



## **Mirna Therapeutics Reports Notice of Allowance from USPTO Related to the Clinical Application of an Important Cancer-Related miRNA**

**AUSTIN, TX – October 19, 2010** - Mirna Therapeutics, Inc. announced today that the USPTO has allowed claims related to the therapeutic application of let-7 in the regulation of oncogenes. The claims derive from a patent application that was submitted by Yale University and exclusively licensed to Mirna related to the pioneering work of Dr. Frank Slack, Professor of Molecular, Cellular & Developmental Biology at Yale University in New Haven, CT. Let-7 was the first miRNA that was demonstrated to function as a tumor suppressor via its ability to regulate oncogene expression.

During an extended collaboration, scientists at Mirna and Yale have shown that let-7 regulates multiple cancer-related genes and pathways, influences the sensitivity of cancer cells to radiation and chemotherapy, and affects tumor development. Using transgenic and xenograft mouse models of cancer, the two labs have demonstrated that therapeutic candidates featuring the let-7 sequence significantly inhibit tumor development and growth. Additional studies have shown that the altered expression of let-7 is important in cancer stem cell development and that the miRNA can inhibit metastasis.

“More than 100 peer-reviewed publications have detailed the involvement of let-7 in cancer development. We are very excited about the potential of let-7 based therapies being used either alone or in combination with traditional and/or targeted therapies to enhance cancer patient care,” said Paul Lammers, M.D., President and CEO. “This allowance from the USPTO provides further evidence of the critical position that the Company holds in the burgeoning field of miRNA-based therapies.”

### **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 900 miRNAs are encoded in the human genome and comprise approximately 2% of all mammalian genes. Since each miRNA appears to regulate the expression of tens to hundreds of different genes, miRNAs can function as “master-switches,” efficiently regulating and coordinating multiple cellular pathways and processes. By coordinating the expression of multiple genes, miRNAs are responsible for guiding proper embryonic development, immunity, inflammation, as well as cellular growth and proliferation. Misregulation of miRNAs appears to play a fundamental role in many cancers and replacement of down regulated miRNAs in tumor cells results in a positive therapeutic response.

### **About Mirna Therapeutics**

Mirna Therapeutics is a biotechnology company focused on the development and commercialization of microRNA (miRNA) therapeutics. The Company has a substantial body of pending intellectual property around miRNAs developed by its own scientists as well as in-licensed from other institutions. Mirna’s IP portfolio contains >300 miRNAs with applications in oncology and other diseases. Oncology-directed miRNAs include those that are key tumor suppressors in cancer, such as miR-34 and let-7 that have proven to block tumor growth in a number of different pre-clinical animal studies. The Company, founded in 2007, is located in Austin, Texas. For more information, visit [www.mirnarx.com](http://www.mirnarx.com).

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