Eyenovia Reveals Positive Evidence That Optejet® Delivery Technology Decreased Inflammation From Preserved Glaucoma Solutions Compared to Drops

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Academic study found the Optejet® to be comparable to non-preserved drops in lessening the proinflammatory response

NEW YORK, Jan. 12, 2023 (GLOBE NEWSWIRE) -- Eyenovia, Inc. (NASDAQ: EYEN), a pre-commercial ophthalmic technology company developing the Optejet® delivery system for use both in connection with its own drug-device therapeutic programs for mydriasis, presbyopia and pediatric progressive myopia as well as out-licensing for additional indications, today announced positive results from a research study conducted in collaboration with Dr. Pedram Hamrah, Interim Chairman of Ophthalmology at Tufts Medical Center, which evaluated the gene and protein expression of cytokines and chemokines after latanoprost+benzalkonium chloride (BAK) treatment administered via Optejet versus latanoprost+BAK administered via standard eye drops.

Preservatives are used to support product sterility and prolong shelf-life. Unfortunately, patients treated with BAK preserved glaucoma medications often suffer inflammatory side effects and develop subsequent ocular surface disease.

“Chronic treatment of glaucoma with BAK preserved topical ophthalmic medications introduces ocular surface stress and may trigger a vicious cycle of inflammation,” said Dr. Hamrah. “Unfortunately, the majority of glaucoma patients treated long term with drops eventually succumb to the associated inflammatory effects and discomforts of ocular surface disease.”

Per the in vitro study design, conjunctival epithelial cells were exposed to drug by standard drop or Optejet microdose technology. Assays were then conducted to assess inflammatory Gene expression via RT-qPCR and Protein expression by ELISA. These assays targeted the common immune biomarkers and ocular surface disease inflammatory mediators such as IL6 and MIF cytokines as well as the chemokine CCL2.

The study found that the expression of Pro-Inflammatory cytokines and chemokines was decreased in two out of three cytokines with the latanoprost+BAK treatment administered via Optejet technology compared to latanoprost+BAK administered via standard drops. In these early findings, the Optejet® technology appears better than latanoprost+BAK administered via standard drops in reducing inflammatory processes and pathways.

Julie Whitcomb, PhD, Sr. Director of Medical Affairs at Eyenovia, commented, “The Optejet ® Technology shows lower levels of proinflammatory cytokines and chemokines than standard drops. The current study further underscores that precision dosing of drug and preservatives by the Optejet® decreases inflammation.”

About Mydcombi™ for Mydriasis

Mydcombi is Eyenovia's investigational, first-in-class fixed-dose-combination product (tropicamide 1% and phenylephrine 2.5% ophthalmic spray) for pharmacologic mydriasis (eye dilation), which is targeted to improve the efficiency of the estimated 100 million office-based comprehensive eye exams performed every year in the United States, as well as the estimated 4 million pharmacologic mydriasis applications for cataract surgery. Developed as a micro-formulation for use without anesthetic, Eyenovia believes Mydcombi will help improve the efficacy, tolerability, and efficiency of pharmacologic mydriasis. Mydcombi has been licensed to Arctic Vision (Hong Kong) Limited in Greater China and South Korea.

About Optejet® and Microdose Array Print (MAP™) Therapeutics

Eyenovia's Optejet microdose formulation and delivery platform for ocular therapeutics uses high-precision piezo-print technology to deliver 6-8 µL of drug, consistent with the capacity of the tear film of the eye. We estimate the volume of ophthalmic solution administered with the Optejet is less than 20% of that delivered using conventional eyedroppers, thus reducing overdosing and exposure to drug and preservatives. Eyenovia's patented microfluidic ejection technology is designed for fast and gentle ocular surface delivery, where solution is dispensed to the ocular surface in approximately 80 milliseconds, beating the ocular blink reflex. Successful use of the Optejet has been demonstrated more than 85% of the time after basic training in a variety of clinical settings compared to 40 – 50% historically seen with conventional eyedroppers. Additionally, its smart electronics and mobile e-health technology are designed to track and enhance patient compliance. Optejet® has not been approved or cleared by the FDA for any use and is not commercially available in the United States or in any jurisdiction.

About Eyenovia, Inc.

Eyenovia, Inc. (NASDAQ: EYEN) is an ophthalmic pharmaceutical technology company developing a pipeline of microdose array print (MAP™) therapeutics. Eyenovia is currently focused on the late-stage development of microdosed medications for mydriasis, presbyopia and myopia progression. For more information, visit Eyenovia.com.

The Eyenovia Corporate Information slide deck may be found at ir.eyenovia.com/events-and-presentations.

Forward-Looking Statements

Except for historical information, all of the statements, expectations and assumptions contained in this press release are forward-looking statements. Forward-looking statements include, but are not limited to, statements that express our intentions, beliefs, expectations, strategies, predictions or any other statements relating to our future activities or other future events or conditions, including estimated market opportunities for our product candidates and platform technology. These statements are based on current expectations, estimates and projections about our business based, in part, on assumptions made by management. These statements are not guarantees of future performance and involve risks, uncertainties and

assumptions that are difficult to predict. Therefore, actual outcomes and results may, and in some cases are likely to, differ materially from what is expressed or forecasted in the forward-looking statements due to numerous factors discussed from time to time in documents which we file with the U.S. Securities and Exchange Commission. In addition, such statements could be affected by risks and uncertainties related to, among other things: risks of our clinical trials, including, but not limited to, the costs, design, initiation and enrollment (which could still be adversely impacted by COVID-19 and resulting social distancing), timing, progress and results of such trials; the timing of, and our ability to submit applications for, obtaining and maintaining regulatory approvals for our product candidates; the potential impacts of COVID-19 on our supply chain; the potential advantages of our product candidates and platform technology; the rate and degree of market acceptance and clinical utility of our product candidates; our estimates regarding the potential market opportunity for our product candidates; reliance on third parties to develop and commercialize our product candidates; the ability of us and our partners to timely develop, implement and maintain manufacturing, commercialization and marketing capabilities and strategies for our product candidates; intellectual property risks; changes in legal, regulatory and legislative environments in the markets in which we operate and the impact of these changes on our ability to obtain regulatory approval for our products; and our competitive position. Any forward-looking statements speak only as of the date on which they are made, and except as may be required under applicable securities laws, Eyenovia does not undertake any obligation to update any forward-looking statements.

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