



Mirna Therapeutics presents data at Keystone Symposium on MicroRNA and Cancer

Systemic delivery of a mimic for miR-34 as a microRNA replacement therapy inhibits tumor growth and metastasis in multiple animal models of cancer

Austin, Texas – June 15, 2009 – Mirna Therapeutics, a leading developer of miRNA replacement therapies, presented preclinical data for one of its lead microRNA therapeutic candidates at the Keystone Symposium on MicroRNA and Cancer held June 10 – 15, 2009 in Keystone, Colorado.

Results presented at the Symposium highlighted significant progress on the development and application of the natural tumor suppressor, miR-34. Reduced expression of certain specific miRNAs appears to be critical for the development of tumors in a significant number of cancers. Mirna has combined its miR-34 mimic, called miR-Rx34 with a lipid-based delivery agent and tested the resulting formulation for efficacy and safety using a variety of mouse models. The results presented at the Symposium demonstrated that:

- miR-Rx34 inhibits the proliferation and viability of a variety of cultured cancer cells, including those derived from patients with melanoma, lung, prostate, liver, and colon cancer;
- Systemic delivery of miR-Rx34 inhibits the growth and metastasis of established human tumors in mouse models of lung and prostate cancer;
- IV injections of Mirna's proprietary lipid-based delivery agent either alone or complexed with miR-Rx34 is well tolerated in mice and lacks signs of toxicity and immune response;
- The anti-cancer activity of miR-Rx34 derives primarily through its ability to regulate the expression of several key oncogenes; and
- The expression of miR-34 is reduced in a variety of cancers as well as in cancer stem cells, suggesting that miR-Rx34 may have broad applicability as an anti-cancer agent in miRNA replacement strategies.

"Unlike antisense approaches that reduce the effective level of a particular miRNA, our approach is to replace miRNAs in tumor cells that have reduced levels of key miRNAs," said Matt Winkler, CEO of Mirna. "Because there are already high levels of these miRNAs in normal cells, it is unnecessary to specifically target tumor tissues with the 'replacement therapeutic' approach. Our data adds to a rapidly growing body of evidence that miRNA replacement therapy may be a safe and effective approach for the treatment of a variety of cancers. With this strong data on miR-Rx34, we are preparing for IND-enabling preclinical studies that will pave the way for clinical trials in 2011."

About microRNA

miRNAs are approximately 21 nucleotides long and affect gene expression by interacting with messenger RNAs. Unlike siRNAs, miRNAs are encoded in the human genome and are used as natural regulators of global gene expression. More than 600 miRNA-encoding genes have been identified in the human genome which represents approximately 2% of all known human genes. miRNAs appear to regulate the expression of tens to hundreds of different, though often related, genes, which allows the small RNAs to efficiently regulate and coordinate multiple cellular pathways and processes. Mis-regulation of a few key miRNAs appears to contribute to the development of many cancers and replacement of down regulated miRNAs in tumor cells results in a positive therapeutic response.

About Mirna Therapeutics

Mirna Therapeutics, a wholly-owned subsidiary of Asuragen, Inc., is a biotechnology company focused on the development and commercialization of microRNA (miRNA) therapeutics. Mirna scientists have identified 6 miRNAs, down regulated in many tumors that have high potential in miRNA replacement therapy. It has a substantial body of pending intellectual property around miRNAs based upon a program initiated by its scientists in 2002 as well as intellectual property in-licensed from other institutions. Mirna scientists (while at Asuragen), along with their Yale collaborators have shown that a particular miRNA, let-7, plays a fundamental role in lung cancer and that introduction of let-7 using a viral vector results in a reduction of tumor load in an animal model (Esquela-Kerscher et al. Cell

Contact:

Matt Winkler, CEO
512.901-0900
mwinkler@mirnarx.com



Cycle, March 15, 2008). The Company, founded in 2007, is located in Austin, Texas. For more information, visit www.mirnatherapeutics.com.

###

Contact:
Matt Winkler, CEO
512.901-0900
mwinkler@mirnarx.com