



Geron Gives Five Presentations on Telomerase Inhibitor Imetelstat at the AACR Annual Meeting

April 22, 2010

Continued Demonstration of Anti-Cancer Stem Cell Activity Confirms Rationale for Geron's Randomized Phase 2 Trials in Lung and Breast Cancer

MENLO PARK, Calif., March 3, 2010 - Geron Corporation (Nasdaq: GERN) today announced five presentations by Geron scientists and collaborators on the company's telomerase inhibitor, imetelstat sodium (GRN163L), including the drug's activity against cancer stem cells, at the 101st American Association for Cancer Research (AACR) annual meeting held in Washington D.C. Telomerase was a featured topic of over 30 presentations, including two dedicated sessions, underlining, as in previous AACR annual meetings, the importance of telomerase as a cancer target.

Geron plans to initiate four Phase 2 clinical trials of imetelstat in 2010 - two randomized trials in non-small cell lung cancer and breast cancer, and two single arm trials in multiple myeloma and essential thrombocythemia.

The randomized Phase 2 trial in non-small cell lung cancer will examine the impact of imetelstat on progression-free survival when used in the maintenance setting, after remission-induction by first line chemotherapy. The randomized Phase 2 trial in breast cancer will examine the effect on progression-free survival achieved by adding imetelstat to the first line chemotherapy combination of paclitaxel and bevacizumab. These studies plan to enroll over 250 patients in up to 70 U.S. medical centers.

"The data presented at AACR by Geron and our collaborators once again highlight the importance of telomerase as a cancer stem cell target and the broad anti-cancer stem cell properties of imetelstat in preclinical models," said Stephen M. Kelsey, M.D., Geron's executive vice president and chief medical officer, oncology. "We are excited about our Phase 2 clinical program for imetelstat, which targets malignancies that are thought to be driven, at least in part, by cancer stem cells and we look forward to initiating our first randomized Phase 2 trial in non-small cell lung cancer in the coming months."

In Vivo and In Vitro Inhibition of Multiple Types of Cancer Stem Cells by the Novel Telomerase Inhibitor Imetelstat (GRN163L)

A series of preclinical study results showing efficacy of imetelstat against cancer stem cells from multiple tumor types were presented by Geron scientists and collaborators William Matsui, M.D., at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore; Caterina La Porta, Ph.D., at the Department of Biomolecular Science and Biotechnology, University of Milan, Italy; Uri Tabori, M.D., at The Arthur and Sonia Labatt Brain Tumour Research Centre, Hospital for Sick Children, Toronto; Harley Kornblum, M.D., Ph.D., at UCLA's Jonsson Comprehensive Cancer Center and Brittney-Shea Herbert, Ph.D., at the Indiana University Melvin and Bren Simon Cancer Center and IU School of Medicine, Indianapolis.

Preclinical studies have shown that in nine out of nine tumor types tested, imetelstat exhibits potent activity against cancer stem cells derived from primary patient samples or cancer cell lines. The current presentation highlighted the effects of imetelstat on myeloma, melanoma, breast, pancreatic, pediatric glioma, neuroblastoma, and glioblastoma stem cells. Imetelstat inhibited cancer stem cell proliferation, clonogenic capacity and spheroid formation *in vitro* and significantly reduced the establishment and growth of tumors in xenograft models. The data provide strong rationale for the clinical use of imetelstat to target cancer stem cells in multiple tumor types.

Cancer stem cells are small populations of cells within tumors believed to be responsible for initiating tumor growth, recurrence and metastasis. Cancer stem cells are capable of indefinite self-renewal because of high telomerase activity, and can differentiate into all malignant cells found in a particular tumor type. Cancer stem cells often show resistance to standard therapies resulting in renewed proliferation and differentiation, leading to disease relapse.

Role of Telomerase in Normal and Neoplastic Stem Cells

An oral presentation was delivered by Geron collaborator Prof. Jerry Shay, Ph.D., from the University of Texas Southwestern Medical Center at Dallas, as part of the Major Symposium: Role of Telomeres and Telomerase in Chromosomal Stability and Disease. A recorded webcast of this presentation will be available for replay from the AACR website, www.aacr.org, approximately 15 business days after the end of the conference.

The presentation included data from studies using immortalized and transformed human bronchial epithelial cells as an experimental model of lung cancer that suggests a single multipotent stem cell origin of lung cancers. The presentation also included data demonstrating the utility of imetelstat for targeting cancer stem cells in model systems. Preclinical studies showed *in vitro* and *in vivo* efficacy of imetelstat against human brain tumor stem cells, including the drug's ability to penetrate the blood-brain tumor barrier in an orthotopic xenograft model. Prof. Shay also reviewed Geron's current clinical oncology program using imetelstat highlighting the company's pioneering role in targeting telomerase as a potential anti-cancer therapy.

Imetelstat Inhibits Telomerase Activity in Xenograft Tumors and Bone Marrow Cells and Inhibits Tumor Growth in Xenograft Models at Plasma Levels Equivalent to Those Achieved in Geron's Phase 1 Trials

Imetelstat has been shown to inhibit telomerase activity and reduce tumor growth in a dose-dependent fashion in multiple xenograft models of human cancer. The data presented by Geron scientists from *in vivo* xenograft studies showed the relationship between inhibition of telomerase and reduction of tumor growth, and plasma concentrations of imetelstat. When compared to interim pharmacokinetic analyses of the Phase 1 trial in patients with solid tumors, the data showed that plasma concentrations of imetelstat achieved in patients are higher than plasma concentrations at which efficacy was observed in xenograft models. In addition, telomerase inhibition has been observed during preliminary pre- and post-treatment analyses of target (bone marrow) and surrogate (peripheral blood mononuclear cells) patient tissue samples from the Phase 1 trials in multiple myeloma and solid tumors, respectively.

Sensitivity and Resistance of Non-Small Cell Lung Cancer to the Telomerase Inhibitor Imetelstat

Preclinical study data presented by Geron collaborators Ms. Robin Frink and colleagues at the University of Texas Southwestern Medical Center at Dallas showed that continued treatment of NSCLC cell lines with imetelstat inhibited telomerase activity, resulting in decreases in telomere lengths and slowed cell growth rates *in vitro*.

Lung cancer is the most frequent cause of cancer-related deaths in the U.S., according to the American Cancer Society, and telomerase is essential for sustained cell proliferation in virtually all lung cancers. A Geron-sponsored randomized Phase 2 clinical trial will be initiated in the coming months to explore the impact of imetelstat used in the maintenance setting after first-line induction chemotherapy for non-small cell lung cancer (NSCLC).

Telomerase Inhibition Affects Fludarabine Sensitivity in Quiescent Primary Chronic Lymphocytic Leukemia Lymphocytes

Telomerase activity and telomere length have been shown to be strong prognostic factors in chronic lymphocytic leukemia (CLL), the most common adult leukemia. Geron has conducted a Phase 1 study of imetelstat in patients with chronic lymphoproliferative disease (CLD).

CLL exists in patients as slowly accumulating resting, as well as proliferating lymphocytes. Data presented by May Shawi, Ph.D. and colleagues at McGill University and Lady David Institute, Montreal in collaboration with Geron scientists showed *in vitro* that while telomerase activity is not required for the survival of quiescent primary CLL lymphocytes, telomerase is required after treatment with fludarabine (standard treatment for CLL). These results suggest that imetelstat in combination with fludarabine may be a strategy to decrease tumor burden in CLL.

About Telomerase and Imetelstat (GRN163L)

Telomerase is a critical and 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 that enables malignant cell growth. Telomerase is absent or expressed only transiently at low levels in most normal adult tissues.

Imetelstat is a short chain oligonucleotide that binds with high affinity and specificity to the catalytic site of telomerase, resulting in competitive inhibition of enzyme activity. Proprietary manufacturing chemistry and the addition of a 5' lipid chain have enabled the molecule to penetrate cells and tissues throughout the body.

Imetelstat has been tested in six Geron-sponsored Phase 1 clinical trials at 22 U.S. medical centers treating over 180 patients to examine the safety, tolerability, pharmacokinetics and pharmacodynamics of the drug, alone or in combination with other standard therapies in patients with different hematological and solid tumors. Four of the trials have completed patient enrollment. Two randomized Phase 2 clinical trials for imetelstat will start this year in non-small cell lung and breast cancer, and two single arm Phase 2 clinical trials will begin in multiple myeloma and essential thrombocythemia - all malignancies in which cancer stem cells have been shown to play an important role in relapse after standard therapy.

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 oncology/telomerase 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 our 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 our results and other risks and uncertainties are detailed from time to time in Geron's periodic reports, including the annual report on Form 10-K for the year ended December 31, 2009.

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