miRagen Therapeutics to Present MRG-106 Phase 1 Clinical Trial Data at the International Conference on Malignant Lymphoma

June 8, 2017

Expanded Corporate Milestones for Coming 18 Months

BOULDER, Colo., June 08, 2017 (GLOBE NEWSWIRE) -- miRagen Therapeutics, Inc. (NASDAQ:MGEN), a clinical-stage biopharmaceutical company focused on the discovery and development of RNA-targeted therapies, today announced that interim results from its ongoing Phase 1 clinical trial of MRG-106 will be presented at the 14thInternational Conference on Malignant Lymphoma (ICML) being held June 14-17, 2017 in Lugano, Switzerland. The company will discuss data from its Phase 1 clinical trial evaluating the safety, efficacy and pharmacokinetics of MRG-106 in subjects with the mycosis fungoides (MF) form of cutaneous T-cell lymphoma (CTCL).

MF is the most common form of CTCL. It generally affects the skin, often causing rash and sometimes disfiguring skin lesions and tumors that can progress internally over time.

MRG-106 has been generally well-tolerated to date. Eighteen of nineteen subjects (95%), independent of administration route, showed improvement in either the individual lesion or total skin disease as measured by maximal change in either Composite Assessment of Index Lesion Severity or modified Severity Weighted Assessment Tool.

“We are pleased that MRG-106 has been generally well-tolerated to date with preliminary indications of clinical responses,” said miRagen President and Chief Executive Officer, William S. Marshall, Ph.D. “Patients suffering from MF have limited therapeutic options available, and we look forward to the continued development of MRG-106 for the potential treatment of MF and, ultimately, potential additional indications where elevated expression of microRNA-155 has been implicated in disease.”

Poster Presentation Details
Abstract title: Ph 1 Trial Evaluating MRG-106, a microRNA-155 Inhibitor, Administered by Intratumoral, Subcutaneous, or Intravenous Delivery in Cutaneous T-Cell Lymphoma (CTCL) Patients

- **Session:** New Drug Development
- **Poster number:** 289
- **Date:** June 15-16, 2017, 12:30 p.m. - 1:00 p.m. CET
- **Location:** Marquee Parco Ciani

For additional information, please visit the ICML website: www.lymphcon.ch

In addition to the presentation of Phase 1 data in Lugano, miRagen also announced an expanded list of potential clinical milestones for the coming 18 months.

Dr. Marshall continued, “Including MRG-106, our portfolio of RNA-targeted therapeutic candidates continues to progress steadily, potentially expanding certain expected milestones for the second half of 2017 and next year. We plan to launch additional clinical studies and produce further data in the coming months and year.”

Clinical milestones anticipated to be completed in the coming 18 months include:

- MRG-201 (pathologic fibrosis)
  - Phase 1 results presentation at a scientific conference (2H 2017)
  - Presentation of results from pre-clinical inhalation feasibility study (2H 2017) and initiation of a Phase 1 trial with an inhaled formulation (2018)
- MRG-106 (hematological malignancies)
  - Interim Phase 1 CTCL data presentation at ASH (Q4 2017)
  - Phase 1 trial expansion to include potential second indication (2H 2017) and potential third indication (1H 2018)
  - Initiation of Phase 2 trial in CTCL/Non-Hodgkin’s lymphoma (2H 2018)
- MRG-110 (ischemic disease)
  - Completion of Investigational New Drug/Clinical Trial Application enabling studies (Q4 2017)
  - Initiation of Phase 1 in 2018

About miRagen Therapeutics, Inc.

miRagen Therapeutics, Inc. is a clinical-stage biopharmaceutical company discovering and developing proprietary RNA-targeted therapies with a specific focus on microRNAs and their role in diseases where there is a high unmet medical need. miRagen’s two lead product candidates, MRG-106 and MRG-201, are currently in Phase 1 clinical trials. miRagen’s clinical product candidate for the treatment of certain cancers, MRG-106, is an inhibitor of microRNA-155, which is found at abnormally high levels in several blood cancers. miRagen’s clinical product candidate for the treatment of pathological fibrosis, MRG-201, is a replacement for microRNA-29, which is found at abnormally low levels in a number of pathological fibrotic conditions, including cutaneous, cardiac, renal, hepatic, and pulmonary fibrosis, as well as systemic sclerosis. In addition to miRagen’s clinical programs, it is developing a pipeline of pre-clinical product candidates. The goal of miRagen’s translational medicine strategy is to progress rapidly to

first in human studies once it has established the pharmacokinetics, pharmacodynamics and safety of the product candidate in pre-clinical studies. For more information, please visit www.miragenrx.com.

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

Note Regarding Forward-Looking Statements

This press release may contain forward-looking statements that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. All statements contained in this press release other than statements of historical fact, including statements regarding miRagen's strategy, future operations, future financial position, future revenue, projected expenses, prospects, plans and objectives of management or the expected features of or potential indications for miRagen's product candidates are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "plan," "expect," "predict," "potential," "opportunity," "goals," or "should," and similar expressions are intended to identify forward-looking statements. 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: that miRagen has incurred losses since its inception, and anticipates that it will continue to incur significant losses for the foreseeable future; future financing activities may cause miRagen to restrict its operations or require it to relinquish rights; miRagen may fail to demonstrate safety and efficacy of its product candidates; miRagen's product candidates are unproven and may never lead to marketable products; miRagen's product candidates are based on a relatively novel technology, which makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval, if at all; miRagen's product candidates may cause undesirable side effects or have other properties that could delay or prevent the regulatory approval; and results of miRagen's Phase 1 clinical trials are not sufficient to show safety and efficacy of miRagen's product candidates and may not be indicative of future clinical trial results.

miRagen has based these forward-looking statements largely on its current expectations and projections about future events and trends. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described under the heading "Risk Factors" in miRagen's Annual Report on Form 10-K and subsequent periodic reports filed with the Securities and Exchange Commission. Moreover, miRagen operates in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for its management to predict all risks, nor can it assess the impact of all factors on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements it may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this press release may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. miRagen undertakes no obligation to revise or publicly release the results of any revision to such forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

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