Quarterly Reports on Form 10-Q, together with other information in this prospectus, the information and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. The occurrence of any of the events or developments described below could materially and adversely affect our business, financial condition, results of operations and prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment.

Risks Related to this Offering

The sale or issuance of our common stock to Lincoln Park may cause dilution and the 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 August 10, 2023, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to \$50,000,000 of our common stock. Upon the execution of the Purchase Agreement, we issued 246,792 Commitment Shares to Lincoln Park, which represents the fee for its commitment to purchase shares of our common stock under the Purchase Agreement. We have also paid Lincoln Park \$40,000 as full and complete reimbursement of its expenses in connection with the offering. The remaining shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 30-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the registration statement, of which this prospectus is effective. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. 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. Additional sales of our common stock, if any, to Lincoln Park 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 additional 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.

A substantial number of shares of common stock may be sold in the market as a result of this offering, which may depress the market price for our common stock.

Sales of a substantial number of shares of our common stock in the public market as a result of this offering could cause the market price of our common stock to decline. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock offered hereby are, freely tradable without restriction or further registration under the Securities Act, unless these shares are owned or purchased by “affiliates” as that term is defined in Rule 144 under the Securities Act.

We have broad discretion to determine how to use the funds raised in this offering, if any, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion over the use of net proceeds from this offering, if any, and we could spend the net proceeds from this offering in ways our stockholders may not agree with or that do not yield a favorable return, if at all. We currently expect to use the net proceeds from this offering, if any, for clinical development of our product candidates and for working capital and general corporate purposes, including costs and expenses associated with being a public company. However, our use of these net proceeds may differ substantially from our current plans.

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If we do not invest or apply the net proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline. Pending use, we may invest any net proceeds from this offering in a manner that does not produce income or loses value. See “Use of Proceeds” beginning on page S-0 of this prospectus.

We may not be able to access sufficient funds under the Purchase Agreement when needed.

Our ability to sell shares to Lincoln Park and obtain funds under the Purchase Agreement is limited by the terms and conditions in the Purchase Agreement, including restrictions on the amounts we may sell to Lincoln Park at any one time, and a limitation on our ability to sell shares to Lincoln Park to the extent that it would cause Lincoln Park to beneficially own more than 4,195,058 shares in total under the Purchase Agreement, which is equal to 19.99% of the shares of common stock outstanding on the date of the Purchase Agreement, unless we obtain stockholder approval or the average price of such sales is equal to or greater than the minimum price of \$4.399 as determined under Nasdaq rules. In addition, the Purchase Agreement also provides that Lincoln Park will not purchase or acquire any shares of common stock under the Purchase Agreement which, when aggregated with all other shares of common stock beneficially owned by Lincoln Park and its affiliates would result in the beneficial ownership of Lincoln Park and its affiliates of more than 4.99% of our outstanding shares of common stock (the “Beneficial Ownership Cap”), which Lincoln Park may, in its sole discretion, increase to up to 9.99% of our outstanding shares of common stock by delivering written notice thereof to us, which shall not be effective until the 61st day after such written notice is delivered to us. In addition, any amounts we sell under the Purchase Agreement may not satisfy all of our funding needs, even if we are able and choose to sell and issue all of our common stock currently registered.

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 \$50,000,000 worth of shares of our common stock under our agreement over a 30-month period, in amounts up to 50,000 to 70,000 shares of our common stock depending on market prices, subject to a maximum limit of \$1,000,000 per regular purchase, on any single business day.

Our ability to sell shares to Lincoln Park and obtain funds under the Purchase Agreement is limited by the terms and conditions in the Purchase Agreement, including restrictions on the amounts we may sell to Lincoln Park at any one time, and a limitation on our ability to sell shares to Lincoln Park to the extent that it would cause Lincoln Park to beneficially own more than 4.99% of our outstanding shares of common stock (the “Beneficial Ownership Cap”), which Lincoln Park may, in its sole discretion, increase to up to 9.99% of our outstanding shares of common stock by delivering written notice thereof to us, which shall not be effective until the 61st day after such written notice is delivered to us. Additionally, we are prohibited under applicable Nasdaq listing rules from issuing to Lincoln Park more than 4,195,058 shares of common stock under the Purchase Agreement (including Purchase Shares and Commitment Shares), such maximum number of shares representing 19.99% of the outstanding shares of our common stock immediately prior to the execution of the Purchase Agreement (such maximum share issuance limitation subject to certain reductions and pro rata adjustments as set forth in the Purchase Agreement, the “Exchange Cap”), unless (i) we first obtain stockholder approval in accordance with applicable Nasdaq listing rules to issue shares in excess of the Exchange Cap to Lincoln Park under the Purchase Agreement or (ii) the average price paid by Lincoln Park for all shares of common stock issued by us under the Purchase Agreement is equal to or greater than \$4.399, such that the Exchange Cap will not apply under applicable Nasdaq listing rules to limit issuances and sales of our common stock to Lincoln Park pursuant to the Purchase Agreement. Therefore, we may not in the future have access to the full amount available to us under the Purchase Agreement, depending on the price of our common stock. In addition, any amounts we sell under the Purchase Agreement may not satisfy all of our funding needs, even if we are able and choose to sell and issue all of our common stock currently registered.

The extent to which 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 secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we may need to secure another source of funding in order to satisfy our future plan and working capital needs. Even if we sell all \$50,000,000 of common stock under the Purchase Agreement to Lincoln Park, we may still need additional capital to finance our future plans and working capital needs, and we may have to raise funds through the issuance of equity or debt securities. Depending on the type and the terms

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of any financing we pursue, stockholders' rights and the value of their investment in our common stock could be reduced. A financing could involve one or more types of securities including common stock, convertible debt or warrants to acquire common stock. These securities could be issued at or below the then prevailing market price for our common stock. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted. Should the financing we require to sustain our future plan and our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could have a material adverse effect on our business, operating results, financial condition and prospects.

Our stock price and the trading volume of our stock may be volatile and you may not be able to resell shares of our common stock at or above the price you paid.

The trading price of our common stock could be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. In particular, the trading prices for biopharmaceutical companies have been highly volatile as a result of supply chain disruptions and the ongoing COVID-19 pandemic. These factors include those described in this "Risk Factors" section and elsewhere in this prospectus or the documents incorporated by reference herein, others such as:

- the announcement of new products or product enhancements by us or our competitors;
- changes in our relationships with our licensors, licensees, or other strategic partners;
- developments concerning intellectual property rights and regulatory approvals;
- variations in our and our competitors' results of operations;
- the announcement of clinical trial results;
- the announcement of potentially dilutive financings;
- changes in earnings estimates or recommendations by securities analysts;
- changes in the structure of healthcare payment systems; and
- developments and market conditions in the pharmaceutical and biotechnology industries, including due to the COVID-19 pandemic.

In addition, the stock markets in general, and the markets for biopharmaceutical stocks in particular, have experienced extreme volatility that may have been unrelated to the operating performance of the issuer. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the SEC that are incorporated by reference contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, forward-looking statements may be identified by words such as “anticipate,” “believe,” “continue,” “could,” “design,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially,” “predict,” “project,” “should,” “will” or the negative of these terms or other similar expressions.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, including risks described in the section titled “Risk Factors” and elsewhere in this prospectus and in our most recent Annual Report on Form 10-K and filed 2023 Quarterly Reports, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with a specific offering. These risks include, among other things, that:

- we currently depend entirely on the success of Phentolamine Ophthalmic Solution 0.75% (POS) and APX3330, our only product candidates, and we may never complete clinical development of, receive marketing approval for, or successfully commercialize, POS alone or as adjunctive therapy with low dose pilocarpine (LDP), APX3330, or other product candidates we may pursue in the future for any indication;
- Viartis has exclusive rights to commercialize our POS products in key global markets and Viartis’ failure to timely develop or commercialize these products would have a material adverse effect on our business and operating results;
- the results of previous clinical trials may not be predictive of future results, and the results of our current and planned clinical trials may not satisfy the requirements of the FDA or non-U.S. regulatory authorities;
- changes in regulatory requirements or FDA guidance, or unanticipated events during our clinical trials, may result in changes to clinical trial protocols or additional clinical trial requirements, which could result in increased costs to us or delays in our development timelines;
- we expect to incur losses for the foreseeable future and may never achieve or maintain profitability;
- adverse global economic conditions could have a negative effect on our business results of operations and financial condition and liquidity;
- adverse developments affecting the financial services industry could negatively affect our current and projected business operations, financial condition and results of operations;
- raising additional capital may cause dilution to our stockholders, restrict our operations, or require us to relinquish rights to our technologies or product candidates;
- even if we receive marketing approval for our product candidates in the United States, we may never receive regulatory approval to market such product candidates outside of the United States;
- our employees or our representatives may engage in misconduct or other improper activities, including violating applicable regulatory standards and requirements or engaging in insider trading, which could significantly harm our business;

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- we face substantial competition, which may result in others discovering, developing, or commercializing products before or more successfully than we do;
- we lack experience in commercializing products, which may have an adverse effect on our business;
- if we are unable to establish sales and marketing capabilities or enter into agreements with third parties to sell, market, and distribute APX3330, if approved, we may not be successful in commercializing APX3330 if and when it is approved;
- product liability lawsuits against us, or our suppliers and manufacturers, could cause us to incur substantial liabilities and could limit commercialization of any product candidate that we may develop;
- we are unable to control all aspects of our clinical trials due to our reliance on clinical research organizations, contract development and manufacturing organizations and other third parties that assist us in conducting clinical trials;
- we are unable to control the supply, manufacture and testing of bulk drug substances and the formulation, testing and packaging of preclinical and clinical drug supplies of our product candidates, and will be unable to control these elements at the commercial stage, due to our reliance on third-party manufacturers and analytical facilities;
- if we are not able to establish new collaborations for APX3330 on commercially reasonable terms, we may have to alter our development, manufacturing, and commercialization plans;
- if we are unable to obtain and maintain sufficient patent protection for our product candidates, our competitors could develop and commercialize products or technology similar or identical to ours, which would adversely affect our ability to successfully commercialize any product candidates we may develop, our business, results of operations, financial condition and prospects;
- if we do not obtain protection under the Hatch-Waxman Act and similar foreign legislation by extending the patent terms and obtaining data exclusivity for our product candidate, our business may be materially harmed;
- we may not be able to protect or practice our intellectual property rights throughout the world;
- obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements;
- we depend on intellectual property sublicensed from Apexian Pharmaceuticals, Inc. (“Apexian”) for our APX3330 product candidate under development and our additional pipeline candidates, and the termination of, or reduction or loss of rights under, this sublicense would harm our business;
- we are dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy;
- we will need to develop and expand our company and may encounter difficulties in managing this development and expansion, which could disrupt our operations;
- our insurance policies are expensive and protect only from some business risk, which leaves us exposed to significant uninsured liabilities;
- environmental, social, and governance matters and any related reporting obligations may impact our business;
- if we fail to comply with the continued listing standards of the Nasdaq Capital Market, our common stock could be delisted. If it is delisted, our common stock price and the liquidity of our common stock would be impacted;
- the market price of our common stock may fluctuate significantly;
- we may be subject to securities litigation, which is expensive and could divert management attention; and
- there is uncertainty regarding the use of proceeds, if any, from this offering.

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These risks are not exhaustive. Other sections of this prospectus may include additional factors that could harm our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment.

New risks and uncertainties emerge from time to time, and it is not possible for our management to predict all risks and uncertainties nor can we assess the impact of all such factors on our business or the extent to which any such factor, or combination of such factors, may cause actual results to differ from those contained in, or implied by, any forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus or to conform these statements to actual results or to changes in our expectations.

In addition, “we believe” and “we expect” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and achievements may be different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to \$50,000,000 in aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement after the date of this prospectus over a 30-month period, 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. The aggregate gross proceeds do not include offering expenses of approximately \$140,000 and a cash fee of \$40,000 to Lincoln Park as Lincoln Park's full and complete expense reimbursement in connection with entering into the transaction, including any legal fees. Because we are not obligated to sell any shares of our common stock under the Purchase Agreement, other than the Commitment Shares (from which we will receive no proceeds), the actual total offering amount and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will receive any proceeds under or fully utilize the Purchase Agreement. See "Plan of Distribution" elsewhere in this prospectus for more information.

We intend to use the net proceeds from the sale of common stock offered by us hereunder, if any, for clinical development of our product candidates and for working capital and other general corporate purposes.

Our expected use of the net proceeds from the sale of common stock offered by us hereunder, if any, represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures and the extent of our preclinical, clinical and future development activities may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from our ongoing and planned clinical trials, our ability to take advantage of expedited programs or to obtain regulatory approval for product candidates, the timing and costs associated with the manufacture and supply of product candidates for clinical development and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending the use of the net proceeds from the sale of common stock offered by us hereunder, if any, as described above, we intend to invest the net proceeds, if any, in a variety of capital preservation instruments, including short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

LINCOLN PARK TRANSACTION

General

On August 10, 2023, we entered into the Purchase Agreement with Lincoln Park. In connection with the Purchase Agreement, on August 10, 2023, we also entered into a registration rights agreement (the “Registration Rights Agreement”) with Lincoln Park, pursuant to which we agreed to take specified actions to maintain the registration of the shares of our common stock subject to the offering described in this prospectus. Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to \$50,000,000 of our common stock (subject to certain limitations) from time to time during the 30-month term of the Purchase Agreement. Pursuant to the terms of the Purchase Agreement and Registration Rights Agreement, we have filed with the SEC this prospectus regarding the sale under the Securities Act of the shares issuable to Lincoln Park under the Purchase Agreement. Pursuant to the terms of the Purchase Agreement, on the date of this prospectus, we are issuing 246,792 Commitment Shares to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement. We have also paid a cash fee of \$40,000 to Lincoln Park as Lincoln Park’s full and complete expense reimbursement in connection with entering into the transaction, including any legal fees.

Under the Prior S-3 Shelf and the Prior Prospectus, the Company registered the offer and sale of up to \$50,000,000 of shares of our common stock and an additional 246,792 Commitment Shares under the Purchase Agreement. Since August 11, 2023, the Company issued the 246,792 Commitment Shares and sold 1.3 million shares to Lincoln Park under the Purchase Agreement. Because the Prior S-3 Shelf expires on February 12, 2024, the Company has filed this New Form S-3 Shelf, which includes this prospectus as a part thereof, which Prospectus supersedes and replaces the Prior Prospectus, registering the offer and sale of up to \$50,000,000 shares of our common stock and the Commitment Shares under the Purchase Agreement.

We may, from time to time and at our sole discretion, direct Lincoln Park to purchase shares of our common stock upon the satisfaction of certain conditions set forth in the Purchase Agreement at purchase prices per share as computed in accordance with the terms as set forth in the Purchase Agreement. We will control the timing and amount of any sales of our common stock to Lincoln Park, and Lincoln Park has no right to require us to sell any shares to it under the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

Under applicable Nasdaq listing rules, we are prohibited from issuing to Lincoln Park more than the Exchange Cap of 4,195,058 shares of common stock under the Purchase Agreement (including Purchase Shares and Commitment Shares), representing 19.99% of the outstanding shares of our common stock immediately prior to the execution of the Purchase Agreement (subject to certain reductions and pro rata adjustments as set forth in the Purchase Agreement), unless (i) we first obtain stockholder approval in accordance with applicable Nasdaq listing rules to issue shares in excess of the Exchange Cap to Lincoln Park under the Purchase Agreement or (ii) the average price paid by Lincoln Park for all shares of common stock issued by us under the Purchase Agreement is equal to or greater than \$4.399 (which represents the lower of (A) the official closing price of our common stock on Nasdaq on the date 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 date of the Purchase Agreement, as adjusted to take into account our issuance of the Commitment Shares to Lincoln Park for non-cash consideration), such that the Exchange Cap will not apply under applicable Nasdaq listing rules to limit issuances and sales of our common stock to Lincoln Park pursuant to the Purchase Agreement. 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 listing rules.

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

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Purchase of Shares under the Purchase Agreement

Regular Purchases

Under the Purchase Agreement, after the Commencement Date (as defined below), on any business day selected by us, we may direct Lincoln Park to purchase up to 50,000 shares of our common stock on such business day (or the purchase date), which we refer to as a Regular Purchase, provided that the Closing Sale Price of our common stock on the applicable Purchase Date is not below \$0.25, provided, however, that (i) a Regular Purchase may be increased to up to 60,000 shares if the closing sale price of our common stock on Nasdaq is not below \$5.00 on the applicable purchase date and (ii) a Regular Purchase may be increased to up to 70,000 shares if the closing sale price of our common stock on Nasdaq is not below \$7.50 on the applicable purchase date. Lincoln Park's committed obligation under any single regular purchase, subject to certain exceptions, cannot exceed \$1,000,000. We may direct Lincoln Park to purchase shares in Regular Purchases as often as every business day. The foregoing share amounts and per share prices will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring after the date of the Purchase Agreement.

The purchase price per share for each such Regular Purchase will be equal to the lesser of:

- the lowest sale price for our common stock on Nasdaq on the purchase date of such shares; and
- the arithmetic average of the three (3) lowest closing sale prices for our common stock on Nasdaq during the ten (10) consecutive business days prior to the purchase date of such shares.

Accelerated Purchases

We may also direct Lincoln Park, on any business day on which we have submitted a Regular Purchase notice for the maximum amount allowed for such Regular Purchase, to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, of up to the lesser of:

- three (3) times the number of shares purchased pursuant to such Regular Purchase; or
- 30% of the aggregate shares of our common stock traded on Nasdaq during the period on the trading day immediately following the purchase date for such Regular Purchase (the "Accelerated Purchase Date"), beginning at the commencement of regular trading on Nasdaq (or such later time on such Accelerated Purchase Date as mutually agreed by us and Lincoln Park specified in the Accelerated Purchase notice for such Accelerated Purchase), and ending at the close of regular trading on Nasdaq on such Accelerated Purchase Date, or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed prior to the close of regular trading on Nasdaq on the applicable Accelerated Purchase Date, ending at such earlier time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase Date (the "Accelerated Purchase Measurement Period").

The purchase price per share for each such Accelerated Purchase will be equal to 96.5% of the lower of:

- the closing sale price of our common stock on Nasdaq on the applicable Accelerated Purchase date; and
- the volume-weighted average price of our common stock on Nasdaq during the applicable Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date.

Additional Accelerated Purchases

We may also direct Lincoln Park on any business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder have been delivered to Lincoln Park in accordance with the Purchase Agreement, to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- three (3) times the number of shares purchased pursuant to the applicable corresponding Regular Purchase; and
- 30% of the aggregate shares of our common stock traded on Nasdaq during the period on the applicable Additional Accelerated Purchase Date beginning at the time mutually agreed by us and

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Lincoln Park and specified in the Additional Accelerated Purchase notice for such Additional Accelerated Purchase, and ending at the close of regular trading on Nasdaq on such Additional Accelerated Purchase Date, or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed prior to the close of regular trading on Nasdaq on such date, ending at such earlier time that any one of such thresholds is crossed, which period of time on the applicable Additional Accelerated Purchase Date (the “Additional Accelerated Purchase Measurement Period”).

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 have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each such Additional Accelerated Purchase will be equal to 96.5% of the lower of:

- the closing sale price of our common stock on Nasdaq on the applicable Additional Accelerated Purchase date; and
- the volume-weighted average price of our common stock on Nasdaq during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase Date.

In the case of Regular Purchases, Accelerated Purchases, and Additional Purchases, 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 between the business days used to compute the purchase price. Other than as set forth 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 the following:

- the effectiveness of the registration statement of which this prospectus lapses for any reason (including, without limitation, the issuance of a stop order or similar order by the SEC), or such registration statement (or the prospectus forming a part thereof) is unavailable for the sale by us or the resale by Lincoln Park of our common stock under the Purchase Agreement, 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, but excluding a lapse or unavailability where (i) we terminate the registration statement after Lincoln Park has confirmed in writing that all of the shares of our common stock covered thereby have been resold or (ii) we supersede the registration statement with a new registration statement, including, without limitation, when the prior registration statement is effectively replaced with a new registration statement covering the shares of our common stock covered by the Purchase Agreement (provided in the case of this clause (ii) that all of the shares of our common stock covered by the superseded or terminated registration statement that have not theretofore been sold to Lincoln Park are included in the superseding or new registration statement);
- suspension by Nasdaq of our common stock from trading or the failure of the common stock to be listed on Nasdaq for a period of one business day;
- the delisting of our common stock from Nasdaq Capital Market, provided, however, that the common stock is not immediately thereafter trading on the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the NYSE American, the NYSE Arca, or the OTCQX or OTCQB operated by the OTC Markets Group, Inc. (or any nationally recognized successors thereto);
- the failure for any reason by our transfer agent to issue (i) the Commitment Shares to Lincoln Park within two business days after the commencement date of the Purchase Agreement, or (ii) Purchase Shares to Lincoln Park within two business days after any Regular Purchase date, Accelerated Purchase Date or Additional Accelerated Purchase Date, as applicable, on which Lincoln Park is entitled to receive such shares;

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- if we breach any representation, warranty, covenant, or other term or condition contained 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, except, 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;
- if any person commences a proceeding against the us pursuant to or within the meaning of any bankruptcy law;
- if we, pursuant to or within the meaning of any bankruptcy law, (i) commence a voluntary case, (ii) consent to the entry of an order for relief against us in an involuntary case, (iii) consent to the appointment of a custodian of the Company or for all or substantially all of our property, or (iv) makes a general assignment for the benefit of our creditors or are generally unable to pay our debts as the same become due;
- a court of competent jurisdiction enters an order or decree under any bankruptcy law that (i) is for relief against us in an involuntary case, (ii) appoints a custodian of the Company or for all or substantially all of our property, or (iii) orders the liquidation of us or any of our subsidiaries;
- if, at any time, we are not eligible to transfer our common stock electronically as DWAC shares; or
- if, at any time after the commencement date of the Purchase Agreement, the Exchange Cap is reached (to the extent such Exchange Cap is applicable) and the stockholder approval to issue in excess of such amount has not been obtained in accordance with the applicable rules of Nasdaq.

In addition to any other rights and remedies under applicable law and the Purchase Agreement, so long as a suspension event has occurred and is continuing, or if any event which, after notice and/or lapse of time, would become a suspension event has occurred and is continuing, we shall not deliver to Lincoln Park any Regular Purchase notice, Accelerated Purchase notice or Additional Accelerated Purchase notice. Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the suspension events set forth above, however, the Purchase Agreement will automatically terminate (i) if, pursuant to or within the meaning of any bankruptcy law, we commence a voluntary case or if any person commences a proceeding against us which is not discharged within 90 days, or a custodian is appointed for the Company or for substantially all of our property, or we make a general assignment for the benefit of our creditors; (ii) we sell and Lincoln Park purchases the full amount of shares available under the Purchase Agreement; or (iii) the full amount of shares available under the Purchase Agreement has not been purchased by the end of the 30-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement.

Our Termination Rights

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give one (1) business day notice to Lincoln Park to terminate the Purchase Agreement.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has represented and warranted that neither it nor any of its agents, representatives or affiliates has engaged in any direct or indirect short-selling or hedging of our common stock, and has agreed that neither it nor any of its agents, representatives or affiliates will engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Prohibitions on Variable Rate Transactions

Subject to specified exceptions included in the Purchase Agreement, we are limited in our ability to enter into specified variable rate transactions until the 30-month anniversary of the date of the Purchase Agreement, irrespective of any earlier termination of the Purchase Agreement. Such transactions include an equity line of credit, at-the-market offering, or other similar continuous offering in which we may offer or issue or sell our common stock or other securities that entitle the holder thereof to acquire shares of our common stock at a future determined price. However, we are permitted to enter into certain at-the-market offerings exclusively through a registered broker-dealer acting as agent of the Company pursuant to a written agreement between the Company and such registered broker-dealer, including our existing at-the-market offering.

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Effect of Performance of the Purchase Agreement on our Stockholders

All shares registered in this offering that have been or may be issued or sold by us to Lincoln Park under the Purchase Agreement are expected to be freely tradable. Shares registered in this offering may be sold over a period of up to 30 months commencing on the date of this prospectus. The sale by Lincoln Park of a significant amount of 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 additional 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 cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Lincoln Park to purchase up to \$50,000,000 of our common stock, exclusive of the Initial Commitment Shares being issued to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement and the Additional Commitment Shares that may be issued to Lincoln Park in connection with each purchase under the Purchase Agreement. The Purchase Agreement generally prohibits us from issuing or selling to Lincoln Park under the Purchase Agreement (i) shares of our common stock in excess of the Exchange Cap, unless we obtain stockholder approval to issue shares in excess of the Exchange Cap or the shares we desire to sell in excess of the Exchange Cap must be sold for an average price that equals or exceeds \$4.399 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction that occurs on or after the date of the Purchase Agreement), such that the transactions contemplated by the Purchase Agreement are exempt from the Exchange Cap limitation under applicable Nasdaq rules and (ii) any shares of our 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 exceed the Beneficial Ownership Limitation of our then issued and outstanding shares of common stock.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of shares to Lincoln Park under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price	Number of Registered Shares to be Issued if Full Purchase⁽¹⁾	Percentage of Outstanding Shares After Giving Effect to the Issuance to Lincoln Park⁽²⁾	Gross Proceeds to Us from the Sale of Shares to Lincoln Park Under the Purchase Agreement
\$2.00	4,195,058 ⁽³⁾	16.50%	\$ 8,390,116
\$3.00	4,195,058 ⁽³⁾	16.50%	\$12,585,174
\$3.25 ⁽⁴⁾	4,195,058 ⁽³⁾	16.50%	\$13,633,939
\$4.00	10,000,000	32.02%	\$50,000,000
\$5.00	8,333,333	28.19%	\$50,000,000
\$6.00	7,142,857	25.17%	\$50,000,000

(1) Includes the total number of Purchase Shares which we would have sold under the Purchase Agreement at the corresponding assumed average purchase price set forth in the first column, up to the aggregate purchase price of \$50,000,000, if available, while giving effect to the Exchange Cap and without regard for the limitation of 9.99% of our outstanding shares of common stock that Lincoln Park may beneficially own under the Purchase Agreement, and excludes the Commitment Shares.

(2) The denominator is based on 20,985,784 shares outstanding as of June 30, 2023. The numerator is based on the number of shares issuable under the Purchase Agreement (that are the subject of this offering) at the corresponding assumed average purchase price set forth in the first column, which excludes the issuance of the Commitment Shares.

(3) This number of shares reflects the Exchange Cap. We may only issue shares of our common stock in excess of the Exchange Cap if we obtain stockholder approval to do so, or if the average price of all shares of common stock issued to Lincoln Park under the Purchase Agreement equals or exceeds \$4.399 per share.

(4) The closing sale price of our common stock on The Nasdaq Capital Market on January 9, 2024.

PLAN OF DISTRIBUTION

Pursuant to this prospectus, we are offering up to \$50,000,000 in shares of our common stock and 246,792 shares of our common stock are being issued to Lincoln Park as Commitment Shares pursuant to the Purchase Agreement. This prospectus also covers the resale of these shares by Lincoln Park to the public. Under the Prior S-3 Shelf and the Prior Prospectus, the Company registered the offer and sale of up to \$50,000,000 of shares of our common stock and an additional 246,792 Commitment Shares under the Purchase Agreement. Since August 11, 2023, the Company issued the 246,792 Commitment Shares and sold 1.3 million shares to Lincoln Park under the Purchase Agreement. Because the Prior S-3 Shelf expires on February 12, 2024, the Company has filed this New Form S-3 Shelf, which includes this prospectus as a part thereof, which Prospectus supersedes and replaces the Prior Prospectus, registering the offer and sale of up to \$50,000,000 shares of our common stock and the Commitment Shares under the Purchase Agreement.

We may, from time to time, and at our sole discretion, direct Lincoln Park to purchase shares of our common stock in a Regular Purchase in amounts up to the greater of 50,000 shares on any single business day from and after the Commencement provided that the closing sale price of our common stock is not below \$0.25, which amounts may be increased to up to 60,000 shares or 70,000 shares of our common stock depending on the market price of our common stock at the time of sale, subject to, upon the parties mutual agreement, which share amounts and related market prices will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring after the date of the Purchase Agreement. In addition, upon notice to Lincoln Park, we may, from time to time and at our sole discretion, direct Lincoln Park to purchase additional shares of our common stock in “accelerated purchases,” and/or “additional accelerated purchases” as set forth in the Purchase Agreement. The purchase price per share is computed in accordance with the terms as set forth in the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement. See “Lincoln Park Transaction - Purchases of Shares under the Purchase Agreement.”

Lincoln Park is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that it will use an unaffiliated broker-dealer to effectuate all sales, if any, of the common stock that it may purchase from us pursuant to the Purchase Agreement. Such sales will be made on Nasdaq 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.

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

We have paid \$40,000 to Lincoln Park as Lincoln Park’s full and complete expense reimbursement in connection with entering into the transaction, including any legal fees.

We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, 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 represented to us that at no time prior to the date 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 of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to the 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 Lincoln Park, 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 shares offered by this prospectus.

This offering will terminate on the date that all shares offered by this prospectus have been sold to Lincoln Park.

Our common stock is listed on The Nasdaq Capital Market and trades under the symbol “OCUP.” The transfer agent of our common stock is Equiniti Trust Company.

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LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Honigman LLP, Kalamazoo, Michigan. Reed Smith LLP, New York, New York, is counsel for Lincoln Park in connection with this offering.

EXPERTS

The consolidated financial statements of Ocuphire Pharma, Inc. appearing in Ocuphire Pharma, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2022 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus forms a part of a registration statement on Form S-3 that we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We are currently subject to the reporting requirements of the Exchange Act, and in accordance therewith, file periodic reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including Ocuphire. The address of the SEC website is www.sec.gov. Our SEC filings are available to you on the SEC's website at <https://www.sec.gov> and in the "Investor Relations" section of our website at <https://ocuphire.com>. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement) we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act until the termination of the offering of the shares covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K):

- our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on [March 30, 2023](#), and the information specifically incorporated by reference into our Definitive Proxy Statement on Schedule 14A, filed with the SEC on [May 1, 2023](#);
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023, and September 30, 2023 filed with the SEC on [May 15, 2023](#), [August 11, 2023](#), and [November 13, 2023](#);
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on [January 25, 2023](#), [April 21, 2023](#), [June 2, 2023](#), [June 9, 2023](#), [June 14, 2023](#), [August 11, 2023](#), [September 27, 2023](#), [November 1, 2023](#), [November 2, 2023](#), [November 27, 2023](#), and [December 6, 2023](#); and
- the description of common stock set forth in the Registration Statement on Form 8-A, filed with the SEC on [June 7, 2019](#), including any amendments thereto or reports filed for the purposes of updating this description, as updated by [Exhibit 4.6](#) to our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 30, 2023, including any amendments or reports filed for the purposes of updating this description.

We will furnish without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You may request a copy of these documents by writing or telephoning us at the following address:

Ocuphire Pharma, Inc.
37000 Grand River Avenue, Suite 120
Farmington Hills, MI 48335
(248) 957-9024
Attn: Dr. George Magrath, Chief Executive Officer



\$50,000,000 and

246,792 Shares of Common Stock

PROSPECTUS

January 23, 2024
