

Inotek Pharmaceuticals Presents Preclinical Data in Support of Novel Glaucoma Candidate, INO-8875 at ARVO

INO-8875 currently in Phase 1/2 clinical trial, results anticipated mid-2009

LEXINGTON Mass.,-- May 6, 2009 – Inotek Pharmaceuticals today presented positive preclinical results supporting the Company’s lead clinical-stage drug candidate in glaucoma, INO-8875. INO-8875 is a highly selective adenosine-1 (A1) receptor agonist in development as a topical agent for the treatment of elevated intraocular pressure (IOP) associated with primary open angle glaucoma and ocular hypertension. Elevated IOP can be a risk factor in the development and progression of optic nerve changes and vision loss associated with glaucoma and is thought to be a causal factor in the neuropathology of the disease. Results from preclinical studies of INO-8875 were presented in a poster presentation at the Association for Research in Vision and Ophthalmology, Inc. (ARVO) 2009 Annual Meeting in Fort Lauderdale, FL.

“Today’s results directly support our ongoing Phase 1/2 clinical study of INO-8875 in glaucoma and more broadly validate Inotek’s growing ophthalmology pipeline which is focused on the development of therapeutics with novel mechanisms of action to fulfill major unmet medical needs in serious diseases of the eye,” said Paul G. Howes, Inotek’s President and Chief Executive Officer. “Notably, INO-8875 continues to demonstrate a positive, differentiated profile from other A1 agonists through its high selectivity for A1 receptors, which is believed to greatly reduce off-target effects. We look forward to reporting initial results from the first clinical study of INO-8875 in patients with glaucoma in mid-2009.”

“Preclinical data suggest that INO-8875 lowers IOP primarily by restoring trabecular meshwork outflow,” said Dr. Rudolf Baumgartner, Inotek’s Chief Medical Officer. “Additionally, INO-8875 may have a secondary mechanism of action that leads to a decrease in IOP through a reduction in aqueous humor production. Today’s data further support the idea that INO-8875’s novel mechanism of action may provide a meaningful new therapeutic approach for the treatment of glaucoma and ocular hypertension.”

Study results from the ARVO poster entitled: “INO-8875, An Adenosine A1 Agonist, in Development for Open-Angle Glaucoma Reduces IOP in Three Rabbit Models”

INO-8875 has a high binding affinity, as well as a high selectivity, for the adenosine A1 receptor subtype. INO-8875 was evaluated *in vivo* for safety and efficacy in ocular normotensive and hypertensive animal models. After a single topical administration in the eye of rabbits, INO-8875 at dosages of 25 µg and above was shown to lower IOP by 20% to 35% from baseline at 1-2 hours post-dose and this effect was sustained throughout the 4-6 hour measurement period.

Ocular drug distribution was also assessed *in vivo* and it was determined that INO-8875 is rapidly absorbed and distributed to various target tissues in the rabbit eye, including angular meshwork and aqueous plexus, the area equivalent to the trabecular meshwork in humans. Adenosine A1 receptor agonists are believed to lower IOP by acting on the trabecular meshwork cells to enhance the conventional outflow capacity.

Daily ocular instillations of INO-8875 up to the maximum dosage of 2 mg/day for 2 weeks in rabbits and canines were well-tolerated. There were no treatment-related toxicities, including ophthalmology, cardiovascular or histopathology findings in these ocular studies. Systemic levels of INO-8875 were notably low after ocular administration even at high dosages. This low systemic exposure following high ocular dosing supports a favorable safety profile for INO-8875.

About Inotek Pharmaceuticals

Inotek is a clinical-stage pharmaceutical company developing ophthalmic therapies with novel mechanisms of action to address significant diseases of the eye. The Company has an emerging pipeline of drug candidates targeting a broad range of ophthalmic diseases, including glaucoma, age-related macular degeneration and diabetic retinopathy.

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