miRagen Therapeutics Initiates First Clinical Trial for MRG-106 in Lymphoma Patients

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BOULDER, Colo. -- miRagen Therapeutics, Inc. a clinical-stage biopharmaceutical company developing innovative microRNA-based therapeutics, today announced that it has initiated a Phase 1 clinical study of its anti-cancer product candidate MRG-106, a synthetic microRNA antagonist (LNA antimiR®) of microRNA-155. The Phase 1 trial is being conducted in patients suffering from cutaneous T-cell lymphoma (CTCL) of the mycosis fungoides (MF) sub-type.

"miR-155 is pathologically increased in many forms of lymphoma, including cutaneous T-cell lymphoma (CTCL) and diffuse large B-cell lymphoma (DLBCL)," said David Rodman, Executive Vice President, R&D at miRagen. "In our laboratory tests, MRG-106 enters lymphoma cells and induces programmed cell death through inhibition of microRNA-155, and although our first-in-human trial is designed to assess safety, tolerability and pharmacokinetics, we will also explore the molecular signature of MRG-106 in the lesions of these MF patients."

"This is the first clinical trial in lymphoma patients of an antimiR that targets a well-known oncogenic microRNA," added William S. Marshall, President and Chief Executive Officer of miRagen. "We believe this trial of MRG-106 will advance a mechanistically important, potential new therapy for lymphoma patients and is an example of miRagen's focus on developing innovative product candidates for diseases where there is a significant unmet medical need."

About microRNAs
MicroRNAs have emerged as an important class of small RNAs encoded in the genome, acting as master regulators of gene expression. Recent studies have indicated that microRNAs appear to be associated with many disease processes. Because they are thought to be single molecular entities that dictate the expression of fundamental regulatory pathways, microRNAs represent potential drug targets for controlling many biologic and disease processes.

About MRG-106 and microRNA-155
MRG-106 is an antimiR (antagonist) of microRNA-155. In hematological malignancy microRNA-155 has key roles in the differentiation, function and proliferation of blood and lymph cells. Therapeutic inhibition (antagonism) of microRNA-155 in lymphoma cells restores normal function and reduces the aberrant cell proliferation that is characteristic of cancerous cells.

About miRagen Therapeutics, Inc.
miRagen Therapeutics, Inc., is a clinical-stage biopharmaceutical company focused on the discovery and development of innovative microRNA (miRNA)-targeting therapies in disease areas of high unmet medical need. The Company seeks to leverage in-house expertise in miRNA biology, oligonucleotide chemistry, and drug development to evaluate and advance promising technologies and high-potential product candidates for its own pipeline and in conjunction with strategic collaborators. For certain cardiovascular disease programs, miRagen has a collaboration and license agreement with Servier, an independent French research-based pharmaceutical company. miRagen retains all rights for the Servier-partnered programs in the U.S and Japan.

For more information, please visit www.miragenrx.com.

For information on clinical trials please visit www.clinicaltrials.gov.

Safe Harbor Statement

This press release contains "forward-looking statements" for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements regarding the role of microRNAs in disease processes and as potential drug products, the potential for MRG-106 and MRG-201 to target diseases, the adequacy of the Company's capital to support its future operations and the Company's ability to successfully initiate and complete clinical trials. Such statements are based on management's current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including, without limitation, results of earlier studies and trials may not be predictive of future clinical trial results, the protection and market exclusivity provided by the Company's intellectual property; risks related to the drug discovery and the regulatory approval process, the risks and uncertainties associated with: the Company's financial resources and whether they will be sufficient to meet the Company's business objectives and operational requirements; and, the impact of competitive products and technological changes. The Company disclaims any intent or obligation to update these forward-looking statements

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