



P R E S S R E L E A S E

FOR IMMEDIATE RELEASE

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XCYTE THERAPIES, INC., INITIATES PHASE II CLINICAL TRIAL OF XCELLERATED T CELLS IN PATIENTS WITH RELAPSED MULTIPLE MYELOMA

Seattle, WA-April 15, 2004 - Xcyte Therapies, Inc., (Nasdaq: XCYT) announced today the initiation of a Phase II clinical trial evaluating the use of its Xcellerated T Cells to treat patients with relapsed multiple myeloma, a common form of cancer of the bone marrow. The clinical study is expected to enroll 30 patients at approximately ten medical centers in the United States. The trial is designed to evaluate the safety as well as the biologic and therapeutic activity of Xcellerated T Cells in patients with relapsed multiple myeloma.

“This is our second clinical trial of Xcellerated T Cells in patients with multiple myeloma,” said Mark Frohlich, M.D., Medical Director and Vice President of Xcyte Therapies. “In our first trial in patients undergoing high dose chemotherapy followed by peripheral blood stem cell transplantation, we have observed rapid and sustained lymphocyte recovery. In addition, the majority of patients have had clinical responses following the combination treatment of the transplant and Xcellerated T Cells. Based on these results, we are now examining the safety and efficacy of Xcellerated T Cells without additional anti-tumor therapy in patients with relapsed or refractory disease.”

Multiple myeloma is one of the most common cancers of the bone marrow. In 2003, the American Cancer Society estimated that there were approximately 14,600 new cases of multiple myeloma, and about 10,900 patients died of the disease in the United States. Multiple myeloma is most often diagnosed in middle-aged and elderly individuals. A variety of standard chemotherapy agents have been used to treat this disease, but few patients experience long-term disease-free survival.

Xcyte Therapies is developing novel therapies that harness the power of the immune system to treat cancer and other serious illnesses. Xcyte derives its therapeutic products from a patient’s own T cells, which are cells of the immune system that orchestrate immune responses and can detect and eliminate cancer cells and infected cells in the body. Xcyte uses its patented and proprietary Xcellerate Technology to generate activated T cells, called Xcellerated T Cells, from blood that is collected from the patient. Activated T cells are T cells that have been stimulated to carry out immune functions. The Xcellerate Technology is designed to rapidly activate and expand the number of the patient’s T cells outside of the body. These Xcellerated T Cells are then administered to the patient.

Note: Certain of the statements made in this press release are forward-looking, such as those, among others, relating to the therapeutic potential of Xcellerated T Cells. Actual results or developments may differ materially from those projected or implied in these forward-looking statements. Factors that may cause such a difference include risks related to adverse clinical results as our product candidates move into and advance in clinical trials, risks inherent in early-stage development and failure by Xcyte Therapies to secure or maintain relationships with collaborators. More information about the risks and uncertainties faced by Xcyte Therapies is contained in our filings with the Securities and Exchange Commission. Xcyte Therapies disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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