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Data Published in Blood Demonstrate Potent Activity of MacroGenics' Proprietary DART™ Technology

ROCKVILLE, MD., April 28 /PRNewswire/ -- MacroGenics, Inc., a privately held biotechnology company that develops immunotherapeutics to treat autoimmune disorders, cancer and infectious diseases, today announced the publication in the journal *Blood* of preclinical data demonstrating potent inhibition of B-cell lymphoma through redirected T lymphocyte-mediated killing, using its bispecific DART™ antibod technology.

Included in the peer-reviewed article titled, “Application of Dual-Affinity Re-Targeting (DART) molecules to achieve optimal redirected T-cell killing of B-cell lymphoma,” by Moore, et al.[1], is a side by side comparison of MacroGenics’ DART protein to an antibody molecule identical in specificity and structure to that of a bispecific T-cell engager (BiTE®), an alternative bispecific platform. While the previously established potency of the BiTE molecule in various redirected cytotoxicity assays was confirmed in this study, the DART was shown to be consistently more potent in eliminating CD19-positive cells. Importantly, no activation of T-cells by the DART was observed in the absence of engagement with targeted CD19-positive cells. In addition, a CD19xTCR DART, constructed using a proprietary anti-T cell receptor antibody fragment, revealed virtually identical *in vitro* activity to that of the CD19xCD3 DART and demonstrated *in vivo* activity in a xenograft mouse model.

An accompanying *Inside Blood* commentary titled “DARTs take aim at BiTEs,” noted that this article as well as other recently published articles[2],[3] related to MacroGenics’ DART molecules “underscore the adaptability of this bispecific antibody platform; it also provides an alternate T-cell recruiting and activation mechanism that may have a different activity and toxicity profile than blinatumomab.” The commentary further noted that MacroGenics’ DART “ .can be produced in high quantity and quality and reveals exceptional stability in both formulation buffer and human serum.”

“We are very pleased to have our most recent DART data published in this high-impact journal,” stated Dr. Scott Koenig, President and CEO of MacroGenics. “In addition to recognition in this peer-reviewed publication, MacroGenics has already achieved multiple research milestones in our two recently-established DART collaborations with Boehringer Ingelheim and Pfizer.”

DART Background

MacroGenics’ DART technology enables the generation of highly stable antibody-based therapeutic molecules that can simultaneously target two different antigens. DART therapeutics can accommodate virtually any variable region sequence in a “plug-and-play” fashion, are potent, and have very favorable manufacturing properties. To date, the company has engineered over 75 different DART proteins and has completed multiple in vitro and in vivo proof-of-concept studies in a variety of disease models. The company has been able to produce DART proteins in both bacterial and mammalian expression systems. DARTs also have been engineered with an Fc domain, which confers them with additional properties, such as Fc receptor binding and extended half-life. This functionality can be expanded further with the inclusion of MacroGenics’ proprietary Fc domain portfolio. MacroGenics has established and continues to expand a significant patent estate around its DART technology.

About MacroGenics, Inc.

MacroGenics is a private, venture-backed biotechnology company that focuses on the discovery, development and delivery to patients of novel biologics for autoimmune disorders, cancer and infectious diseases. The company has built a fully-integrated set of capabilities in antibody-based product development which supports its innovative pipeline of clinical stage product candidates. MacroGenics’ proprietary research is based on three core technology platforms, which include: (1) a method for generating cancer stem-like cells; (2) Dual-Affinity Re-Targeting (or DART™) technology, which allows the company to incorporate multiple specificities within a single recombinant molecul and (3) Fc optimization, which enhances antibody-dependent effector functions. The company has global product development collaborations with Boehringer Ingelheim and Pfizer Inc. For more information about MacroGenics, please visit www.macrogenics.com.

Statements made in this news release that are not historical facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "expects," "believes," "intends," and similar expressions are intended to identify forward-looking statements. Actual results may differ materially from those projected in any forward-looking statement. Specifically, there are a number of important factors that could cause actual results to differ materially from those anticipated, such as the Company’s ability to raise additional capital, and risks related to the Company’s ability to initiate, and enroll patients in, planned clinical trials. You should not place undue reliance on any forward-looking statements. The Company assumes no obligation to update any forward-looking statements as a result of new information, future events or developments, except as required by law.

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[1] Moore PA, Zhang W, Rainey GJ, et al. Application of dual-affinity re-targeting molecules to achieve optimal redirected T-cell killing of B-cell lymphoma. *Blood*. 2011; 117(17):4542-4551.

[2] Johnson S, Burke S, Huang L, et al. Effector cell recruitment with novel Fv-based dual-affinity re-targeting protein leads to potent tumor cytolysis and in vivo B-cell depletion. *J Mol Biol.* 2010; 399(3):436-449.

[3] Veri MC, Burke S, Huang L, et al. Therapeutic control of B cell activation via recruitment of Fcgamma receptor IIb (CD32B) inhibitory function with a novel bispecific antibody scaffold. *Arthritis Rheum*. 2010; 62(7):1933-1943.