



Award ID:  
RP101219

Project Title:  
Cancer Treatment Including Drug Discovery/Development and Clinical Trials

Award Mechanism:  
Company Commercialization

Principal Investigator:  
Ana Ward

Entity:  
Mirna Therapeutics, Inc.

#### Lay Summary:

Mirna Therapeutics, Inc. (Mirna) is a discovery-stage biotechnology research and development company focused on microRNA-directed oncology therapies. MicroRNAs (miRNAs) are approximately 21 nucleotides long and affect gene expression by interacting with messenger RNAs. Misregulation of miRNAs appears to play a fundamental role in many cancers and unique miRNA profiles have been identified that are useful for diagnosis of certain cancer types.

Mirna's lead cancer programs feature "MicroRNA Replacement Therapy" which involves introducing tumor suppressor miRNAs into cancer cells to induce cell death and tumor shrinkage. 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. 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. Mirna has entered into an exclusive license agreement with Yale University for the therapeutic use of let-7, and its IP portfolio contains >300 miRNAs with applications in oncology and other diseases, including, but not limited to, inflammatory, cardiovascular, ophthalmic, metabolic, neurological and infectious diseases. In addition, Mirna has active collaborations with both the University of Texas (UT) MD Anderson Cancer Center and UT Austin in the microRNA therapeutic field. Mirna currently has eight lead microRNA candidates directed against the treatment of tumors in lung, breast, prostate and colon cancers. With the CPRIT investment, Mirna will, upon further optimization of its microRNA candidates and their systemic delivery, begin Phase 1 clinical trials. Mirna currently has twelve full time employees with a target of expanding to 20 technical and support employees by Fall of 2011.