



## **Mirna Therapeutics Inc. Announces Scientific Publication that Outlines a Combinatorial microRNA Approach in Preclinical Lung Cancer Model**

*Studies conducted in collaboration with scientists at Yale University and Dr. Frank Slack, Director of the Institute for RNA Medicine at Beth Israel Deaconess Medical Center*

Austin, Texas – September 26, 2014 - Mirna Therapeutics, Inc., a clinical-stage biotechnology company pioneering microRNA-based Replacement Therapy to treat cancer, today announced the publication of preclinical study results showing that the therapeutic delivery of two microRNA mimics in combination, *let-7* and miR-34, is able to inhibit tumor cell growth and enhance survival in a non-small cell lung cancer (NSCLC) mouse model. *let-7* and miR-34 are two biologically relevant tumor suppressor microRNAs in NSCLC, and each microRNA alone has previously been demonstrated to block lung cancer growth in preclinical animal models.

When used in combination, half the previously administered dose of each of these microRNA mimics was capable of repressing relevant biological targets in cells and *in vivo* and was well tolerated in animals, suggesting that this approach could be a more tolerable and more direct method to target multiple biologically relevant cancer pathways than current targeted therapies.

“Unlike other targeted cancer therapies that affect only one or two oncogenic pathways, we believe tumor suppressor microRNA mimics have great potential as cancer therapeutics due to their capacity to regulate many different oncogenes across multiple pathways,” said Dr. Paul Lammers, President and Chief Executive Officer of Mirna Therapeutics.

### **About the Study**

The data, published in *Oncogene*, one of the world's leading cancer journals, demonstrate how microRNA Replacement Therapy can be used to supplement the expression of tumor suppressor microRNAs that are missing or under expressed in cancer, and that it may offer a promising therapeutic approach for NSCLC, an extremely aggressive form of cancer.

It had been demonstrated earlier that the microRNAs *let-7* and miR-34 each inhibit tumor growth in a variety of preclinical models. In this study, the combination of *let-7* and miR-34 repressed oncogene expression and prevented proliferation and invasion of cancer cells to inhibit tumor proliferation *in vivo*. This combinatorial microRNA approach may be a more direct and less toxic method of targeting multiple biologically relevant pathways at once.

The study was conducted by co-senior authors Andreas Bader, Ph.D., Director, Analytical & External Research at Mirna Therapeutics, and Frank Slack, Ph.D., Director of the Institute for RNA Medicine (iRM) in the Cancer Center at Beth Israel Deaconess Medical Center (BIDMC), as well as colleagues at Mirna Therapeutics and Yale University.

This study was funded, in part, by the American Cancer Society, National Institutes of Health (NIH) Pathway to Independence Award (CA178091) and NIH grant CA131301, as well as a commercialization grant from the Cancer Prevention & Research Institute of Texas (CPRIT) to Mirna Therapeutics.

### **About Mirna Therapeutics, Inc.**

Mirna Therapeutics, Inc. (Mirna) is a clinical-stage biopharmaceutical company developing a broad pipeline of leading microRNA-based oncology therapeutics. Mirna's lead program, MRX34, a first in class cancer compound, is the first microRNA mimic drug candidate to advance into clinical testing, and is now being studied in a Phase 1 trial in patients with liver cancers and hematological malignancies such as lymphoma and leukemia. Mirna's patent portfolio relating to its proprietary microRNA mimics technology consists of nine issued U.S. patents that include cancer and non-cancer therapeutic use claims related to 15 tumor suppressor microRNAs and more than 100 U.S. and foreign pending patent applications that it either owns or in-licenses from third parties. The company, founded in 2007 and located in Austin, TX, has received significant funding from New Enterprise Associates, Pfizer Venture Investments, Sofinnova Ventures and other private investors. Mirna is also funded by the State of Texas, both through the State's Emerging Technology Fund, and from CPRIT.

For more information, visit [www.mirnarx.com](http://www.mirnarx.com).

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