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## **Aerie Pharmaceuticals' ROCK Inhibitor, AR-12286, Demonstrates Positive Results in Glaucoma Patients in a Phase 2a Study**

### **Novel Drug has Potential to Create Significant Improvement in Function of Diseased Tissue**

**Bridgewater, NJ and Research Triangle Park, NC – October 22, 2009** – Aerie Pharmaceuticals, a biotechnology company focused on the discovery and development of novel treatments for glaucoma, today announced positive results from a Phase 2a study of its Rho-kinase (ROCK) inhibitor, AR-12286. The study evaluated the safety, tolerability and efficacy of three different doses of AR-12286 in 88 patients with primary open angle glaucoma or ocular hypertension. According to the study results, AR-12286 was safe and well-tolerated. There were no serious side effects reported in the study; mild to moderate and transient hyperemia (eye redness) was observed in a minority of patients. In addition, the Phase 2a study achieved statistical significance in demonstrating lowered intraocular pressure (IOP) with both once-daily and twice-daily treatment. AR-12286 achieved a maximum change of mean IOP of 28% from baseline, which is comparable to, or exceeds, pressure lowering attained by the most commonly used glaucoma drugs as reported in other studies. The Company plans on submitting the full data set for presentation at an upcoming medical meeting.

David L. Epstein, M.D., Professor and Chairman, Department of Ophthalmology, Duke University Medical Center, and Co-Founder of Aerie Pharmaceuticals, commented, "I am greatly encouraged by the results of the Phase 2a study. ROCK inhibitors such as AR-12286 act directly on the diseased tissue that is responsible for elevated intraocular pressure, the trabecular meshwork, and now it has been shown in patients to safely and effectively lower IOP. The ability to target diseased tissue and act directly to restore normal function is a fundamental tenet of Medicine and one which current glaucoma therapies do not address. AR-12286 may have broad implications in glaucoma therapy and could offer the next major advancement in the field since the approval of latanoprost (Xalatan) in 1996." There are currently no ROCK inhibitors on the market, and AR-12286 is the first in class to report positive safety, tolerability and efficacy data in glaucoma patients.

The Phase 2a study was a U.S., multi-center, randomized, double-masked, placebo-controlled study in which patients were randomly assigned to receive one of three doses of AR-12286 or placebo. Patients were first dosed once daily and then twice daily and evaluated over a three-week treatment period.

Thomas van Haarlem, M.D., President and Chief Executive Officer of Aerie Pharmaceuticals, commented, "We are very pleased with these results and will soon initiate a Phase 2b study with once-daily dosing in a larger patient group in order to determine the optimal dose to take forward into Phase 3 registration studies. Aerie's goal is to advance the quality of glaucoma care and the clinical success of AR-12286 represents a significant step. We have several other innovative R&D programs underway with significant therapeutic potential, including the recent discovery by Aerie scientists of a new class of dual-action glaucoma drugs."

#### **About AR-12286**

AR-12286 is a highly selective Rho-kinase (ROCK) inhibitor designed to lower intraocular pressure by improving outflow of fluid via the trabecular pathway with the potential of restoring normal function. This class of compounds acts directly on diseased tissue, the trabecular meshwork<sup>™</sup>, which undergoes pathological changes in patients with primary open angle glaucoma. An altered TM morphology eventually restricts the drainage of fluid from the eye, which causes an increase in intraocular pressure and ultimately damage to the optic nerve. ROCK inhibitors return the TM to a state that allows normal drainage of ocular fluid and thereby reduces pressure in the eye.

#### **About Glaucoma**

Glaucoma represents a group of eye diseases often marked by elevated intraocular pressure, which, if left untreated, can lead to progressive loss of vision and eventually blindness. Over four million people are estimated to have glaucoma in the United States, but only half receive a diagnosis. Approximately 120,000 people are blind from glaucoma, making glaucoma the second most common cause of blindness in the U.S. For more information on glaucoma, please visit the National Eye

Institute's website at [www.nei.nih.gov](http://www.nei.nih.gov).

## **About Aerie Pharmaceuticals**

Aerie Pharmaceuticals is a privately held, clinical-stage biotechnology company dedicated to the discovery and development of novel treatments for glaucoma. Aerie's internal research and development engine has generated an innovative glaucoma pipeline. In addition to AR-12286, the Company's Rho-kinase (ROCK) inhibitor, the pipeline includes AR-13165, a novel product candidate with a dual mechanism of action that represents the first of a new proprietary class of glaucoma drugs. AR-13165 is currently in preclinical, IND-enabling studies. An ocular implant for long-term drug delivery is also being advanced towards the clinic. The Company is located in Bridgewater New Jersey and Research Triangle Park North Carolina.

For more information on Aerie, please visit the Company's website at [www.aeriepharma.com](http://www.aeriepharma.com).

## **Contacts**

### **Aerie Pharmaceuticals**

Thomas van Haarlem  
President and Chief Executive Officer  
(908) 685-0069

### **Burns McClellan, Inc.**

Justin Jackson (media)  
[jjackson@burnsmc.com](mailto:jjackson@burnsmc.com)  
*or*  
Catherine Collier Kyroulis (media)  
[ckyroulis@burnsmc.com](mailto:ckyroulis@burnsmc.com)  
(212) 213-0006