Geron Announces Publication of Preclinical Data on Imetelstat Activity in Acute Myelogenous Leukemia

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MENLO PARK, Calif., December 4, 2014 - Geron Corporation (Nasdaq: GERN) today announced the publication of preclinical data demonstrating activity of the company's telomerase inhibitor drug, imetelstat, on leukemic stem cells from acute myelogenous leukemia (AML). In addition, the preclinical study showed the role of telomerase in AML disease initiation and progression. These data provide preclinical proof-of-concept to support clinical development of imetelstat in AML.

Leukemic stem cells (LSCs) are functionally described as cells within AML that are capable of initiating and maintaining the disease. Through their high expression of telomerase, LSCs are believed to be responsible for chemotherapy resistance and relapse in AML which make them an important therapeutic target as a durable treatment for AML.

In the study, mice were transplanted with AML grafts from normal and telomerase deficient donor mice. Mice that received telomerase deficient grafts were shown to have reduced LSC functions and experienced cell cycle arrest and programmed cell death. This resulted in prolonged survival of telomerase deficient AML mice as compared to normal AML mice, providing proof-of-principle of the role of telomerase in maintaining LSCs.

To test telomerase as a pharmacological target for AML treatment, xenograft mice were engrafted with primary AML patient samples and treated with or without imetelstat. Imetelstat treatment resulted in inhibition of disease progression and prolonged survival in these mice. In addition, imetelstat was shown to inhibit disease relapse after doxorubicin chemotherapy in the AML xenografts. These data suggest that imetelstat has the potential for disease-modifying activity in AML by targeting LSCs.

The study was co-authored by Dr. Steven Lane and colleagues at QIMR Berghofer Medical Research Institute in Australia in collaboration with Geron scientists and published online on December 4, 2014 in the journal *Cell Stem Cell*. In addition, companion preclinical research on imetelstat in animal models of AML was selected for presentation as a poster at the upcoming 56th American Society of Hematology Annual Meeting (Abstract #2322, *Inhibition of Telomerase with Imetelstat is Detrimental to Leukemia Stem Cells in Acute Myeloid Leukemia*).

About Telomerase and Imetelstat

Telomerase is an enzyme that enables cancer cells, including malignant progenitor cells, to maintain telomere length, which provides them with the capacity for limitless, uncontrolled proliferation. Imetelstat (GRN163L) is a potent and specific inhibitor of telomerase that is administered by intravenous infusion. This first-in-class compound, discovered by Geron and to be licensed to and jointly developed with Janssen Biotech, Inc., pending the effectiveness of the collaboration agreement upon the expiration of the applicable waiting periods under the Hart-Scott-Rodino Act, is a specially designed and modified short oligonucleotide, which targets and binds directly with high affinity to the active site of telomerase. Preliminary data suggest disease-modifying activity by imetelstat is by affecting the malignant clone associated with hematologic malignancies. Imetelstat has not been approved for marketing by any regulatory authority.

About Geron

Geron is a clinical stage biopharmaceutical company developing a first-in-class telomerase inhibitor, imetelstat, in hematologic myeloid malignancies. For more information about Geron, visit www.geron.com.

Use of Forward-Looking Statements

Except for the historical information contained herein, this press release contains 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: (i) the anticipated effectiveness of the collaboration agreement; (ii) potential

clinical development of imetelstat in AML; (iii) potential disease-modifying effect of imetelstat in AML; and (iv) other statements that are not historical facts, constitute forward-looking statements. These statements involve risks and uncertainties that can cause actual results to differ materially from those in such forward-looking statements. These risks and uncertainties, include, without limitation, risks and uncertainties related to: (i) the ability of the parties to satisfy all of the conditions for the effectiveness of the collaboration agreement, including the expiration or termination of waiting periods under the Hart-Scott-Rodino Act; (ii) the uncertain and time consuming product development and regulatory process, including whether the parties will succeed in overcoming all of the clinical safety and efficacy, technical, scientific, manufacturing and regulatory challenges in the development and commercialization of imetelstat; (iii) the ability of Geron and Janssen to protect and maintain intellectual property rights for imetelstat; and (iv) Geron's dependence on Janssen, including the risks that if Janssen were to breach or terminate the collaboration agreement or otherwise fail to successfully develop and commercialize imetelstat and in a timely manner, Geron would not obtain the anticipated financial and other benefits of the collaboration agreement and the clinical development or commercialization of imetelstat could be delayed or terminated. Additional detailed information and factors that could cause actual results to differ materially from those in the forward-looking statements is contained in Geron's periodic reports filed with the Securities and Exchange Commission, including Exhibit 99.1 of the Current Report on Form 8-K filed on November 13, 2014. Undue reliance should not be placed on forward-looking statements, which speak only as of the date they are made, and the facts and assumptions underlying the forward-looking statements may change. Except as required by law, Geron disclaims any obligation to update these forward-looking statements to reflect future information, events or circumstances.

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