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Ocuphire Announces Publication of ORION-1 Phase 2 Results for Nyxol in Clinical Ophthalmology and Presentation at the January OIS Presbyopia Innovation Showcase

Durability of Nyxol's Pupil Constricting Effects Using an Evening Dosing Regimen Informs Dosing Strategy for Phase 2 Trial in Presbyopia and Phase 3 Trial in NVD

Ocuphire Invited to Present at the Ophthalmology Innovation Summit (OIS) Presbyopia Innovation Showcase on January 28, 2021

FARMINGTON HILLS, Mich., Jan. 20, 2021 (GLOBE NEWSWIRE) -- Ocuphire Pharma, Inc. (Nasdaq: OCUP), a clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing therapies for the treatment of several eye disorders, announced today that results from its ORION-1 (NCT03960866) Phase 2 clinical trial evaluating the safety and efficacy of Nyxol® in glaucoma and presbyopia have been published in *Clinical Ophthalmology*, an international, peer-reviewed, open access journal covering all subspecialties within ophthalmology.

The paper, titled "**Phentolamine Mesylate Ophthalmic Solution Provides Lasting Pupil Modulation and Improves Near Visual Acuity in Glaucoma Patients in a Randomized Phase 2b Clinical Trial**", reported the following key findings:

- Use of Nyxol eye drops produced a statistically significant 20% mean reduction or approximately 1 mm in pupil diameter under daytime and nighttime lighting conditions that was sustained for over 30 hours post-dosing;
- Over 60% of patients in the Nyxol treatment group demonstrated a statistically significant improvement of 1-line or greater in near visual acuity compared to 20% on placebo;
- There was no statistical difference in eye redness compared to placebo upon examination the following morning after dosing the prior evening before bedtime; and
- Nyxol eye drops demonstrated with daily evening dosing for 2 weeks a tolerable profile with no systemic effects and an intraocular pressure (IOP) lowering trend, especially for those with IOP baselines that were slightly higher than the normal range.

Highlights from this double-masked, randomized, placebo-controlled, multiple-dose, multi-center Phase 2b trial were first presented by Dr. Jay Pepose at the Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting 2020. The peer-reviewed journal publication can now be found at on Ocuphire's website here.

“We are excited to announce the second peer-reviewed publication of clinical results from our second recent Phase 2 trial in our Nyxol program and would like to thank the authors, who include the five site investigators, our medical monitor at Oculos, and our team at Ocuphire for their contributions,” said Mina Sooch, MBA, President and CEO of Ocuphire Pharma. “The findings of the ORION-1 trial and our comprehensive end of Phase 2 meeting with the FDA in May 2020 set the direction for us to also pursue Nyxol in presbyopia. We believe that 2021 could be a transformational year for Ocuphire with 4 late-stage trials planned with our Nyxol eye drops in front of the eye indications and APX3330 oral tablets for diabetic retinal disease, starting with the first Phase 3 data read-out expected at the end of first quarter 2021.”

The ORION-1 Phase 2 trial together with the MIRA-1 Phase 2 trial established Ocuphire’s strategy to focus on acute and chronic *pupil modulation* indications: night vision disturbances (NVD), reversal of mydriasis, and presbyopia. The observation from the trial of durable moderate miotic effects combined with many presbyopia patients experiencing a 1-line improvement in near visual acuity confirmed the potential overall benefits of a smaller pupil aperture for improvement in everyday vision. The results also reaffirmed the potential for Nyxol, a moderate miotic, to be combined with another moderate miotic with the goal to achieve “pinhole” diameter of 1.6 mm to 2.0 mm. This target diameter has been demonstrated by ophthalmic devices and pharmacological treatments to achieve the primary endpoint of 3-line near vision improvement in many patients. Accordingly, Ocuphire is planning to initiate VEGA-1, a Phase 2 randomized, double-masked, placebo-controlled trial investigating a combination of 1% Nyxol and low dose (0.4%) pilocarpine to treat presbyopia. Ocuphire believes that the addition of low-dose pilocarpine, a miotic that works through a different iris muscle and mechanism than Nyxol, may synergistically produce the “pinhole” effect on the pupil as well as reduce the side effects common with higher approved doses of pilocarpine. For more information about the VEGA-1 Phase 2 trial design, please visit www.clinicaltrials.gov (NCT04675151).

Ocuphire has been invited to present on its approach to treating presbyopia at the Ophthalmology Innovation Summit (OIS) Presbyopia Innovation Showcase on January 28, 2021. More information about the showcase can be found at https://ois.net/ois-presbyopia-innovation-showcase-2021.

For NVD, Ocuphire’s most advanced chronic ophthalmic indication, the same daily evening dosing regimen from ORION-1 for Nyxol is planned. Ocuphire recently initiated the LYNX-1 Phase 3 randomized, double-masked, placebo-controlled trial in 160 NVD patients. The primary endpoint in this registration trial is the percentage of subjects with at least 3 lines of improvement in mesopic, low-contrast, best-corrected distance visual acuity after 7 days. Secondary endpoints include pupil diameter reductions, other visual acuity measures (distance and near), and safety and tolerability. Additional information about the LYNX-1 Phase 3 trial can be found at www.clinicaltrials.gov (NCT04638660).

About Presbyopia

Presbyopia is an age-related condition with onset most common in people over 40 years old. As the eye ages, the lens becomes stiffer, which limits the eye’s ability to adjust its focus for reading or for other tasks that require clear vision at near distances. It is estimated that 120 million Americans have presbyopia and this number is expected to grow as the population above the age of 40 increases. Currently, there are no pharmacological therapies

approved for presbyopia, but there is evidence that decreasing pupil diameter, especially to a size of 1.6 mm to 2.0 mm to create a “pinhole” effect, can improve near visual acuity by increasing the depth of focus.

About Night Vision Disturbances (NVD)

NVD, also known as dim light vision disturbances, is a condition in which peripheral imperfections (aberrations) of the cornea scatter light when the pupil dilates in dim light conditions. These imperfections can be naturally occurring, especially with age, or surgically induced from refractive procedures such as LASIK. Patients with NVD experience glare, halos, starbursts and decreased contrast sensitivity. About 38 million individuals in the US are believed to suffer from some level of NVD, with an estimated 16 million having moderate-to-severe NVD that may be directly addressable with a pupil management approach. The effects of NVD may be reduced or eliminated by moderately reducing pupil diameter to avoid some of the aberrations and their scattering effect, without impeding the ability to see at night. Four major patient subpopulations of NVD have been identified based on their underlying cause of aberrations: night myopia (naturally occurring), non-central cataracts, post-LASIK procedures, and post-IOL implantation. These conditions span an age range of late teenagers to those 80 years and older, with no approved pharmacologic therapies available for use.

About Ocuphire Pharma

Ocuphire is a publicly traded (NASDAQ: OCUP), clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing therapies for the treatment of several eye disorders. Ocuphire’s pipeline currently includes two small-molecule product candidates targeting front and back of the eye indications. The company’s lead product candidate, Nyxol® Eye Drops, is a once-daily preservative-free eye drop formulation of phentolamine mesylate, a non-selective alpha-1 and alpha-2 adrenergic antagonist designed to reduce pupil size, and is being developed for several indications, including dim light or night vision disturbances (NVD), reversal of pharmacologically-induced mydriasis (RM), and presbyopia, and has been studied in 7 Phase 1 and 2 trials. Ocuphire’s second product candidate, APX3330, is an oral tablet designed to inhibit angiogenesis and inflammation pathways relevant to retinal and choroidal vascular diseases, such as diabetic retinopathy (DR) and diabetic macular edema (DME), and has been studied in 11 Phase 1 and 2 trials. Nyxol is entering Phase 3 clinical development for NVD and RM, and Phase 2 for presbyopia. APX3330 is entering Phase 2 clinical development for DR/DME. As part of its strategy, Ocuphire will continue to explore opportunities to acquire additional ophthalmic assets and to seek strategic partners for late-stage development, regulatory preparation and commercialization of drugs in key global markets. Please visit www.clinicaltrials.gov to learn more about Ocuphire’s completed Phase 2 clinical trials and ongoing Phase 3 registration trials (NCT04620213 and NCT04638660) and soon to recruit Phase 2 trials (NCT04675151 and NCT04692688). For more information, please 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 Ocuphire’s product candidates, results of ongoing and future clinical trials, and

commercialization and market opportunities. 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; (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, and (viii) the effects of COVID-19 on clinical programs and business operations. 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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