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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): **May 15, 2023**

Ocuphire Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**001-34079**	**11-3516358**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

37000 Grand River Avenue, Suite 120 Farmington Hills, MI 48335
(Address of principal executive offices and zip code)

248-957-9024
(Registrant's telephone number including area code)

(Registrant's former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	OCUP	NASDAQ

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).
Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition.

On May 15, 2023, Ocuphire Pharma, Inc. (the "Company") issued a press release announcing its financial results for the quarter ended March 31, 2023. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report on Form 8-K (this "Report") and is incorporated herein by reference.

In accordance with General Instruction B.2. of Form 8-K, the information in this Item 2.02, and Exhibit 99.1 hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any of the Company's filings under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, whether made before or after the date hereof, regardless of any incorporation language in such a filing, except as expressly set forth by specific reference in such a filing.

Item 7.01 Regulation FD Disclosure.

On May 15, 2023, the Company posted an updated corporate presentation to its website at https://ir.ocuphire.com/presentations, which the Company may use from time to time in communications or conferences. A copy of the corporate presentation is attached as Exhibit 99.2 to this Report.

The information in this Report, including Exhibit 99.2 hereto, is furnished pursuant to Item 7.01 and shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing. The Company's submission of this Report shall not be deemed an admission as to the materiality of any information required to be disclosed solely to satisfy the requirements of Regulation FD.

Exhibit 99.2 hereto contains forward-looking statements within the meaning of the federal securities laws. These forward-looking statements are based on current expectations and are not guarantees of future performance. Further, the forward-looking statements are subject to the limitations listed in Exhibit 99.2 and in the other reports of the Company filed with the Securities and Exchange Commission, including that actual events or results may differ materially from those in the forward-looking statements.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Exhibit Description
99.1	Press Release by Ocuphire Pharma, Inc., dated May 15, 2023
99.2	Corporate Presentation, dated May 15, 2023
104	Cover Page Interactive Data File (embedded within Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

OCUPHIRE PHARMA, INC.

Date: May 15, 2023

By: /s/ Richard J. Rodgers
Richard J. Rodgers
Interim President and Chief Executive Officer

Exhibit 99.1

Ocuphire Pharma Announces Financial Results for First Quarter 2023 and Provides Corporate Update

End-of-Phase 2 Meeting with FDA Anticipated in 2H 2023 to Confirm Phase 3 Regulatory Path for Oral APX3330 in Diabetic Retinopathy (DR)

PDUFA date for Nyxol First Indication in Reversal of Pharmacologically-Induced Mydriasis (RM) Set for September 28, 2023; Nyxol Development and Commercialization Funded by Viatris

Cash Balance of $39 Million Expected to Fund Operations into 2025

FARMINGTON HILLS, Mich., May 15, 2023 – Ocuphire Pharma, Inc. (Nasdaq: OCUP), 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, today announced financial results for the first quarter ended March 31, 2023, and provided a corporate update.

“Ocuphire made significant progress across both our APX3330 and Nyxol programs throughout the first quarter,” said Rick Rodgers, Interim Chief Executive Officer. “Based on the efficacy and safety data from the ZETA-1 Phase 2 trial of APX3330, we are preparing for an End-of-Phase 2 meeting with the FDA to confirm Phase 3 registration endpoints and study parameters. If approved, APX3330 has the potential to be a non-invasive, oral, early intervention treatment for millions of DR patients at risk of progressing to vision-threatening complications. For Nyxol, we look forward to the September 2023 PDUFA date in its first indication in RM. With a strong cash position and our partner Viatris funding the Nyxol program, we are well positioned to advance both APX3330 and Nyxol programs.”

Key Anticipated Future Milestones

- **APX3330:** End of Phase 2 meeting with FDA to confirm Phase 3 regulatory path for Oral APX3330 in DR (2H 2023)
- **Nyxol:** PDUFA date for Nyxol in RM. FDA approval in RM would trigger a $10 million milestone payment to Ocuphire(September 28, 2023)
- **Nyxol:** Topline results from VEGA-2 Phase 3 pivotal trial of Nyxol in Presbyopia (Late 2023)

Recent Business Highlights

Clinical and Regulatory Updates

- In January 2023, the Company announced topline results from the ZETA-1 Phase 2 trial of oral APX3330 for the treatment of diabetic retinopathy (DR). Oral APX3330 achieved statistical significance on a key pre-specified secondary endpoint of binocular ≥ 3-step worsening of DRSS and demonstrated favorable safety and tolerability. This binocular secondary endpoint is a potential Phase 3 registration endpoint. The Company plans an End-of-Phase 2 FDA meeting in the second half of 2023 to formally confirm this endpoint and other clinical trial parameters.

- In February 2023, the Company announced that the FDA has accepted for review a New Drug Application (NDA) for Nyxol® in RM and set a PDUFA date of September 28, 2023. FDA approval in RM would trigger a $10 million milestone payment to Ocuphire.

- Topline results from the VEGA-2 Phase 3 pivotal trial of Nyxol in presbyopia are expected in late 2023. Nyxol clinical programs in presbyopia and dim light disturbances (DLD) continue to progress as planned.

Presentations, Publications, and Conferences

- From January 2023 through May 2023, several papers, posters, and panel talks were presented at medical and industry conferences with updates on APX3330 in DR and Nyxol in RM, DLD and presbyopia. Highlights include:

    - Results from ZETA-1 Phase 2 trial of APX3330 in DR were presented for the first time to the medical community at the 20th Angiogenesis, Exudation, and Degeneration 2023 Meeting in February 2023.

    - Results from LYNX-1 Phase 3 trial of Nyxol in DLD were presented for the first time to the medical community at the Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting in April 2023, and at the American Society of Cataract and Refractive Surgery (ASCRS) Annual Meeting in May 2023.

    - Previously announced results from ZETA-1 Phase 2 trial of APX3330 in DR were presented to the medical community at the American Society of Cataract and Refractive Surgery (ASCRS) Annual Meeting in May 2023.

Corporate

In April, Ocuphire announced the appointment of Rick Rodgers as Interim President and Chief Executive Officer. Mr. Rodgers is a seasoned operating executive with 20 years of experience in biopharmaceutical management.

First Quarter ended March 31, 2023 Financial Highlights

As of March 31, 2023, Ocuphire had cash and cash equivalents of approximately $39.0 million. The Company has no debt. Based on current projections, management believes the present cash on hand will be sufficient to fund operations into 2025.

License and collaborations revenue was $1.7 million for the three months ended March 31, 2023. There was no revenue recorded in the three months ended March 31, 2022. Revenue during the first quarter of 2023 was derived from the reimbursement of research and development services under the Nyxol License Agreement.

General and administrative expenses for the three months ended March 31, 2023 were $2.3 million, compared to $1.7 million for the three months ended March 31, 2022. The increase was primarily attributable to an increase in stock-based compensation, professional services fees, legal support, and business development activities, offset in part by a decrease in payroll and insurance costs on a net basis. General and administrative expenses included $0.5 million and $0.3 million in stock-based compensation expense during the three months ended March 31, 2023, and 2022, respectively.

Research and development expenses for the three months ended March 31, 2023 were $5.6 million, compared to $4.8 million for the three months ended March 31, 2022. The increase was primarily attributable to increased manufacturing activities for Nyxol and APX3330 period over period as well as increased payroll and consulting costs during the current period. Research and development expenses also included $0.3 million and $0.1 million in stock-based compensation expense during the three months ended March 31, 2023, and 2022, respectively.

The loss from operations for the quarter ended March 31, 2023 was $6.1 million, compared to $6.5 million for the quarter ended March 31, 2022.

Net loss for the quarter ended March 31, 2023 was $5.8 million or ($0.28) per share, compared to $6.6 million or ($0.35) per share for the quarter ended March 31, 2022.

For further details on Ocuphire's financial results, refer to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023 to be filed with the Securities and Exchange Commission.

About Ocuphire Pharma

Ocuphire is a publicly traded (Nasdaq: OCUP), clinical-stage, ophthalmic biopharmaceutical company focused on developing novel therapies for the treatment of unmet needs of patients with retinal and refractive eye disorders.

Ocuphire's lead product candidate targeting retinal (back-of-the-eye) indications APX3330, is a first-in-class, small molecule oral drug that blocks downstream pathways regulated by transcription factor Ref-1 – including those involving angiogenesis (VEGF) and inflammation (NFkB). These pathways are implicated across several ocular diseases, including diabetic retinopathy (DR), diabetic macular edema (DME), and age-related macular degeneration (AMD). Ocuphire recently announced topline data from the ZETA-1 Phase 2 trial in which APX3330 achieved statistical significance on a key pre-specified secondary endpoint of preventing clinically meaningful progression of DR after 24 weeks of daily treatment. APX3330 has also shown a favorable safety and tolerability profile in diabetic subjects (ZETA-1 trial) and in 11 previous clinical trials conducted in healthy, liver disease, and cancer subjects. An End-of-Phase 2 meeting with the FDA is planned for APX3330.

Ocuphire has a partnership with Viatris, Inc. to develop and commercialize Nyxol® eye drops as a preservative-free eye drop formulation of phentolamine mesylate, a non-selective alpha-1 and alpha-2 adrenergic antagonist designed to reduce pupil size by uniquely blocking the alpha-1 receptors found only on the iris dilator muscle without affecting the ciliary muscle. Nyxol has been studied in a total of 12 clinical trials (3 Phase 1, 5 Phase 2, 4 Phase 3) across three indications, including single-use for reversal of pharmacologically-induced mydriasis (RM), and once-daily for treatment of presbyopia and dim light (night) vision disturbances (DLD), pending regulatory approvals. Nyxol's NDA under the 505(b)(2) pathway for the first indication, RM, has been accepted with a PDUFA date assigned of September 28, 2023. Nyxol is currently in Phase 3 for presbyopia and DLD.

For more information, visit www.ocuphire.com.

Forward Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements concerning the timing and success of identifying a permanent CEO, the potential receipt of regulatory approval for Nyxol for the treatment of RM, expected financial results for the quarter ended March 31, 2023, the ability to fund operations into 2025, the occurrence and timing of an End-of-Phase 2 meeting with the FDA, the ability of Viatris to execute successful US and global launches of Nyxol, and the ability to determine a path to registration for APX3330. These forward-looking statements are based upon Ocuphire's current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, including, without limitation: (i) the success and timing of regulatory submissions and pre-clinical and clinical trials, including enrollment and data readouts; (ii) regulatory requirements or developments; (iii) changes to clinical trial designs and regulatory pathways; (iv) changes in capital resource requirements; (v) risks related to the inability of Ocuphire to obtain sufficient additional capital to continue to advance its product candidates and its preclinical programs; (vi) legislative, regulatory, political and economic developments, (vii) changes in market opportunities, (viii) the effects of COVID-19 on clinical programs and business operations; (ix) risks that the Nyxol partnership may not facilitate the commercialization or market acceptance of Ocuphire's product candidates; (x) the success and timing of commercialization of any of Ocuphire's product candidates; and (xi) the maintenance of Ocuphire's intellectual property rights. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the risk factors detailed in documents that have been and may be filed by Ocuphire from time to time with the SEC. All forward-looking statements contained in this press release speak only as of the date on which they were made. Ocuphire undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Contacts

Corporate	Investor Relations	
Rick Rodgers Interim President & CEO ir@ocuphire.com	Corey Davis, Ph.D. LifeSci Advisors cdavis@lifesciadvisors.com	Bret Shapiro CoreIR brets@coreir.com

Ocuphire Pharma, Inc.
Condensed Balance Sheets
(in thousands, except share amounts and par value)

	As of	
	March 31, 2023 (unaudited)	**December 31, 2022**
Assets		
Current assets:		
Cash and cash equivalents	$ 38,988	$ 42,634
Accounts receivable	2,834	1,298
Contract asset	2,467	3,552
Prepaids and other current assets	1,088	1,453
Short-term investments	22	49
Total current assets	45,399	48,986
Property and equipment, net	5	6
Total assets	$ 45,404	$ 48,992
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,221	$ 1,069
Accrued expenses	1,933	1,684
Total current liabilities	4,154	2,753
Warrant liabilities	—	—
Total liabilities	4,154	2,753
Commitments and contingencies		
Stockholders' equity		
Preferred stock, par value $0.0001; 10,000,000 shares authorized as of March 31, 2023 and December 31, 2022; no shares issued and outstanding at March 31, 2023 and December 31, 2022.	—	—
Common stock, par value $0.0001; 75,000,000 shares authorized as of March 31, 2023 and December 31, 2022; 20,947,830 and 20,861,315 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively.	2	2
Additional paid-in capital	118,519	117,717
Accumulated deficit	(77,271)	(71,480)
Total stockholders' equity	41,250	46,239
Total liabilities and stockholders' equity	$ 45,404	$ 48,992

Ocuphire Pharma, Inc.
Condensed Statements of Comprehensive Loss
(in thousands, except share and per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
License and collaborations revenue	$ 1,749	$ —
Operating expenses:		
General and administrative	2,285	1,736
Research and development	5,595	4,772
Total operating expenses	7,880	6,508
Loss from operations	(6,131)	(6,508)
Interest expense	—	(5)
Fair value change in warrant liabilities	—	—
Other income (expense), net	340	(82)
Loss before income taxes	(5,791)	(6,595)
Benefit (provision) for income taxes	—	—
Net loss	(5,791)	(6,595)
Other comprehensive loss, net of tax	—	—
Comprehensive loss	$ (5,791)	$ (6,595)
Net loss per share:		
Basic and diluted	$ (0.28)	$ (0.35)
Number of shares used in per share calculations:		
Basic and diluted	20,939,607	18,888,471

Exhibit 99.2

Ocuphire PHARMA

Restore Vision & Clarity

May 2023

Ocuphire Corporate Presentation

Disclosures and Forward-Looking Statements

This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements concerning the success and timing of planned regulatory filings and approvals, pre-commercial activities, commercialization strategy and timelines, business strategy, product labels, cash runway, scalability, future clinical trials in presbyopia (P), dim light/night vision disturbance (DLD) and diabetic retinopathy (DR) / diabetic macular edema (DME), including the potential for Nyxol to be a "best in class" presbyopia drop, and timing of planned future clinical trials for APX3330, timing and occurrence of an End-of-Phase 2 meeting with the FDA, the potential of a Phase 3 registration path for APX3330, the success and timing of planned regulatory filings, business strategy, cash runway, scalability, the potential for APX3330 to be the first line of therapy for DR patients, and the potential market opportunity for the slowing of DR progression. These forward-looking statements are based upon the Company's current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, including, without limitation: (i) the success, costs, and timing of regulatory submissions and pre-clinical and clinical trials, including enrollment and data readouts; (ii) regulatory requirements or developments; (iii) changes to clinical trial designs and regulatory pathways; (iv) changes in capital resource requirements; (v) risks related to the inability of Ocuphire to obtain sufficient additional capital to continue to advance its product candidates and its preclinical programs; (vi) legislative, regulatory, political and economic developments, (vii) changes in market opportunities, (viii) risks that the partnership with Viatris may not facilitate the commercialization or market acceptance of Ocuphire's product candidates; (ix) the success and timing of commercialization of any of Ocuphire's product candidates, including the scalability of Ocuphire's product candidates and (x) the maintenance of Ocuphire's intellectual property rights. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the risk factors detailed in documents that have been and may be filed by the Company from time to time with the SEC. All forward-looking statements contained in this presentation speak only as of the date on which they were made. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

The Company makes no representation or warranty, express or implied, as to the accuracy or completeness of the information contained in or incorporated by reference into this presentation. Nothing contained in or incorporated by reference into this presentation is, or shall be relied upon as, a promise or representation by the Company as to the past or future. The Company assumes no responsibility for the accuracy or completeness of any such information. This presentation also contains estimates and other statistical data made by independent parties and by us relating to market shares and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of such products.

Corporate Highlights

Two Lead Clinical-Stage Novel Drugs Addressing Multiple Large Ophthalmology Markets with Limited to No Competition & Extensive Patent Portfolio

APX3330 oral tablets
Diabetic
Retinopathy/Diabetic Macular Edema (DR/DME)

Nyxol eyedrops
Reversal of Mydriasis (RM) – eye dilation
Presbyopia (P) – age-related blurry near vision
Dim Light or Night Vision Disturbances (DLD)

Global License Agreement with Viatris to Fund the Development and Commercialization of Nyxol for All Indications

APX3330 – Paradigm Changing Oral Tablet for 8 million DR patients; Moving into Phase 3

Nyxol for RM Indication PDUFA Date on September 28, 2023

Strong Financial Position to Advance APX 3330 and Nyxol Clinical Programs into 2025

Ocuphire PHARMA

Ocuphire Pipeline

Product Candidate	Indication	Pre-clinical	Phase 1	Phase 2	Phase 3	Regulatory Approval	Upcoming Milestones
APX3330 Oral Pill	Diabetic Retinopathy (DR)/ Macular Edema (DME)				EOP2 Meeting		❑ EOP2 Mtg 2H 2023 to Advance to Phase 3
Nyxol® Eye Drop	Reversal of Mydriasis (RM)				Partnered with Viatris	PDUFA Sept 28, 2023	❑ PDUFA Date Sep 28, 2023
Nyxol® Eye Drop	Presbyopia (P)				Partnered with Viatris; Ph3 Initiated		❑ VEGA-2 Phase 3 Topline Data Late 2023
Nyxol® + 0.4% Low Dose Pilocarpine (LDP) Eye Drops							
Nyxol® Eye Drop	Dim Light or Night Vision Disturbances (DLD)				Partnered with Viatris		❑ LYNX-2 2nd Phase 3 trial (n=150+)

Global Partnership with Viatris for Nyxol

Viatris Has Selected Nyxol to be a Key Element of its Global Eye Care Division

Partner for Nyxol global commercialization

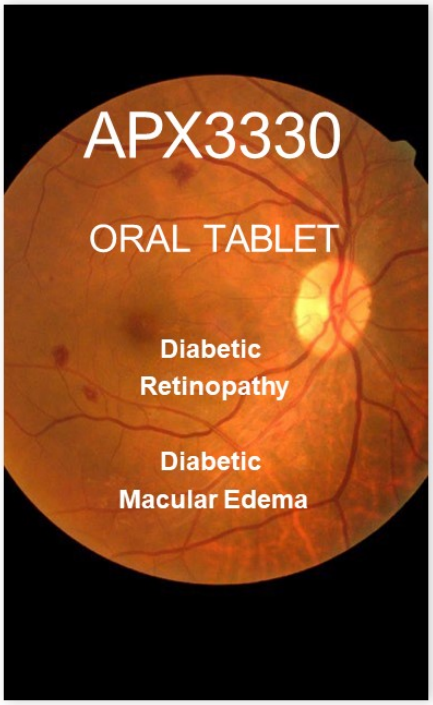
Fully funded development and commercialization costs for all 3 Nyxol indications

Allows Ocuphire to focus on APX3330 development

Strengthens cash position into 2025

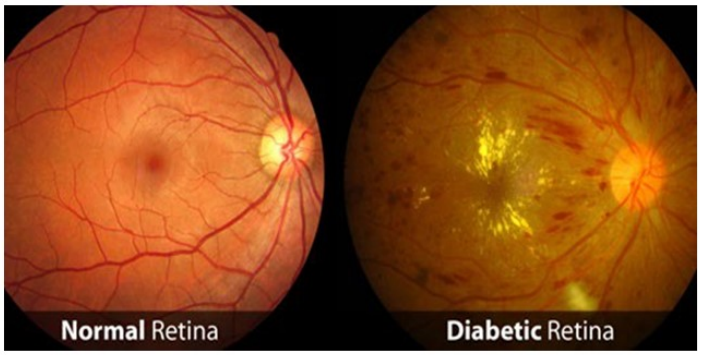
- **$35 million upfront**
- **Funding for potentially all R&D and commercialization for all 3 indications globally**
- **$130 million in regulatory and sales milestones**
  - First potential $10 million milestone payment on FDA approval in RM
- **Tiered double digit royalties through 2040**

Ocuphire PHARMA



DR

DME



"I could lose my hearing, I could lose talking but…. It's frightening to lose my eyesight."

Patient Diagnosed with DR

Ocuphire PHARMA

Diabetic Retinopathy At a Glance

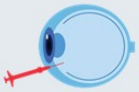
Larger Disease to Manage with Growing Diabetes

There are **8M** adults in the U.S. with DR[1]

DR/DME affects about **1 in 4** people with type 1 and type 2 diabetes

DR is the **leading cause of blindness** among working-age adults

$13B (2020) Global **Intravitreal Injection** Revenues

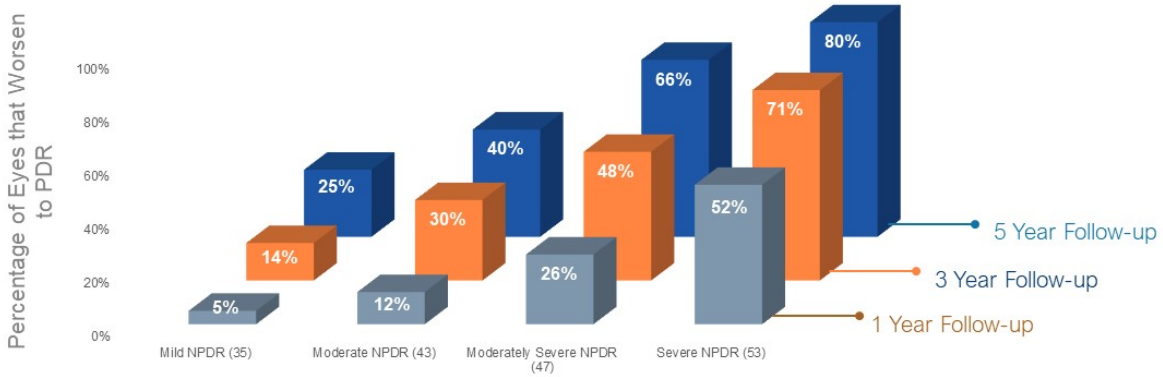


Majority of patients with mild to moderate DR are **not treated with anti-VEGF due to injection fear and burden**

1. American Diabetes Association; International Diabetes Federation; Healthline

DRSS Predicts Vision-Threatening Complications (PDR/DME)

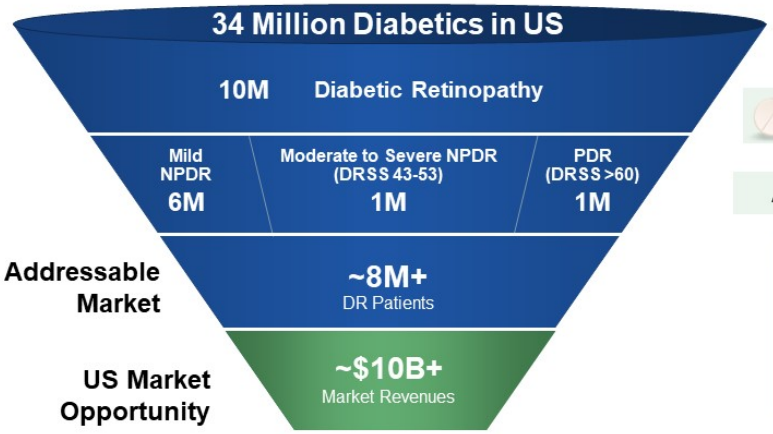
Early screening and treatment for DR can reduce vision loss by up to 94%



Regardless of severity, all eyes worsen over time

1. Early treatment diabetic retinopathy study research group. ophthalmology. 1991;98(5 suppl):823-33.
2. Diabetes control and complications trial research group. N Engl J Med. 1993;329(14):997-86.
3. Fathy C, Patel S, Sternberg P Jr, Kohanim S. Disparities in adherence to screening guidelines for diabetic retinopathy in the United States: a comprehensive review and guide for future directions. *Semin Ophthalmol*. 2016;31(4):364–377. doi: 10.3109/08820538.2016.1154170

Broad Opportunities to Treat Retinal Diseases with APX3330



APX3330

APX3330 + Anti-VEGF treatments

APX3330 / APX2009 / APX2014 *(Local Delivery)*

Inflammatory component is common across these retina indications as well & potentially addressable by MOA of Ref-1

DME 1M | Wet AMD 2M | Dry AMD 10M+ | GA 1M

Potential First Oral Rx for Retina Diseases with Multi-Billion Revenue Opportunity

Source:
1. American Diabetes Association; International Diabetes Federation; Healthline; *Ocuphire internal analysis and assumptions;
2. Das UN. DME, retinopathy and age-related macular degeneration as inflammatory conditions. Arch Med Sci. 2016;12(5):1142-1157. doi:10.5114/aoms.2016.61918
3. Patient survey adapted from Lions International Foundation and International Diabetes Foundation-Europe; Meltzer 2000
4. Estimates are provided by the National Eye Institute, FactSheet, Global Data, and Research and Markets. Estimated values are rounded.
5. Estimated prevalence in the **U.S.**; DME- Diabetic Macular Edema; Age-related Macular Degeneration; Geographic Atrophy; Retinal Vein Occlusion

APX3330 Profile Overview

Oral, First-In-Class Ref-1 Inhibitor with Favorable Human Safety Data from 12 Completed Trials

APX3330: Well-tolerated Oral Dose up to 600 mg/day | Twice Daily Dosing

MOA and Efficacy Signals in DR

Novel MOA for Treating Retina
- ↓ Inflammation
- ↓ Abnormal Angiogenesis

Good Patient Compliance in ZETA-1 with Convenient Oral Dosing

APX3330 Demonstrated Slowing of Progression of Diabetic Retinopathy

Favorable Safety Profile

Over 350 Subjects (Healthy, Liver, Cancer, Diabetic) treated with Several Subjects Systemically Dosed ~1 Year and Others at 24-Wks

Few Systemic AEs Across All Doses (120mg-720mg)
- < 5% Mild Skin Rash/Pruritis (reversible)
- < 5% Mild Diarrhea

No Treatment-Related Organ Toxicity

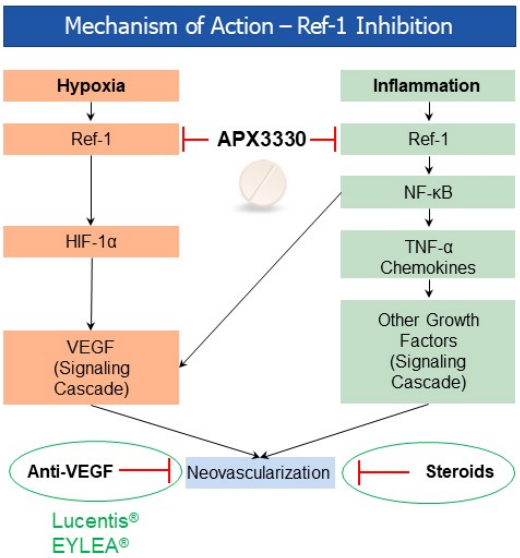
Minimal Ocular Side Effects*

Ocuphire PHARMA

Source: ZETA-1 Clinical Trial
*1 subject had vision blur thought to be related by investigator in ZETA-1

APX3330 Ref-1 Inhibition – Decreases Abnormal Angiogenesis

Ref-1 Involved in Multiple Key Pathways that Contribute to DR and DME



- Ref-1 (reduction-oxidation effector factor-1), a novel target for retinal diseases, is a transcription factor regulator of angiogenesis (VEGF) and inflammation (NFkB)
- **Unique dual MOA decreases abnormal angiogenesis and inflammation**
- **Anti-VEGF injections *do not* target inflammation**
- Previously developed by Eisai for hepatic inflammatory indications and by Apexian for solid tumors in **11 Phase 1 and 2 trials**
- Extensively studied in over **20 in-vitro and animal studies** with favorable efficacy and safety

Ocuphire PHARMA

Sources: Logsdon et al (2018), Li et al (2014).

ZETA-1 Phase 2 Design – APX 3330 in DR

Randomized, Double-masked, Placebo-controlled 24-week Trial (Similar to Eylea P3 DR trial)

Eligibility Criteria

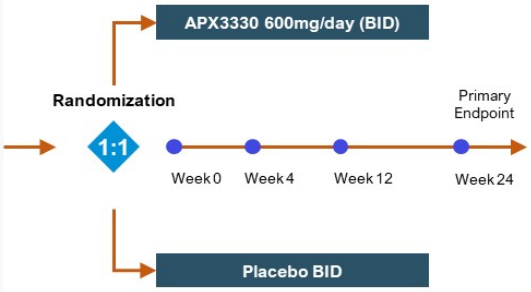
- 25 US sites
- N = 90-100 participants with moderately severe to severe NPDR or mild PDR (DRSS 47, 53, 61)

Key inclusion:

- ≥ 18 years of age
- DRSS 47, 53, or 61
  - Noncentral DME permitted
- ETDRS BCVA ≥ 60 letters (20/63)

Key exclusion:

- OCT CST >320 µm[2]
- Center involved DME allowed in fellow eye
- Anti-VEGF within past 6 months[3]
- HbA1c ≥ 12.0%



Endpoints

Primary:

- % subjects with ≥ 2 step improvement on DRSS (Diabetic Retinopathy Severity Scale[1]) at week 24

Secondary:

- DRSS worsening ≥1, ≥2, ≥3*, ≥4*
- DRSS worsening ≥1, ≥2, ≥3*, ≥4*
- Progression to vision threatening complications
- Central subfield thickness (CST)
- Best Corrected Distance Visual Acuity (BCDVA)
- Rescue subjects
- DME fellow eye status
- Safety and tolerability

Exploratory: Labs/PK

*Potential Phase 3 approvable endpoints

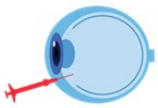
103 subjects enrolled (FPFV Apr 2021 to LPLV Aug 2022)
Topline announced in early 2023

1. By Central Reading Center
2. Center-Involved DME in Fellow Eye is Acceptable
3. Includes Systemic or IVT VEGF

www.clinicaltrials.gov (NCT04692688); Eylea® is registered trademark of Regeneron
NPDR = non-proliferative diabetic retinopathy PDR = proliferative diabetic retinopathy

Change in DRSS is Regulatory Approval Endpoint for DR

FDA accepts improvement OR worsening (prevention of progression)[1] of the disease AND DRSS is an established surrogate endpoint for DR

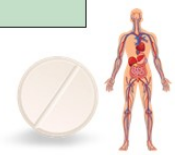


Local Drugs (Intravitreal Injections)

Precedent approvable endpoint for locally-delivered drugs (Non-Systemic) in DR:

- ≥ 2-step DRSS improvement in study eye
  - Aflibercept (PANORAMA trial)
  - Ranibizumab (RISE/RIDE/DRCR trials)

Systemic Drugs



Potential approvable endpoints for systemic drug in DR (to be confirmed at the EOP2 FDA meeting) include:

- ≥ 3-step binocular DRSS improvement
- ≥ 3-step binocular DRSS worsening

End-of-Phase 2 meeting with FDA to align on binocular ≥ 3-step DRSS worsening (i.e., sum of right and left eye change in DRSS) as an acceptable primary endpoint for registration.

This endpoint is distinct from historical anti-VEGF IVT precedent due to different delivery

Ocuphire PHARMA

1. Nair P, Aiello LP, Gardner TW, Jampol LM, Ferris FL III. Report From the NEI/FDA Diabetic Retinopathy Clinical Trial Design and Endpoints Workshop. Invest Ophthalmol Vis Sci. 2016 Oct 1;57(13):5127-5142. doi: 10.1167/iovs.16-20356. PMID: 27699406; PMCID: PMC6016432.

Source: ZETA-1 Clinical trial; Eylea® is registered trademark of Regeneron; Lucentis® is registered trademark of Roche/Genentech

ZETA-1: Baseline Characteristics - Well-Balanced Across Arms

DRSS Scores

	APX3330 n=51	Placebo n=52
DRSS Score – Study Eye		
47 (Moderately severe to severe NPDR)	22 (43%)	18 (35%)
53 (Moderately severe to severe NPDR)	25 (49%)	28 (54%)
61 (Mild proliferative diabetic retinopathy)	4 (8%)	6 (12%)
DRSS Score – Fellow Eye		
43 or Lower (Mild to moderate NDPR or better)	14 (31%)	12 (24%)
47 (Moderately severe to severe NPDR)	13 (29%)	19 (39%)
53 (Moderately severe to severe NPDR)	12 (27%)	9 (19%)
61 (Mild proliferative diabetic retinopathy)	1 (2%)	4 (8%)
65 or Higher (Moderate to severe prolif. DR)	5 (11%)	5 (10%)

Ocuphire PHARMA

Source: ZETA-1 Clinical Trial

Note: 15 fellow eyes were CST>320 microns (center-involved DME eyes)

Key Visual Metrics

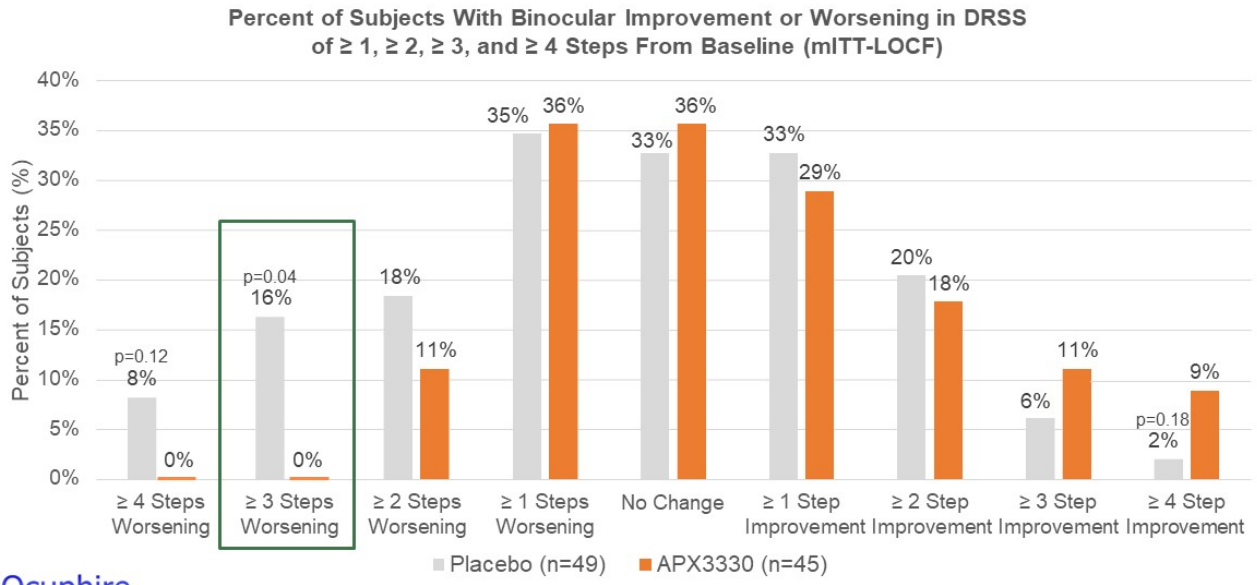
	APX3330 n=51	Placebo n=52	Total n=103
BCVA Study Eye Letters (mean)	**81**	**78**	**80 (20/25 Snellen)**
BCVA Fellow Eye Letters (mean)	76	77	77 (20/32 Snellen)
OCT CST Study Eye (µm)	**270**	**271**	**271**
OCT CST Fellow Eye (µm)	292	286	289
Intraretinal Fluid in the Center of SE	Y – 21 N – 26	Y – 12 N – 31	Y – 33 N – 57
Intraretinal Fluid at the Foveal Center of SE	Y – 1 N – 20	Y – 1 N – 41	Y – 2 N – 61
Intraocular Pressure in Study Eye (mmHg)	15	16	15

Good Visual Acuity

Fluid Below 320µm

ZETA-1: % of Subjects with Binocular Improvement/Worsening in DRSS at Wk 24

APX3330 Demonstrated Statistical Efficacy on Potential Phase 3 Registration Endpoint

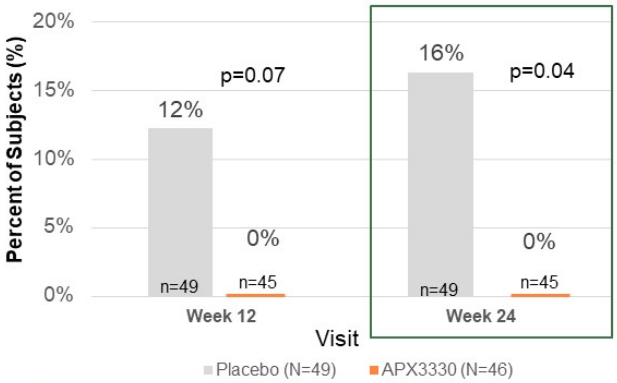


Source: ZETA-1 Clinical Trial

ZETA-1: Percent of Subjects With Binocular ≥ 3-Step Worsening in DRSS

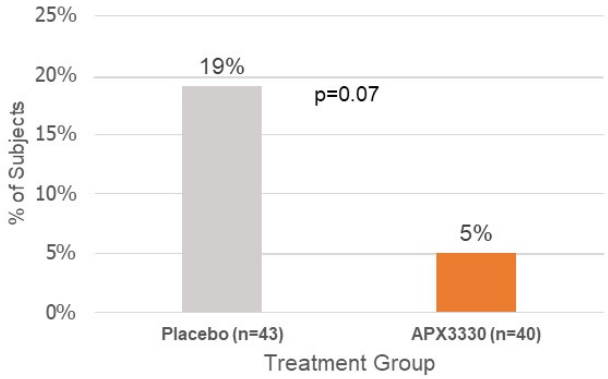
Primary Endpoint for Planned Phase 3 Demonstrates Prevention of Progression

Percent of Subjects With Worsening in DRSS of ≥3 Steps From Baseline by Visit Binocular Eyes (mITT-LOCF)



Based on extrapolation from ZETA-1 and Rise/Ride extension trials[1], estimated **~25% of untreated patients may progress by ≥ 3 steps in binocular DRSS over 1 year**

Percentage of Subjects with ≥ 5 Letters of BCVA Lost at Week 24 (Safety Population)



BCVA data shows **function followed structure with fewer APX3330 treated subjects losing visual acuity** compared to placebo at week 24

Source: ZETA-1 Clinical Trial

1. Sun JK, Evidence for DR Progression and Regression from Clinical Trials. Presented at NDI/FDA DR Clinical Trials Design and Endpoints Workshop, June 26, 2015.

Note: Images from Central Reading Center will be reviewed prior to EOP2 FDA meeting

Note: Large "N" indicates total number of participants within each arm for the mITT-LOCF population. Small "n" indicates total number of evaluable eyes for each respective endpoint and arm.

ZETA-1: Treatment Emergent Adverse Events

Oral APX3330 Showed a Favorable Safety Profile Consistent with Prior Trials

	APX3330 (n=51)	Placebo (n=52)	Total (n=103)
Total AEs	91	120	211
# of Subjects with AEs	29 (57%)	35 (67%)	64 (62%)
Treatment Related AEs	14 (45%)	17 (55%)	31 (30%)
Serious AEs	3 (3%)	11 (9%)	14 (7%)
Subjects Withdrawals Due to AEs	2 (4%)	1 (2%)	3 (3%)
Deaths	0 (0%)	1 (2%)	1 (1%)
AEs in >5% of Subjects*			
| *Eye disorders* | Diabetic Retinal Edema	2 (4%)	5 (10%)	7 (7%)
Diabetic Retinopathy	1 (2%)	6 (12%)	7 (7%)
Vitreous detachment	0 (0%)	3 (6%)	3 (3%)
Cataract	3 (6%)	1 (2%)	4 (4%)
Pruritus	6 (12%)	1 (2%)	7 (7%)
Rash	3 (6%)	1 (2%)	4 (4%)
COVID-19	1 (2%)	5 (10%)	6 (6%)

APX3330 SAEs: Dyskinesia, TIA, Chest pain
Placebo SAEs: Vertigo, Asthenia, Multiple organ dysfunction, Bradycardia, CAD
AEs → Withdrawal APX3330: Presyncope, Dyspnea; Placebo: DME (both eyes)
*Preferred Term within Organ Class

APX3330 Safety Profile:

- Limited AEs, most mild in severity
- AEs similar to or less than placebo (except for pruritis/rash)
- Few serious treatment-related AEs, all unrelated to study medication
- No ocular AEs other than expected DR progression
- No effect on clinical labs
- No adverse effects on heart, kidney, liver, CNS, GI
- No effect on vital signs (HR, BP)
- Patients continued routine medications to manage their diabetes comorbidities

Ocuphire PHARMA

APX3330 - Phase 2 Summary and Next Steps

ZETA-1 Summary

- APX3330 is the most advanced oral program in development for diabetic eye disease
- APX3330 demonstrated favorable safety with compelling potential to slow progression of diabetic retinopathy
- ZETA-1 statistically significant results on potential Phase 3 registration endpoint:
  - 0% APX3330-treated patients had a binocular ≥ 3-step worsening of DRSS from baseline compared with 16% for placebo-treated patients (p=0.04)

APX3330 Next Steps

- Further analysis of ZETA-1 Phase 2 data, including insights for Phase 3 trial design
- Prepare for EOP2 FDA meeting in 2H 2023 to formally confirm Phase 3 design and endpoints
- Advance APX3330 into Phase 3 program

Our Goals for Patients

To have a clinically meaningful impact on ***preventing progression*** to reduce likelihood of vision loss in diabetic retinopathy patients

Ocuphire PHARMA

RM

Reversal of Mydriasis (RM)

P

Presbyopia

1 Nyxol as a Single Drop

2 Nyxol with LDP Adjunctive Therapy

DLD

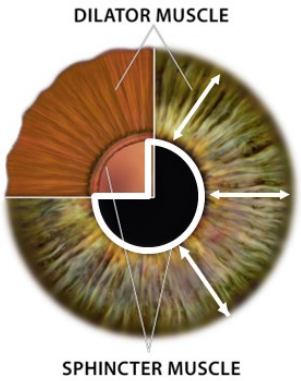
Dim Light or Night Vision Disturbances (DLD)

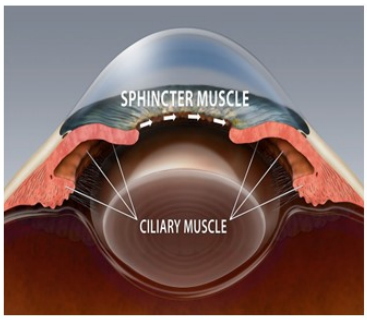
Ocuphire PHARMA

Nyxol's Differentiated MOA as an Alpha-1 Blocker

No Engagement of Ciliary Muscle, No Headaches and Lower Risk of Retinal Detachment

Phentolamine is the Active Ingredient in Nyxol: a non-selective α1 Antagonist





Phentolamine blocks α1 receptors on the **Iris Dilator Muscle up to 24 hours**

↓

Decreases pupil size (moderately) **without affecting the iris sphincter or ciliary muscles**

↓

Allows for 3 indications: **RM, Presbyopia and DLD**

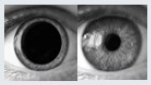
505(b)(2) Regulatory Pathway Supported by Prior Phentolamine Approvals in non-ophthalmic Indications

Ocuphire PHARMA

Company websites. Illustration for educational purposes

Summary of Nyxol Trial Results

Comprehensive Body of Clinical Data Supporting Efficacy and Safety Across 3 Indications

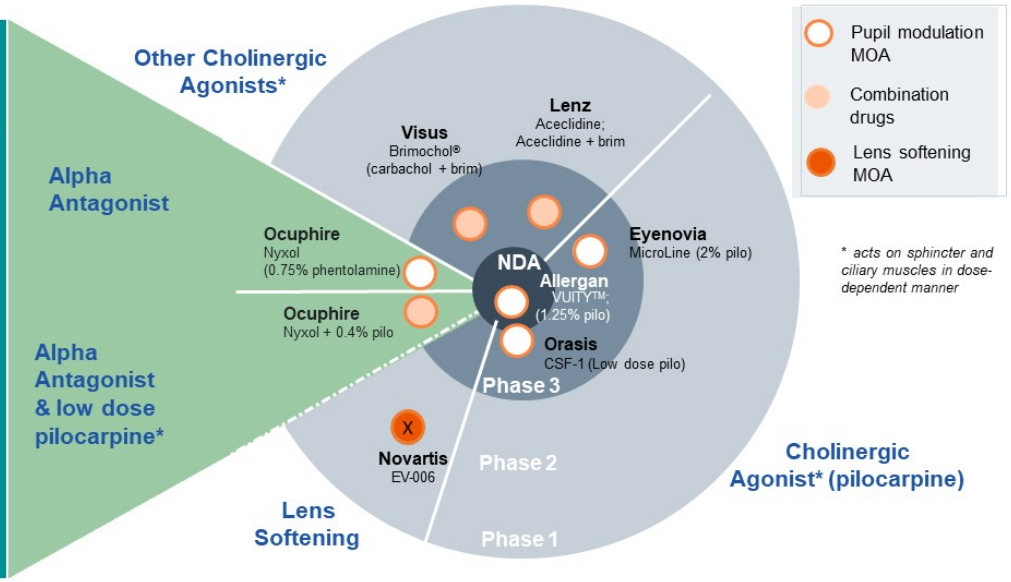
Indication	Primary Endpoint	Efficacy Data	Key Secondary Endpoint(s)	Safety & Tolerability
RM 	Return to baseline pupil diameter at 90 minutes after dilation	**Met Phase 3 primary endpoint** **MIRA-3**: 58% Nyxol vs. 6% placebo **MIRA-2**: 49% Nyxol vs. 7% placebo (p<0.0001) **MIRA-4**: 64% Nyxol vs. 25% placebo	Efficacy across all mydriatic agents, iris color, 1 or 2 drops, and all ages (3-80)	• No headaches • No blurry vision • ~5% mild redness • No change in IOP • No SAEs • Most AEs were mild
Presbyopia (Nyxol Alone) 	≥3 line gain in near vision with loss of no more than 1 line in distance vision	**Met planned Phase 3 primary endpoint** **VEGA-1**: 29% Nyxol vs.12% placebo at 12 hrs post-Nyxol dose (p=0.02)	Durable near vision (18 hrs) Optimal pupil size Pupillary light reflex	
Presbyopia (Nyxol + LDP) 		**Met Phase 2 primary endpoint** **Met planned Phase 3 primary endpoint** **VEGA-1**: 61% combo post-LDP dose (30 min) + post-Nyxol dose (12 hrs) vs. 14% placebo (p<0.0001)	Durable near vision gain Optimal pupil size Pupillary light reflex	
DLD 	≥3 lines (eye test) of improvement in mesopic low contrast best-corrected distance visual acuity (mLCVA)	**Met Phase 3 primary endpoint** **LYNX-1**: 13% Nyxol vs. 3% placebo at Day 8 (p<0.05) and 21% in Nyxol vs.3% placebo at Day 15 (p<0.01)	Improvement visual acuity measures (distance and near) in dim light conditions	

Ocuphire PHARMA

*Trend toward statistical significance even in smaller POS arm from time 0 to time 6 hours (n=30); larger sample size for all arms planned in Phase 3 program

A New, Differentiated MOA and Combination Therapy Offers Tunability

- **Nyxol's potential differentiation:**
  1) **New MOA class** (iris dilator muscle inhibitor)
  2) **Favorable safety and tolerability** (e.g.: no headaches, no accommodative spasm, no risk of retinal detachment)
  3) **24-hour durability**
  4) **Broad range of patients including high myopes**
  5) **Improvement in night vision disturbances**
- **Nyxol+LDP may offer added efficacy and tunability**



Ocuphire PHARMA

Corporate Websites, Grzybowski, A, Markeviciute A, Zemaitiene R. A Review of Pharmacological Presbyopia Treatment. 2020

Corporate Highlights

Two Lead Clinical-Stage Novel Drugs Addressing Multiple Large Ophthalmology Markets with Limited to No Competition & Extensive Patent Portfolio

APX3330 oral tablets
Diabetic
Retinopathy/Diabetic Macular Edema (DR/DME)

Nyxol eyedrops
Reversal of Mydriasis (RM) – eye dilation
Presbyopia (P) – age-related blurry near vision
Dim Light or Night Vision Disturbances (DLD)

Global License Agreement with Viatris to Fully Fund the Development and Commercialization of Nyxol for All Indications

APX3330 – Paradigm changing oral for 8 million DR patients; Moving into Phase 3

Nyxol for RM Indication PDUFA Date on September 28, 2023

Strong Financial Position to Advance APX and Nyxol Clinical Programs into 2025

Ocuphire PHARMA


Ocuphire
PHARMA
Restore Vision & Clarity
www.ocuphire.com
ir@ocuphire.com
Ocuphire Pharma
Appendix:
Team and Nyxol Data
24

Management Team with Decades of Drug Development Experience

Richard Rodgers, MBA
Interim CEO

CARLSON SCHOOL OF MANAGEMENT, UNIVERSITY OF MINNESOTA
MGi PHARMA
Abraxis BioScience
TESARO

Ronil Patel, MS
SVP, Operations and BD

FLORIDA TECH
BETALIQ
Revitalid
POINTGUARD PARTNERS LLC
OCULOS Integrated Insight

Charlie Hoffmann, MBA
SVP, Corporate Development

Tuck School of Business at Dartmouth
Ocularis Pharma
Prudential
SynDevRx
Goldman Sachs

Amy Rabourn, CPA
SVP, Finance

MICHIGAN ROSS
Gemphire Therapeutics
Pfizer
NeuroBo PHARMACEUTICALS
pwc

Drey Coleman
VP, Clinical Operations

OCULOS Integrated Insight
SIRION Therapeutics
UCF

Mitch Brigell, PhD
Head, Clinical Development and Strategy

KANSAS STATE UNIVERSITY
aerpio
Pfizer
NOVARTIS

Barbara Withers, PhD
VP, Clinical and Regulatory Strategy

WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE
aerpio
UBC
Pfizer

Bindu Manne
Head, Market Development and Commercialization

UNC PEMBROKE
Takeda
Shire
MERCK
Ocular Therapeutix
equinox
ThromboGenics

Chris Ernst
Global Head, QA and Manufacturing

NORTHERN KENTUCKY
aerpio
Akebia THERAPEUTICS
MEDPACE

Laura Gambino
Director, Project Management

EASTERN MICHIGAN UNIVERSITY
aerpio
Akebia THERAPEUTICS
Pfizer

Daniela Oniciu, PhD
Global Head, R&D, Chemistry and Product Development

UF UNIVERSITY of FLORIDA
Gemphire Therapeutics
ESPERION
Cerenis THERAPEUTICS
Pfizer

Ocuphire PHARMA

Ocuphire's World-Class Medical Advisory Board

Chief Medical Advisor, Ocuphire
Refractive Specialist
Jay Pepose, MD, PhD
UCLA School of Medicine

Refractive Specialist
Zaina Al-Mohtaseb, MD
Baylor College of Medicine

Refractive Specialist
James Katz, MD
University of Illinois

Refractive Specialist
Y. Ralph Chu, MD
Northwestern University

Refractive Specialist
Marguerite McDonald, MD
Columbia University

Refractive Specialist
Mitch Jackson, MD
University of Chicago

elCON Medical
Refractive Specialist
Eliot Lazar, MD
Georgetown University

Refractive/
Glaucoma Specialist
Thomas Samuelson, MD
University of Minnesota

Refractive/Glaucoma
Specialist
Inder Paul Singh, MD
The Chicago Medical School

Co-Founder
Apexian/APX3330
Mark Kelley, PhD
Indiana University

Retinal Specialist
Michael Allingham, MD, PhD
University of North Carolina

Retinal Specialist
Jeffrey Heier, MD
Boston University

Retinal Specialist
Caroline Baumal, MD
University of Toronto
Medical School

Retinal Specialist
Peter Kaiser, MD
Harvard Medical
School

Retinal Specialist
David Boyer, MD
Chicago Medical School

Retinal Specialist
David Brown, MD
Baylor University

Retinal Specialist
Anat Lowenstein, MD, PhD
The Hebrew University

Retinal Specialist
David Lally, MD
Vanderbilt University

Optometry
Paul Karpecki, OD
Indiana University

Optometry
Douglas Devries, OD
University of Nevada

Optometry
Leslie O'Dell, OD
Salus University

Optometry
Selina McGee, OD
Northeastern
State University

Optometry
Justin Schweitzer, OD
Pacific University
College of Optometry

Ocuphire PHARMA

Ocuphire Board of Directors

Seasoned Directors with Decades of Drug Development, M&A/Financings, and Ophthalmology

Cam Gallagher, MBA
Chair, Board Director

University of San Diego
VELOSBIO
zentalis
ONCTERNAL therapeutics
RetroSense THERAPEUTICS

Richard Rodgers, MBA
Interim President & CEO
Board Director

CARLSON SCHOOL OF MANAGEMENT
UNIVERSITY OF MINNESOTA
TESARO
Abraxis BioScience
MGi PHARMA

Sean Ainsworth, MBA
Lead Independent Director
Board Director

Washington University in St. Louis
Olin Business School
Allergan
RetroSense THERAPEUTICS
IMMUSOFT

Jay Pepose, MD, PhD
Board Director

UCLA David Geffen School of Medicine
PeposeVision INSTITUTE
Wilmer Eye Institute
Washington University in St. Louis

James Manuso, PhD/MBA
Board Director

Columbia Business School
astex pharmaceuticals
Talfinium Investments, Inc.
GALENICA

Susan Benton, MBA
Board Director

USF MUMA
Théa let's open our eyes
Shire
BAUSCH+LOMB

Mina Sooch, MBA
Board Director

HARVARD BUSINESS SCHOOL
Gemphire Therapeutics
Apjohn Ventures
MONITOR
ProNAi

Ocuphire PHARMA