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# Kiora Pharmaceuticals Presents In Vivo Preclinical Data at ARVO 2025 Demonstrating the Potential of KIO-104 to Treat Proliferative Vitreoretinopathy

Encinitas, California--(Newsfile Corp. - May 5, 2025) - Kiora Pharmaceuticals, Inc. (NASDAQ: KPRX), ("Kiora" or the "Company") today announced the results from a preclinical study demonstrating KIO-104 significantly reduced scar formation in an established *in vivo* model of proliferative vitreoretinopathy (PVR). The findings further support KIO-104 as a promising therapeutic candidate for inflammatory and proliferative diseases of the retina that lead to vision threatening scarring. The presentation, titled, *"KIO-104, a novel small molecule inhibitor of DHODH, effectively prevents proliferative vitreoretinopathy in a rabbit model,"* was presented by Romana Seda-Zehetner, MSc MScTox, Kiora's Director, Preclinical Development at the 2025 Association for Research in Vision and Ophthalmology (ARVO) meeting.

"PVR is the leading complication following retinal detachment surgery," said Eric J. Daniels, M.D., Chief Development Officer for Kiora. "This condition is driven by uncontrolled cellular proliferation, fibrosis, and inflammation. This results in scarring which may lead to repeated retinal detachments as well as progressive and permanent loss of vision. Given the reduction in scar formation and scar size observed in this study and the fact that there are no approved drugs for this condition, further development of KIO-104 in PVR is warranted."

The study evaluated the efficacy of intravitreal delivery at multiple dose levels of KIO-104, a small molecule, DHODH inhibitor, in the prevention of PVR-related scar formation. The study used an established retinal detachment model in rabbits that mimics the structural and functional disruption observed in human retinal detachment including glial reactivity, subretinal fibrosis, immune cell infiltration, and glial scar formation. By disrupting an essential molecular pathway for rapidly dividing cells, *de novo* biosynthesis of pyrimidine nucleotides, KIO-104 significantly reduced scar formation in a dose-dependent manner. Findings include the following:

- The high dose group (n=6) exhibited complete prevention of scar formation in all rabbits.
- The low dose group (n=6) exhibited a reduction in scar formation. Two of the six rabbits developed a total of nine retinal scars, with a significant (p=0.04) reduction in mean ± SEM scar length to 43 ± 16 µm.
- The control group (n=6) exhibited scar formation in four out of six animals resulting in 20 retinal scars, with a mean ± SEM scar length of 110 ± 28 µm.

*Study design:*

Retinal detachments were induced in Dutch Belted rabbits (n=6 per group) by subretinal injection of ~500 µL of 0.25% hyaluronic acid into the right eye, inferior to the optic disc/medullary ray followed by a retinotomy to deliver the test article KIO-104 near the detachment site. On the day of disease induction, animals received an intravitreal injection (50 µL) of either vehicle (group 1) or KIO-104 at 1 µg/eye (low dose, group 2) or 10 µg/eye (high dose, group 3). Eyes were collected on day 8 post-induction for histology, and 10 slides per eye taken at regular intervals were evaluated. Tissue sections were stained for vimentin and Isolectin I-B4. Slides were imaged on a widefield fluorescence microscope equipped with plan apochromatic objectives. The outcome measures included (1) the number of glial scars per group (qualitative assessment), (2) scar length per group, and (3) total count of cells testing positive for I-B4 (macrophages and microglia) per eye, normalized by retinal detachment area. These endpoints were selected to evaluate the extent of fibrosis and inflammation.

*About KIO-104*

KIO-104 is a small molecule DHODH inhibitor that works by suppressing T cell replication and function. Suppressing T cell numbers and activity could provide a novel approach to reducing or eliminating the underlying proliferative and inflammatory environment that often leads to scar formation. KIO-104 is being evaluated in a Phase 2 clinical trial in patients with macular edema, an inflammation driven condition secondary to several conditions including diabetic retinopathy and posterior non-infectious uveitis.

**About Kiora Pharmaceuticals**

Kiora Pharmaceuticals is a clinical-stage biotechnology company developing advanced therapies for retinal disease. We target critical pathways underlying retinal diseases using innovative small molecules to slow, stop, or restore vision loss. KIO-301 is being developed for the treatment of retinitis pigmentosa, choroideremia, and Stargardt disease. It is a molecular photoswitch that has the potential to restore vision in patients with inherited and/or age-related retinal degeneration. KIO-104 is being developed for the treatment of retinal inflammation. It is a next-generation, non-steroidal, immuno-modulatory, and small-molecule inhibitor of dihydroorotate dehydrogenase (DHODH).

In addition to news releases and SEC filings, we expect to post information on our website, www.kiorapharma.com, and social media accounts that could be relevant to investors. We encourage investors to follow us on X and LinkedIn as well as to visit our website and/or subscribe to email alerts.

**Forward-Looking Statements**

Some of the statements in this press release are "forward-looking" and are made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995. These "forward-looking" statements include statements relating to, among other things, Kiora's ability to execute on development and commercialization efforts and other regulatory or marketing approval efforts pertaining to Kiora's development-stage products, including KIO-104 and KIO-301, as well as the success thereof, with such approvals or success may not be obtained or achieved on a timely basis or at all, the sufficiency of existing cash and short-term investments on hand to fund operations for specific periods, the ability to timely complete planned initiatives for 2025, including Phase 2 clinical development of KIO-301 and KIO-104, the completion of enrollment and the timing of topline results from the ABACUS-2 Phase 2 trial, the potential for KIO-301 to be the first treatment options for

patients with inherited degenerative diseases like RP, the potential for KIO-104 to reduce inflammation, the timing of topline results from the Phase 2 KLARITY trial of KIO-104, the potential for KIO-104 to apply to other retinal inflammatory diseases, and expected trends for research and development and general and administrative spending in 2025. These statements involve risks and uncertainties that may cause results to differ materially from the statements set forth in this press release, including, among other things, the ability to conduct clinical trials on a timely basis, market and other conditions and certain risk factors described under the heading "Risk Factors" contained in Kiora's Annual Report on Form 10-K filed with the SEC on March 25, 2025 or described in Kiora's other public filings. Kiora's results may also be affected by factors of which Kiora is not currently aware. The forward-looking statements in this press release speak only as of the date of this press release. Kiora expressly disclaims any obligation or undertaking to release publicly any updates or revisions to such statements to reflect any change in its expectations with regard thereto or any changes in the events, conditions, or circumstances on which any such statement is based, except as required by law.

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