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# **Ocuphire Pharma and Viatris Announce FDA Approval of RYZUMVI™ (Phentolamine Ophthalmic Solution) 0.75% Eye Drops for the Treatment of Pharmacologically-Induced Mydriasis Produced by Adrenergic Agonists (e.g., Phenylephrine) or Parasympatholytic (e.g., Tropicamide) Agents**

**RYZUMVI Expected to be Commercially Available in the U.S. in the First Half of 2024**

FARMINGTON HILLS, Mich., and PITTSBURGH, Sept. 27, 2023 (GLOBE NEWSWIRE) -- Ocuphire Pharma, Inc. (Nasdaq: OCUP), a clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing small-molecule therapies for the treatment of retinal and refractive eye disorders and Viatris Inc. (NASDAQ: VTRS), a global healthcare company, today announced that the U.S. Food and Drug Administration (FDA) has approved [RYZUMVI™](#) (phentolamine ophthalmic solution) 0.75% for the treatment of pharmacologically-induced mydriasis produced by adrenergic agonists (e.g., phenylephrine) or parasympatholytic (e.g., tropicamide) agents. RYZUMVI is expected to be commercially available in the U.S. in the first half of 2024.

"The FDA's approval of RYZUMVI marks a significant milestone for our Eye Care Division and underscores Viatris' commitment to advancing eye care and enhancing access for both eye care professionals and patients," said Viatris Eye Care Division President Jeffrey Nau, Ph.D. "Comprehensive dilated eye exams are vital for early detection of vision-compromising diseases. Our hope is that by addressing patient dilation barriers, we're empowering eye care professionals to broaden exam availability, leading to enhanced eye health outcomes. We look forward to launching RYZUMVI in the first half of next year, and to continuing to advance our robust eye care pipeline which is aimed at addressing a range of vision-related disorders."

In the U.S., an estimated 100 million comprehensive eye exams take place each year that involve pharmacologically-induced mydriasis (or dilation) of the pupils<sup>1</sup>, which can last up to 24 hours<sup>2</sup>. Side effects of pharmacologically-induced mydriasis include sensitivity to light

(photophobia)<sup>2</sup> and blurred vision<sup>2</sup>, which may make it difficult to read, work and drive<sup>3,4</sup>

“We are pleased to receive FDA approval of RYZUMVI eye drops and look forward to Viatri’s successful commercial execution,” said Rick Rodgers, MBA, Interim Chief Executive Officer of Ocuphire. “We are grateful to the many patients and investigators who participated in our clinical trials, as well as the Ocuphire and Viatri teams for their commitment to patients.”

RYZUMVI was evaluated in the comprehensive MIRA clinical trial program involving more than 600 subjects, including the MIRA-1 Phase 2b trial, MIRA-2 and MIRA-3 Phase 3 pivotal trials, and MIRA-4 Phase 3 pediatric trial. In the MIRA-2 and MIRA-3 trials, a total of 553 subjects aged 12 to 80 years, who had mydriasis induced by instillation of phenylephrine or tropicamide or a combination of hydroxyamphetamine hydrobromide and tropicamide (Paremyd) were randomized. Two drops (study eye) or one drop (fellow eye) of RYZUMVI or placebo (vehicle) were administered one hour after instillation of the mydriatic agent. The percentage of subjects with study eyes returning to  $\leq 0.2$  mm from baseline pupil diameter was statistically significantly greater ( $p < 0.01$ ) at all time points measured from 60 minutes through 24 hours in the RYZUMVI group compared with the placebo (vehicle) group across both of the MIRA-2 and MIRA-3 trials (see Figure 1 in the US PI). The efficacy of RYZUMVI was similar for all age ranges including pediatric subjects aged 3 to 17 years. Pediatric subjects aged 12 to 17 years ( $n=27$ ) were treated in MIRA-2 and MIRA-3 and pediatric subjects, aged 3 to 11 years ( $n=11$ ) were treated in MIRA-4.

The most common ocular adverse reactions reported in  $>5\%$  of subjects were instillation site discomfort including pain, stinging and burning (16%) and conjunctival hyperemia (12%). The only non-ocular adverse reaction reported in  $>5\%$  of subjects was dysgeusia (6%).

### **About Pharmacologically-Induced Mydriasis**

An estimated 100 million eye dilations are conducted every year in the U.S. to examine the retina (back-of-the-eye) either for routine check-ups, disease monitoring or surgical procedures<sup>1</sup>. Pharmacologically-induced mydriasis can last up to 24 hours in adults and children<sup>2</sup>. Side effects of pharmacologically-induced mydriasis include sensitivity to light (photophobia)<sup>2</sup> and blurred vision<sup>2</sup>, which may make it difficult to read or work and drive<sup>3,4</sup>.

### **About RYZUMVI™ (Phentolamine Ophthalmic Solution) 0.75%**

RYZUMVI is an anti-microbial preservative-free, topical eye drop formulation of phentolamine ophthalmic solution 0.75% that is FDA-approved to treat pharmacologically-induced mydriasis produced by adrenergic agonists (e.g., phenylephrine) or parasympatholytic (e.g., tropicamide) agents. RYZUMVI is a relatively non-selective  $\alpha$ -1 and  $\alpha$ -2 adrenergic agonist. Dilation of the pupil is primarily controlled by the radial iris dilator muscles surrounding the pupil; these muscles are activated by the  $\alpha$ -1 adrenergic receptors. Phentolamine reversibly binds to these receptors on the iris dilator muscle, thereby reducing pupil diameter. Phentolamine directly antagonizes the mydriatic effect of an  $\alpha$ -1 adrenergic agonist, and indirectly reverses mydriasis induced by muscarinic antagonist effects on the iris sphincter muscle.

### **RYZUMVI™ Important Safety Information**

## Warnings and Precautions

- **Uveitis:** RYZUMVI is not recommended to be used in patients with active ocular inflammation (e.g., iritis).
- **Potential for Eye Injury or Contamination:** To avoid the potential for eye injury or contamination, care should be taken to avoid touching the vial tip to the eye or to any other surface.
- **Use with Contact Lenses:** Contact lens wearers should be advised to remove their lenses prior to the instillation of RYZUMVI and wait 10 minutes after dosing before reinserting their contact lenses.

## Adverse Reactions

The most common adverse reactions that have been reported are instillation site discomfort (16%), conjunctival hyperemia (12%), and dysgeusia (6%).

Click here for full [Prescribing Information](#).

## About Ocuphire Pharma

Ocuphire Pharma, Inc. is a clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing small-molecule therapies for the treatment of retinal and refractive eye disorders. Phentolamine is currently being developed in clinical trials for a number of refractive eye disorder indications in partnership with Viatris. Ocuphire's lead retinal product candidate, APX3330, is a first-in-class small-molecule inhibitor of Ref-1 (reduction oxidation effector factor-1 protein) in clinical development for diabetic retinopathy. APX3330 is not approved for use by any regulatory health authority in any country.

## About Viatris

Viatris Inc. (NASDAQ: VTRS) is a global healthcare company empowering people worldwide to live healthier at every stage of life. We provide access to medicines, advance sustainable operations, develop innovative solutions and leverage our collective expertise to connect more people to more products and services through our one-of-a-kind Global Healthcare Gateway®. Formed in November 2020, Viatris brings together scientific, manufacturing and distribution expertise with proven regulatory, medical, and commercial capabilities to deliver high-quality medicines to patients in more than 165 countries and territories. Viatris' portfolio comprises more than 1,400 approved molecules across a wide range of therapeutic areas, spanning both non-communicable and infectious diseases, including globally recognized brands, complex generic and branded medicines, and a variety of over-the-counter consumer products. With more than 38,000 colleagues globally, Viatris is headquartered in the U.S., with global centers in Pittsburgh, Shanghai and Hyderabad, India. Learn more at [viatris.com](https://viatris.com) and [investor.viatris.com](https://investor.viatris.com), and connect with us on [Twitter](#), [LinkedIn](#), [Instagram](#) and [YouTube](#).

## 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

FDA's approval of RYZUMVI; the timing of RYZUMVI's commercial launch in the U.S., and Ocuphire's business strategy. 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 Viatris 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.

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<sup>1</sup> Wilson FA, Stimpson JP, Wang Y. Inconsistencies Exist in National Estimates of Eye Care Services Utilization in the United States. J Ophthalmol. 2015;2015:435606. doi: 10.1155/2015/435606. Epub 2015 Aug 9. PMID: 26346484; PMCID: PMC4546761

<sup>2</sup> PARAMYD® (hydroxyamphetamine hydrobromide/ tropicamide ophthalmic solution) 1%/0.25% US Prescribing Information. Somerset, NJ.: Akorn, Inc.; 2001.

<sup>3</sup> Goel S, Maharajan P, Chua C, Dong B, Butcher M, Bagga P. Driving ability after pupillary dilatation. Eye (Lond). 2003 Aug;17(6):735-8. doi: 10.1038/sj.eye.6700490. PMID: 12928686

<sup>4</sup> Siderov J, Bartlett JR, Madigan CJ. Pupillary dilation: the patient's perspective. Clinical and Experimental Optometry. 1996;79(2):62-66. doi: 10.1111/j.1444-0938.1996.tb04976.



Source: Ocuphire Pharma