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MacroGenics Novel Monoclonal Antibody Shows Potent Anti-tumor Activity against B-Cell Lymphoma in Preclinical Studies

Newly Published Data Validate CD32B as Key Target in Non-Hodgkins Lymphoma

ROCKVILLE, MD. October 5, 2006. MacroGenics, Inc. today announced the publication of data showing that the companys humanized monoclonal antibody (Mab) targeted against CD32B demonstrated potent antitumor activity against B-cell lymphomas in preclinical studies. The Fcγ receptor, CD32B (FcγRIIB), is the predominant Fc receptor on hematopoietic (blood) cells, such as B cells, where it plays a regulatory and cell signaling role in determining cellular function. The CD32B Mab may have therapeutic potential in B-cell malignancies, such as non-Hodgkins lymphoma, chronic lymphocytic leukemia and multiple myeloma, as well as areas outside of cancer. MacroGenics anticipates initiating a clinical program in a B-cell disorder with a CD32B Mab in the second half of 2007.

MacroGenics is also developing Mab product candidates based on its proprietary Fc optimization technology.

MacroGenics is utilizing its proprietary Fc engineering technology to generate highly specific monoclonal antibodies targeted to the CD32B receptor with the goal of developing novel treatments for cancer as well as autoimmune diseases and allergy disorders, said Scott Koenig, M.D., Ph.D., President and Chief Executive Officer of MacroGenics. The anti-tumor data we have generated demonstrate the broad potential of our monoclonal antibody product candidates in B-cell malignancies that cannot be effectively treated with currently approved therapies. The CD32B monoclonal antibody is currently undergoing optimization studies and is advancing rapidly toward the clinic. We also anticipate publication of additional preclinical studies showing the promise of this approach for other lymphoproliferative diseases.

The scientific article, CD32B, the Human Inhibitory Fc Receptor IIB, as a Target for Monoclonal Antibody Therapy of B-Cell Lymphoma, appears in the October 2006 issue of *Blood*, the journal of the American Society of Hematology. Key findings in MacroGenics publication include:

- Chimeric and fully humanized versions of the CD32B monoclonal antibody can mediate in vitro antibody-dependent cellular cytotoxicity (ADCC) against B-cell lymphoma cell lines.
- Chimeric and fully humanized versions of the CD32B monoclonal antibody display potent anti-tumor activity in vivo in a xenograft mouse model of B-cell lymphoma.
- Results, such as reduced tumor growth rate in vivo and improved tumor-free survival, suggest that targeting CD32B may represent a novel approach to the immunotherapy of B-cell malignancies.

We believe our findings represent a meaningful advance in understanding the role of CD32B in B-cell malignancy and indicate that MacroGenics proprietary, high-affinity therapeutic Mab, which specifically engages CD32B and spares CD32A-expressing cells, may have significant therapeutic utility in these cancers, said Ezio Bonvini, M.D., Vice President, Research, MacroGenics. Our data also support the hypothesis that selective targeting CD32B may modulate effector cell function through multiple mechanisms other than mediation of antibody-dependent cellular cytotoxicity, leading to an enhanced antitumor response. We intend to continue to pioneer in the field of Mab-directed CD32B inhibition with the goal of further elucidating the therapeutic potential of this important cancer target.

About CD32B

CD32B is expressed on B-cells, monocytes, macrophages, dendritic cells, basophils, and mast cells. When triggered, it delivers an inhibitory signal that contrasts those induced by activating receptors. The unique combination of cell type specific expression and inhibitory signal sensor suggests that CD32B is a valuable therapeutic target for multiple diseases. CD32B is over expressed in certain cancers, hence representing a target for cancer therapy. MacroGenics also believes that autoimmune and inflammatory diseases, which are mediated by CD32B-expressing immune cells, may be effectively treated with a CD32B Mab.

About Fc Engineering

Fc regions mediate antibody function by binding to different receptors on immune effector cells such as macrophages, natural killer cells, B-cells and neutrophils. Some of these receptors, such as CD16A (FcγRIIIA) and CD32A (FcγRIIA), activate the cells to build a response against antigens. Other receptors, such as CD32B, inhibit the activation of immune cells. By engineering Fc regions that bind to activating receptors with greater selectivity, antibodies can be created that have greater capability to mediate cytotoxic activities desired by an anti-cancer Mab.

About Non-Hodgkins Lymphoma (NHL)

Non-Hodgkins lymphoma is the fifth most common form of cancer in the United States with approximately 55,000 new cases diagnosed annually. B-cell lymphomas comprise more than 85% of all diagnosed lymphomas. The current treatment paradigm for certain B-cell malignancies, such as non-Hodgkins lymphoma, is based on chemotherapy and the administration of an anti-CD20 chimeric antibody, rituximab (Rituxan). While this approach has improved outcomes in certain groups of patients, progress have been limited in certain B-cell malignancies, particularly those that show little or no expression of CD20. MacroGenics believes there remains an unmet medical need for these patients and is working diligently to identify and develop additional promising Mab therapies, such as its Fc-engineered CD32B Mab.

About MacroGenics, Inc.

Founded in 2000, MacroGenics is a private, venture-backed biotechnology company headquartered in Rockville, Maryland, that focuses on the development, manufacture, and commercialization of immunotherapeutics for autoimmune disorders, cancer, and infectious diseases. The company has a CD3 monoclonal antibody to treat autoimmune diseases that is currently in Phase 2/3 development for type 1 diabetes. Its CD32B monoclonal antibody is in early-stage development for cancer, allergy and autoimmune disorders. Together with its partner Genzyme, MacroGenics is also developing a CD16 monoclonal antibody and a soluble Fc receptor fusion protein to treat immune complex-mediated autoimmune diseases such as idiopathic thrombocytopenia purpura (ITP) and lupus. The companys proprietary Fc engineering technology offers ways of improving antibody function, such as enhancing its ability to eliminate cancer cells or cells that contribute to autoimmune disorders. The company is further developing a therapeutic monoclonal antibody and vaccine to treat and prevent West Nile virus. For further information, please visit the companys website at 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 Companys ability to raise additional capital, and risks related to the Companys 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.