



RXi Pharmaceuticals and EyeGate Pharma Announce Collaboration Focused on Non-Invasive Ocular Delivery of RNAi Therapeutics

Worcester, MA, September 22, 2010 – RXi Pharmaceuticals Corporation (Nasdaq: RXII), a recognized leader in RNAi-based therapeutics, and EyeGate Pharma, the leader in non-invasive ocular drug delivery announced today that they will collaborate on the ocular delivery of RNAi therapeutics. Each party will contribute technology, expertise, and resources to the collaboration.

"The development of RNAi therapeutics to treat retinal disorders is a key focus for our company, and we are excited to be collaborating with EyeGate to explore new, patient friendly approaches for delivering RNAi therapeutics to the eye," said Noah D. Beerman, President and CEO at RXi. "In pre-clinical studies, our sd-rxRNA™ (or self-delivering rxRNA™) compounds have shown effective gene silencing in the retina following intraocular injection. Combining our RNAi technology with EyeGate's unique, non-invasive ocular delivery system (EyeGate® II), provides us with the potential opportunity to develop novel treatments for many ocular diseases and to improve treatment options."

The collaboration will explore the use of EyeGate's iontophoresis technology to deliver RXi's sd-rxRNA compounds to the eye in preclinical models. Iontophoresis is a method of drug delivery that uses a low-level electrical current to deliver a drug across the ocular surface into the eye. Once inside the eye, it is believed that RXi's sd-rxRNA compounds will have access to retinal cells, and by virtue of their self-delivering properties, enter these cells and silence disease causing genes. EyeGate's technology is currently being studied in a Phase III trial with an anti-inflammatory product (EGP-437).

Stephen From, President and CEO of EyeGate Pharma, commented, "Collaborating with RXi reflects our strategy to commercialize innovative products for the ophthalmology community. EyeGate is developing a unique ocular Delivery System, the EyeGate® II, which is a non-invasive drug delivery technology that eliminates ocular injections and the risks associated with them. Our collaboration with RXi will enable us to expand the drug delivery options for the EyeGate II® Delivery System into RNAi therapeutics, developing new uses and markets for the device, as well as developing more patient friendly treatments for retinal disease based on RXi's sd-rxRNA™ technology."

About RXi Pharmaceuticals Corporation

RXi Pharmaceuticals is a recognized leader in RNAi-based therapeutic discovery and development with a comprehensive therapeutic platform that includes both RNA interference (RNAi) compounds and delivery methods. The company is leveraging this broad and integrated RNAi therapeutic platform to build a pipeline of RNAi therapeutics for the treatment of a number of disease areas, including its core focus of developing treatments for anti-scarring and retinal disorders as well as a continued interest in oncology and indications accessible by spinal cord delivery. RXi Pharmaceuticals believes it is well positioned to compete successfully in the RNAi therapeutics market based on the strength of its next

generation therapeutic platform, experienced management team, accomplished Scientific Advisory Board, including Nobel Laureate, Dr. Craig Mello, and its broad intellectual property position in RNAi chemistry and delivery. www.rxipharma.com

About EyeGate Pharma

EyeGate Pharmaceuticals, Inc. is focused on developing treatments for unmet ocular medical needs by employing the EyeGate® II Ocular Drug Delivery System, a non-invasive drug delivery technology. The EyeGate® II delivery system is compatible with a wide range of therapeutics and has the potential to address many anterior and posterior segment diseases. EyeGate Pharma is the first company to demonstrate clinical significance using iontophoretic drug delivery in the eye, and EyeGate® II has been studied in over 200 subjects (more than 500 treatments performed). The Company recently completed randomized, double-masked Phase II clinical studies for both dry eye and uveitis with its lead product candidate, EGP-437. It has initiated a Phase III pivotal trial (ALLUVION) in dry eye patients. EyeGate has ongoing relationships with a number of biotech and pharmaceutical companies (e.g., GSK). For more information, please visit www.eyegatepharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements about future expectations, plan and future development of RXi Pharmaceutical Corporation's products and technologies. These forward-looking statements about future expectations, plans and prospects of the development of RXi Pharmaceutical Corporation's products and technologies involve significant risks, uncertainties and assumptions, including the risk that we may not achieve the goals of our research collaborations or that our collaboration partners' technologies may fail, the risk that the development of our RNAi-based therapeutics may be delayed or may not proceed as planned and we may not be able to complete development of any RNAi-based product, the risk that the FDA approval process may be delayed for any drugs that we develop, risks related to development and commercialization of products by our competitors, risks related to our ability to control the timing and terms of collaborations with third parties and the possibility that other companies or organizations may assert patent rights that prevent us from developing our products. Actual results may differ materially from those RXi Pharmaceuticals Corporation contemplated by these forward-looking statements. RXi Pharmaceuticals Corporation does not undertake to update any of these forward-looking statements to reflect a change in its views or events or circumstances that occur after the date of this release.

CONTACT:

RXi Pharmaceuticals
Donna Falcetti
508-929-3615
ir@rxipharma.com

or

Investors
S. A. Noonan Communications

Susan Noonan
212-966-3650
susan@sanoonan.com

or

Media
Rx Communications Group
Eric Goldman
917-322-2563
egoldman@rxir.com

EyeGate Contact
Stephen From
President & CEO
sdfrom@eyegatepharma.com
781-398-3820