October 13, 2015

MacroGenics Highlights Progress at 2015 R&D Day

- ***Encouraging initial clinical results from ongoing enoblituzumab (MGA271) trial***
- ***B7-H3 franchise extended — fifth DART® molecule (MGD009) in Phase 1***
- ***Proprietary immune checkpoint PD-1 x LAG-3 DART molecule (MGD013) introduced***
- ***HIV DART and Trident™ bispecific platform introduced***

ROCKVILLE, Md., Oct. 13, 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 held its first R&D Day and provided an in-depth review of the Company's broad portfolio of product candidates and technology platforms. Special guest speakers included Charles Drake, M.D., Ph.D., Professor of Oncology, Urology and Immunology, Johns Hopkins School of Medicine, and Holbrook Kohrt, M.D., Ph.D., Assistant Professor of Medicine (Oncology) at Stanford University Medical Center.

"The team at MacroGenics continues to make significant advances in realizing our mission to create breakthrough biologics and life-changing medicines," said Scott Koenig, M.D., Ph.D., President and CEO of MacroGenics. "Our growing and advancing pipeline now includes eight product candidates in clinical development across a wide range of indications in solid and hematological malignancies, as well as autoimmune disorders. Today's R&D Day allowed us to provide an update on our Fc-optimized antibodies, margetuximab and enoblituzumab, our five DART molecules in the clinic, additional programs that we have not previously disclosed and the evolution of our multi-specific targeting platforms."

Program Updates and Highlights:

Margetuximab. MacroGenics today provided details about its ongoing SOPHIA Phase 3 clinical study of margetuximab, the company's Fc-optimized, HER2-directed monoclonal antibody in patients with metastatic breast cancer. The Company also highlighted activity of margetuximab as single agent in patients with gastric cancer from its recently completed Phase 1 study, and a planned Phase 1b/2 study evaluating the combination of margetuximab with an anti-PD-1 antibody.

B7-H3 Franchise. MacroGenics highlighted its industry-leading franchise related to therapeutic targeting of B7-H3, a member of the B7 family of molecules involved in immune regulation. The Company is developing three product candidates that engage this target through complementary mechanisms of action and take advantage of this target's broad expression pattern in multiple solid tumors.

- **Enoblituzumab (MGA271).** The Company provided an overview of initial data from its ongoing Phase 1 monotherapy clinical study of enoblituzumab, an Fc-optimized monoclonal antibody. To date, enoblituzumab has been well tolerated in patients and has shown encouraging, initial single-agent activity, including tumor regression in multiple, heavily pre-treated patients. In addition, evidence of T-cell immunomodulatory function has been observed in patients treated with enoblituzumab. The Company continues to enroll patients in additional monotherapy Phase 1 study cohorts as well as in two combination studies with either ipilimumab or pembrolizumab. Data from the ongoing monotherapy study will be presented in a late-breaking abstract session at the 2015 Society for Immunotherapy of Cancer (SITC) Annual Meeting on November 7, 2015.
- **MGD009.** MacroGenics disclosed that MGD009, a Dual-Affinity Re-Targeting (DART) molecule targeting B7-H3 and CD3, has entered into a Phase 1 study in patients and is being evaluated across multiple solid tumor types. MGD009 is designed to target tumors expressing B7-H3 as well as recruit and expand T cells at the tumor site. MacroGenics retains worldwide development and commercialization rights to MGD009.
- **B7-H3 Antibody-Drug Conjugate.** MacroGenics also presented pre-clinical data on an antibody-drug conjugate (ADC) program targeting B7-H3. The Company is evaluating several toxin/linker combinations to induce direct killing of B7-H3-positive tumor cells.

DART Platform. MacroGenics provided an overview of the advantages and versatility of its DART platform for bispecific targeting. The Company also provided a summary of the five DART molecules currently in clinical development, including MGD006 (CD123 x CD3), MGD007 (gpA33 x CD3), MGD011 (CD19 x CD3), MGD010 (CD32B x CD79B) and MGD009 (B7-H3

x CD3). In addition, the Company disclosed for the first time two DART molecules that it expects to advance into clinical development in the first half of 2017. These two product candidates include the following:

- **MGD013.** MacroGenics is developing MGD013 to provide co-blockade of two immune checkpoint molecules co-expressed on T cells, PD-1 and LAG-3, for treatment of diseases spanning a wide range of solid tumors and hematological malignancies. The Company presented pre-clinical data on an Fc-bearing DART molecule directed against these targets. In addition to MGD013, MacroGenics is generating and evaluating multiple other candidates that target a range of immune regulators using its DART and Trident platforms.
- **MGD014.** MacroGenics presented pre-clinical data on MGD014, an Fc-bearing DART molecule that targets HIV-infected cells and CD3. MGD014 is being developed to eliminate latent HIV infection in patients treated with continuous anti-retroviral therapy (cART) alone or in combination with latency-reversing agents. MGD014 will be developed under a contract recently awarded by the National Institute of Allergy and Infectious Diseases for up to $24.5 million. This is the first infectious disease DART program planned for clinical testing.

Trident™ Platform

MacroGenics presented its Trident tri-specific platform, extending the Company's leadership position in multi-specific antibody-based targeting. Trident molecules have an antibody-like structure with three specificities that enable novel mechanisms of action by recognizing up to three separate antigens in different, customizable conformations.

R&D Day Webcast

To view the recorded webcast of the Company's R&D Day event as well as download the presentation, please visit the Investor Relations section of MacroGenics' website at http://ir.macrogenics.com/events.cfm.

About MacroGenics, Inc.

MacroGenics is 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. The Company generates its pipeline of product candidates from its proprietary suite of next-generation antibody-based technology platforms. The combination of MacroGenics' technology platforms and protein engineering expertise has allowed the Company to generate promising product candidates and enter into several strategic collaborations with global pharmaceutical and biotechnology companies. For more information, please see the Company's website at www.macrogenics.com. DART, Trident and the MacroGenics logo are trademarks or registered trademarks of MacroGenics, Inc.

The development of a DART molecule targeting HIV will be funded in part with Federal funds from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services under Contract No. HHSN272201500032C.

Cautionary Note on Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for the Company, 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. In addition, the forward-looking statements included in this press release represent the Company's views as of the date hereof. The Company 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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