



Geron Presents Interim Clinical Data on its Telomerase Vaccine at the 2009 American Society of Hematology Meeting

December 8, 2009

MENLO PARK, Calif., December 8, 2009 - Geron Corporation (Nasdaq: GERN) today announced the presentation of interim data from its phase II trial of GRNVAC1, an autologous dendritic cell vaccine targeting telomerase, in patients with acute myelogenous leukemia (AML) at the 51st Annual Meeting of the American Society of Hematology (ASH) in New Orleans, Louisiana.

The multicenter, open-label trial is designed to evaluate the feasibility of GRNVAC1 manufacture and the safety and tolerability of the vaccination regimen in patients with AML who are in complete clinical remission. Additional objectives of the study are to evaluate the immune responses to GRNVAC1 and to explore the effects of vaccination on minimal residual disease and relapse rates in this patient population.

"First, we are pleased to have met our endpoints of safety and tolerability," said Stephen M. Kelsey, M.D., Geron's executive vice president and chief medical officer, oncology. "At this point in the study a number of high risk patients have entered the extended boost phase of the vaccination regimen. These patients have been in remission for a period ranging from four months to nearly two years. Our analyses of minimal residual disease by qPCR of WT-1 are also very encouraging with one patient whose WT-1 levels became undetectable following vaccination."

Data presented

Fourteen out of 20 patients in the study remain in complete clinical remission (CR). Median duration of CR, including the patients who have relapsed, is 12 months. Six of the patients in CR are in the extended boost phase of vaccination and the duration of their remission since the start of vaccination ranges from four to 20 months. Four of these six patients are at a high risk of relapse as predicted by their cytogenetics or because they are in the second CR. Follow-up of the patients for approximately one additional year is required in order to estimate the impact of vaccination on disease-free survival. Enrollment of additional patients will end this month.

Expression of WT-1, as a marker of minimal residual disease, was sequentially analysed by qPCR in 19 patients. The 14 patients who remain in CR are negative for WT-1, while four of five with clinical relapse were WT-1 positive. One patient was positive for WT-1 prior to vaccination with GRNVAC1 and became WT-1 negative during the course of vaccination.

Patient immune response to telomerase after vaccination with GRNVAC1 was evaluated using two methods: the delayed-type hypersensitivity (DTH) skin response and the ELISPOT assay to measure the presence of activated T cells specific to hTERT. Positive overall immune responses were detected in 12 out of the 20 patients. No correlation has yet emerged between positive immune response and patient remission status.

Twenty patients have received GRNVAC1 product in the study. One patient relapsed prior to vaccination. GRNVAC1 was found to be safe and generally well tolerated over multiple vaccinations, including one patient who had 28 serial vaccinations to date. Idiopathic thrombocytopenic purpura (grade 4) was reported in one patient. Other toxicities were mild to moderate, including rash or headache in 15-20% patients.

GRNVAC1 Vaccination Protocol

Patients enter the study in their first or second complete remission. Prior to or shortly after completing consolidation chemotherapy, patients undergo leukapheresis to harvest normal mononuclear (white blood) cells from the bloodstream for vaccine manufacture.

Patients are vaccinated weekly for six weeks, followed by a rest period of four weeks, and subsequent boost injections every other week for 12 weeks. Monthly extended boost injections are then administered until the vaccine product supply is depleted or the disease relapses.

GRNVAC1 Manufacture

GRNVAC1 is an autologous immunotherapeutic product that comprises mature dendritic cells (DCs) transfected with messenger RNA encoding the catalytic subunit of human telomerase (hTERT) and a portion of the lysosomal targeting signal, lysosome-associated membrane protein (LAMP) to enhance immune stimulatory properties. GRNVAC1 is designed to induce an immune cell mediated response targeted against tumor cells expressing telomerase antigen on their surface.

Patient mononuclear cells are differentiated in culture to immature DCs, which are transfected with messenger the RNA encoding hTERT and LAMP. Transfected DCs are matured, aliquoted, and cryopreserved. GRNVAC1 vaccine is released for patient dosing contingent on several product specifications that include: identity of mature dendritic cells, confirmation of positive transfection with

hTERT, number of viable cells per dose after thawing, and product sterility.

GRNVAC1 was successfully manufactured and released in 21 out of the 31 patients with AML that were enrolled in the study. These results are expected and reflect the variability of patient starting material that is often associated with an autologous, patient-specific product.

Geron is developing GRNVAC2, an immunotherapeutic DC-based product derived from human embryonic stem cells (hESCs), as an "off-the-shelf" vaccine delivery vehicle. HESC-derived DCs exhibit functional equivalence to DCs from peripheral blood and can be generated using scalable production methods.

Clinical study sites

The following clinical sites are participating in the Phase II study: Washington University School of Medicine, Siteman Cancer Center, St. Louis, MO; University of Texas Southwestern Medical Center, Dallas; The Ohio State University, Columbus; University of Nebraska Medical Center, Omaha; Loyola University Medical Center, Maywood, IL; and the Winship Cancer Institute, Emory University School of Medicine, Atlanta, GA.

About Acute Myelogenous Leukemia (AML)

AML is a cancer of the blood characterized by a rapid overproduction of an abnormal immature cell of the myeloid lineage. These leukemic cells accumulate in the bone marrow and interfere with normal blood cell production. AML is the most common form of acute leukemia in adults and remains an unmet clinical need, especially in patients over 60 or who have other biologic features which confer high risk of relapse, where fewer than 10% of patients survive for more than five years.

Chemotherapy is administered in AML to induce remission, however many patients in complete remission will eventually relapse because a substantial burden of leukemic cells remain, referred to as "minimal residual disease". Additional therapies to address minimal residual disease that are well tolerated are needed for patients at high risk of relapse.

About Telomerase

Telomerase is a critical and potentially broadly applicable tumor target. The enzyme is expressed in a wide range of malignant tumors, and its activity is essential for the indefinite replicative capacity of cancer cells that enables their malignant cell growth. Telomerase is absent or expressed only transiently at low levels in most normal adult tissues.

Telomerase expression in AML cells is high, particularly in patients with cytogenetic (chromosomal) abnormalities associated with a high risk of disease progression.

About Geron

Geron is developing first-in-class biopharmaceuticals for the treatment of cancer and chronic degenerative diseases, including spinal cord injury, heart failure and diabetes. The company is advancing an anti-cancer drug and a cancer vaccine that target the enzyme telomerase through multiple clinical trials in different cancers. For more information about Geron, visit www.geron.com.

This news release may contain forward-looking statements made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that statements in this press release regarding potential applications of Geron's telomerase, oncology, and human embryonic stem cell technology constitute forward-looking statements that involve risks and uncertainties, including, without limitation, risks inherent in the development and commercialization of potential products, uncertainty of clinical trial results or regulatory approvals or clearances, need for future capital, dependence upon collaborators and maintenance of Geron's intellectual property rights. Actual results may differ materially from the results anticipated in these forward-looking statements. Additional information on potential factors that could affect Geron's results and other risks and uncertainties are detailed from time to time in Geron's periodic reports, including the quarterly report on Form 10-Q for the quarter ended September 30, 2009.

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