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MacroGenics Initiates Phase 1 Study of MGD010 for the Treatment of Autoimmune Disorders

-- First autoimmune DART(r) to enter the clinic -- MacroGenics to receive \$3 million milestone payment from Takeda

ROCKVILLE, Md., March 16, 2015 (GLOBE NEWSWIRE) -- MacroGenics, Inc. (NASDAQ: MGNX), a clinical-stage biopharmaceutical company focused on discovering and developing innovative monoclonal antibody-based therapeutics for the treatment of cancer, as well as autoimmune disorders and infectious diseases, today announced the initiation of a Phase 1 study with MGD010, its first Dual-Affinity Re-Targeting (DART®) molecule being developed for patients with autoimmune disorders. MGD010 is a bi-specific molecule that simultaneously targets CD32B and CD79B, two B-cell surface proteins, for the treatment of autoimmune disorders. MGD010 is designed to inhibit B-cell activation by exploiting the inhibitory function of CD32B, a checkpoint molecule expressed by B cells. As a result of the study initiation, MacroGenics will receive a \$3 million milestone payment from its partner, Takeda Pharmaceutical Company Limited.

"The initiation of this Phase 1 study marks the advancement of our third DART program into clinical development," said Scott Koenig, M.D., Ph.D., President and CEO of MacroGenics. "MGD010 has been shown to inhibit B-cell activation by a novel dual-targeting mechanism without depleting B cells in pre-clinical models. We believe this molecule has the potential to address features that limit currently approved B-cell-targeted therapies, including delayed onset of action and prolonged depletion of antibody-producing B cells and thus, potentially treat a broader population of patients with autoimmune disorders."

The recently-initiated Phase 1 clinical trial is a first-in-human, double-blind, placebo-controlled, single ascending dose study to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics and immunogenicity of MGD010 in healthy subjects.

About the MGD010 Collaboration with Takeda

In May 2014, MacroGenics entered into an option agreement for the development and commercialization of MGD010 with Takeda Pharmaceutical Company Limited. Takeda has an option to obtain an exclusive worldwide license for MGD010 following the completion of the Phase 1 study. If Takeda exercises its option, it will assume responsibility for future development and pay MacroGenics an option exercise fee of \$15 million. Assuming successful development and commercialization of MGD010, MacroGenics could receive up to an additional \$468.5 million in clinical, regulatory and commercialization milestone payments. If commercialized, MacroGenics would receive double-digit royalties on any global net sales and has the option to co-promote MGD010 with Takeda in the United States. Finally, MacroGenics may elect to fund a portion of Phase 3 clinical development in exchange for a North American profit share.

About MGD010

MGD010 is a humanized DART compound that simultaneously targets CD32B and CD79B. In pre-clinical studies, MGD010 was shown to modulate the function of human B cells without B-cell depletion. In normal conditions, B cells utilize CD32B as one of the key negative regulators to ensure that tolerance to self is maintained and autoimmune disease does not occur. MGD010 exploits this mechanism and triggers this inhibitory "immune checkpoint" loop for the inhibition of B-cell function, an approach that may be useful for the treatment of patients with autoimmune disorders. MacroGenics believes this molecule preferentially blocks those B cells that are activated to produce the pathogenic antibodies that promote the autoimmune process. MGD010 was shown to inhibit B lymphocytes from SLE (Systemic Lupus Erythematosus) patients in vitro; furthermore, MGD010 inhibits the onset of autoimmunity in humanized mouse models. In a non-human primate study, MGD010 has demonstrated a favorable safety profile and pharmacological effect on targeted B cells in the absence of B-cell depletion.

About MacroGenics, Inc.

MacroGenics is a clinical-stage biopharmaceutical company focused on developing innovative monoclonal antibody-based therapeutics for the treatment of cancer, as well as autoimmune disorders and infectious diseases. The Company generates its pipeline of product candidates from its proprietary suite of next-generation antibody technology platforms, which are designed to improve upon the performance of monoclonal antibodies and antibody-derived molecules. The combination of MacroGenics'

technology platforms and antibody engineering expertise has allowed the Company to generate promising product candidates and enter into several strategic collaborations with global pharmaceutical and biotechnology companies. Additional information about MacroGenics can be found on its corporate website at www.MacroGenics.com. MacroGenics and DART are registered trademarks of MacroGenics, Inc.

MacroGenics' Cautionary Note on Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for MacroGenics, including statements about the company's strategy, future operations, clinical development of the company's therapeutic candidates, milestone or opt-in payments from the company's collaborators, the company's anticipated milestones and future expectations and plans and prospects for the company and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the uncertainties inherent in the initiation and enrollment of future clinical trials, expectations of expanding ongoing clinical trials, availability and timing of data from ongoing clinical trials, expectations for regulatory approvals, other matters that could affect the availability or commercial potential of the company's product candidates and other risk factors described in the company's filings with the Securities and Exchange Commission, including those discussed in the "Risk Factors" section of the company's most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission and any subsequent Quarterly Reports on Form 10-Q. In addition, the forward-looking statements included in this press release represent the company's views as of the date hereof. MacroGenics anticipates that subsequent events and developments will cause the company's views to change. However, while the company may elect to update these forward-looking statements at some point in the future, the company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the company's views as of any date subsequent to the date hereof.

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