GERON CORP
Form 10-K
March 17, 2014

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ý **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2013

or

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .
Commission File Number: 0-20859

GERON CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**75-2287752**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
149 Commonwealth Drive, Suite 2070, Menlo Park, CA	**94025**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(650) 473-7700**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**

Common Stock, $0.001 par value	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No ý

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ý

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer ý	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No ý

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant was approximately $193,220,000 based upon the closing price of the registrant's common stock on June 30, 2013 on the Nasdaq Global Select Market. The calculation of the aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant excludes shares of common stock held by each officer, director and stockholder that the registrant concluded were affiliates on that date. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 6, 2014, there were 156,898,895 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Document	**Form 10-K Parts**
Portions of the Registrant's definitive proxy statement for the 2014 annual meeting of stockholders to be filed pursuant to Regulation 14A within 120 days of the Registrant's fiscal year ended December 31, 2013	III

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In this report, unless otherwise indicated or the context otherwise requires, "Geron," "the registrant," "we," "us," and "our" refer to Geron Corporation, a Delaware corporation.

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Forward-Looking Statements

This annual report on Form 10-K, including "Business" in Part I, Item 1 and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7, contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause the results of Geron Corporation, or Geron or the Company, to differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. In some cases, forward-looking statements can be identified by the use of terminology such as "may," "expects," "plans," "intends," "will," "should," "projects," "believes," "predicts," "anticipates," "estimates," "potential," or "continue" or the negative thereof or other comparable terminology. The risks and uncertainties referred to above include, without limitation, risks related to our research and development efforts, including whether we or third party investigators will be able to initiate and complete clinical trials of imetelstat in a timely manner or at all, our dependence on the success of our sole product candidate, need for future capital, uncertainty of clinical trial results or regulatory approvals or clearances, manufacturing imetelstat at scales and costs appropriate for commercialization, enforcement of our patent and proprietary rights, reliance upon investigators, potential competition and other risks that are described herein and that are otherwise described from time to time in our Securities and Exchange Commission reports including, but not limited to, the factors described in Item 1A, "Risk Factors," of this annual report on Form 10-K. Geron assumes no obligation for and except as required by law, disclaims any obligation to update these forward-looking statements to reflect future information, events or circumstances.

Calculation of Aggregate Market Value of Non-Affiliate Shares

For purposes of calculating the aggregate market value of shares of our common stock held by non-affiliates as set forth on the cover page of this annual report on Form 10-K, we have assumed that all outstanding shares are held by non-affiliates, except for shares held by each of our executive officers, directors and 5% or greater stockholders. In the case of 5% or greater stockholders, we have not deemed such stockholders to be affiliates unless there are facts and circumstances which would indicate that such stockholders exercise any control over our company. These assumptions should not be deemed to constitute an admission that all executive officers, directors and 5% or greater stockholders are, in fact, affiliates of our company, or that there are not other persons who may be deemed to be affiliates of our company. Further information concerning shareholdings of our executive officers, directors and principal stockholders is incorporated by reference in Part III, Item 12 of this annual report on Form 10-K.

PART I

ITEM 1. BUSINESS

Company Overview

We are a clinical stage biopharmaceutical company developing a telomerase inhibitor, imetelstat, in hematologic myeloid malignancies. Through a combined strategy of internal efforts and potential future strategic partnerships, we intend to advance the development and commercialization of imetelstat in one or more hematologic myeloid malignancies.

The discovery and early development of imetelstat, our sole product candidate, was based on our core expertise in telomerase and telomere biology. 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.

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Imetelstat is a potent and specific inhibitor of telomerase. Using our proprietary nucleic acid chemistry, we designed imetelstat to be an oligonucleotide that targets and binds with high affinity to the active site of telomerase, thereby directly inhibiting telomerase activity and impeding malignant cell proliferation. We developed imetelstat from inception and own exclusive worldwide commercial rights with U.S. patent coverage extending through 2025.

Based on the data from our Phase 2 clinical trial evaluating imetelstat in essential thrombocythemia, or ET, which showed durable hematologic and molecular responses in patients, and preliminary data from the first two cohorts of an investigator-sponsored trial at Mayo Clinic evaluating imetelstat in myelofibrosis, which we refer to as the Myelofibrosis IST, we intend, subject to the full clinical hold discussed below, to develop imetelstat to treat one or more hematologic myeloid malignancies such as myelofibrosis, or MF, which includes patients with primary MF, or PMF, post-essential thrombocythemia MF, or post-ET MF, or post-polycythemia vera MF, or post-PV MF, all of which are referred to as MF; myelodysplastic syndromes, or MDS; or acute myelogenous leukemia, or AML.

The Myelofibrosis IST is also evaluating imetelstat in patients with refractory anemia with ringed sideroblasts, or RARS, a subpopulation of MDS, and patients with MF that has transformed into AML, known as blast-phase MF. Data we receive from these additional patients may inform, in part, our decision to initiate, subject to the full clinical hold discussed below, one or more potential pilot studies of imetelstat in MDS or AML. In January 2014, Mayo Clinic closed the Myelofibrosis IST to new patient enrollment. In Mayo Clinic's notification informing us of its decision to cease new patient enrollment, Mayo Clinic did not indicate that its decision was due to any concerns regarding efficacy or safety.

In March 2014, we received written notice from the U.S. Food and Drug Administration, or the FDA, that our Investigational New Drug application, or IND, for imetelstat has been placed on full clinical hold following their review of data related to hepatotoxicity in our then-ongoing clinical studies. A full clinical hold is an order that the FDA issues to a trial sponsor to suspend all ongoing clinical trials and delay all proposed trials. With this clinical hold, any patients in an ongoing Geron-sponsored clinical trial cannot receive any further treatment with imetelstat. Therefore, we have stopped imetelstat treatment in our Phase 2 Geron-sponsored clinical trials in ET and multiple myeloma, or MM. For our Phase 2 ET trial, eight patients are affected and for our Phase 2 MM trial, two patients are affected.

In their notice to us, the FDA cited the following safety issues as the basis for the clinical hold: lack of evidence of reversibility of hepatotoxicity, risk for chronic liver injury and lack of adequate follow-up in patients who experienced hepatotoxicity. To address the clinical hold, we are required to: provide clinical follow-up information in patients who experienced liver function test, or LFT, abnormalities until LFT abnormalities have resolved to normal or baseline; and provide information regarding the reversibility of the liver toxicity after chronic drug administration in animals. Accordingly, we intend to compile and submit to the FDA preclinical and clinical data and information from our own studies, as well as data and information available to us from other imetelstat studies, such as the Myelofibrosis IST, regarding LFT abnormalities and the incidence and reversibility of hepatotoxicity. We plan to work diligently with the FDA to seek the release of the full clinical hold.

Until the FDA lifts the full clinical hold, we are unable to submit any new clinical trial protocols to the FDA under our IND for imetelstat and are unable to initiate any new clinical trials for imetelstat in the United States. Therefore, the initiation of our previously-announced planned Geron-sponsored Phase 2 clinical trial of imetelstat in patients with MF will be delayed indefinitely and may not occur at all. If the FDA does not lift the full clinical hold, we will likely be unable to pursue the development of imetelstat. If the FDA lifts the full clinical hold, or partially lifts the full clinical hold, we expect to pursue development of imetelstat in one or more indications, such as MF, MDS or AML, where we believe there is a greater unmet medical need for a new product than is the case for diseases

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such as ET, for which survival is minimally affected by the disease. We have previously announced that our Phase 2 ET trial was a mechanistic proof-of-concept study, and that we did not plan to develop imetelstat for commercial use in ET.

Telomeres and Telomerase in Normal Development

In the human body, normal growth and maintenance of tissues occurs by cell division. However, most cells are only able to divide a limited number of times, and this number of divisions is regulated by telomere length. Telomeres are repetitions of a DNA sequence located at the ends of chromosomes. They act as protective caps to maintain stability and integrity of the chromosomes, which contain the cell's genetic material. Normally, every time a cell divides, the telomeres shorten. Eventually, they shrink to a critically short length, and as a result the cell either dies by apoptosis or stops dividing and senesces.

Telomerase is a naturally occurring enzyme that maintains telomeres and prevents them from shortening during cell division in cells, such as stem cells, that must remain immortalized to support normal health. Telomerase consists of at least two essential components: an RNA template (hTR), which binds to the telomere, and a catalytic subunit (hTERT) with reverse transcriptase activity, which adds a specific DNA sequence to the chromosome ends. The 2009 Nobel Prize for Physiology and Medicine was awarded to Drs. Elizabeth H. Blackburn and Carol W. Greider, who were early Geron collaborators, together with Dr. Jack Szostak, who is a current Geron collaborator, for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase.

Telomerase is active during embryonic development, enabling the rapid cell division that supports normal growth. During the latter stages of human fetal development and in adulthood, telomerase is repressed in most cells, and telomere length gradually decreases during a lifetime. In tissues that have a high turnover throughout life, such as blood and gut, telomerase can be transiently upregulated in progenitor cells to enable controlled, self-limited proliferation to replace cells lost through natural cell aging processes. In proliferating progenitor cells, relatively long telomeres are maintained by upregulated telomerase. As the progeny of progenitor cells mature, telomerase is downregulated and telomeres shorten with cell division, preventing uncontrolled proliferation.

Telomeres and Telomerase in Cancer

Telomerase is upregulated in many tumor progenitor cells, which enables the continued and uncontrolled proliferation of the malignant cells that drive tumor growth and progression. Telomerase expression has been found to be present in approximately 90% of biopsies taken from a broad range of human cancers. Our non-clinical studies, in which the telomerase gene was artificially introduced and expressed in normal cells grown in culture, have suggested that telomerase does not itself cause a normal cell to become malignant. However, the sustained upregulation of telomerase enables tumor cells to maintain telomere length, providing them with the capacity for limitless proliferation. We believe that the sustained upregulation of telomerase is critical for tumor progression as it enables malignant progenitor cells to acquire cellular immortality and avoid apoptosis, or cell death.

Telomerase Inhibition: Inducing Cancer Cell Death

We believe that inhibiting telomerase may be an attractive approach to treating cancer because it may limit the proliferative capacity of malignant cells. We and others have observed in various in vitro and rodent tumor models that inhibiting telomerase results in telomere shortening and arrests uncontrolled malignant cell proliferation and tumor growth. In vitro studies have suggested that tumor cells with short telomeres may be especially sensitive to the anti-proliferative effects of inhibiting telomerase. Our non-clinical data also suggest that inhibiting telomerase is particularly effective at

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limiting the proliferation of malignant progenitor cells, which have high levels of telomerase and are believed to be important drivers of tumor growth and progression.

Many hematologic malignancies, such as ET, MF, and polycythemia vera, or PV are known to arise from malignant progenitor cells in the bone marrow that express higher telomerase activity and have shorter telomeres when compared to normal healthy cells. These disease characteristics support telomerase as a rational and potentially specific oncology target for the use of imetelstat, a potent and specific inhibitor of telomerase.

Imetelstat: The First Telomerase Inhibitor to Advance to Clinical Development

Imetelstat is a lipid-conjugated 13-mer oligonucleotide that is designed to be complementary to and bind with high affinity to the RNA template of telomerase, thereby directly inhibiting telomerase activity. The compound has a proprietary thio-phosphoramidate backbone, which is designed to provide resistance to the effect of cellular nucleases, thus conferring improved stability in plasma and tissues, as well as improved binding affinity to its target. To improve the ability of imetelstat to permeate through cellular membranes, we conjugated the oligonucleotide to a lipid group. Imetelstat's IC_{50}, or half maximal inhibitory concentration, is 0.5-10nM in cell-free assays. The tissue half life of imetelstat, or the time it takes for the concentration or amount of imetelstat to be reduced by half, in bone marrow, spleen, liver and tumor has been estimated to be 41 hours in humans, based on data from animal studies and clinical trial data. The tissue half life indicates how long a drug will remain present in the tissues, and a longer tissue half life may enable a drug to remain at effective doses for a longer period of time.

Imetelstat has been shown in preclinical studies to exhibit relatively preferential inhibition of the clonal proliferation of malignant progenitor cells compared to normal progenitors. For this reason, imetelstat has been studied as a treatment for malignant diseases. Imetelstat is the first telomerase inhibitor to advance to clinical development. The Phase 1 trials that we completed evaluated the safety, tolerability, pharmacokinetics and pharmacodynamic effects of imetelstat. Doses and dosing schedules were established that were tolerable and achieved target exposures in patients that were consistent with those required for efficacy in animal models. We believe adverse events were generally manageable and reversible. The dose-limiting toxicities were thrombocytopenia, or reduced platelet count, and neutropenia, or reduced neutrophil count. Following intravenous administration of imetelstat using tolerable dosing regimens, clinically relevant and significant inhibition of telomerase activity was observed in various types of tissue in which telomerase activity is measurable, including normal bone marrow hematopoietic cells, malignant plasma cells, hair follicle cells, and peripheral blood mononuclear cells.

Developing Imetelstat to Treat Hematologic Myeloid Malignancies

Proof-of-Concept in Essential Thrombocythemia

Myeloproliferative neoplasms, or MPNs, are hematologic myeloid malignancies that arise from malignant hematopoietic myeloid progenitor cells in the bone marrow, such as the precursor cells of red blood cells, platelets and granulocytes. Proliferation of malignant progenitor cells leads to an overproduction of any combination of myeloid white cells, red blood cells and/or platelets, depending on the disease. These overproduced cells may also be abnormal, leading to additional clinical complications. MPN diseases include PV, ET and MF. ET is an MPN characterized by a high platelet count, often accompanied by a high white cell count, and an increased risk of thrombosis, or bleeding, in higher-risk patients.

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In January 2011, we initiated a Phase 2 clinical trial of imetelstat in patients with ET. The Phase 2 ET trial was a multi-center, single arm, and open-label trial that we designed to provide proof-of-concept for the potential use of imetelstat as a treatment for hematologic myeloid malignancies, such as MF, MDS or AML. The trial leveraged clinical observations from Phase 1 trials suggesting that imetelstat reduces platelet counts, as well as non-clinical observations that imetelstat distributes well to bone marrow in rodent models and selectively inhibits the proliferation of malignant progenitors ex vivo from patients with ET. Hematologic responses were measured by reductions in platelet counts, and molecular responses were measured by reductions in the JAK2 V617F mutant allele burden in circulating granulocytes as assessed by a reduction in the proportion of the abnormal Janus kinase 2, or JAK2, gene compared to the normal, or wild type JAK2 gene. We believe a decrease in the proportion of the JAK2 V617F mutant relative to the wild type JAK2 is consistent with selective inhibition of the malignant progenitor cells responsible for the disease.

We presented top-line data from the Phase 2 ET trial at the American Society of Hematology, or ASH, annual meeting in December 2012 and at the Congress of the European Hematology Association, or EHA, in June 2013. A total of 18 ET patients were enrolled into the study. Imetelstat induced platelet count reductions in all patients (a 100% hematologic response rate) and normalizations in 16 out of 18 patients (an 89% complete response rate). The JAK2 V617F gene mutation was detected in eight patients at baseline. Seven out of the eight (88%) patients achieved 72% to 96% reductions in JAK2 V617F allele burden that qualified as partial molecular responses within three to 12 months of treatment with imetelstat. Partial molecular responses were maintained in six of the seven (86%) patients, with a median follow-up of 9.5 months (range 0 to 19 months) after first achieving a response. As of the EHA Meeting in June 2013, the median durations of hematologic and molecular response had not yet been reached. These data suggest that imetelstat inhibits the progenitor cells of the malignant clone believed to be responsible for the underlying disease in a relatively selective manner.

Adverse events reported in the Phase 2 ET trial have been similar to the adverse events reported in other imetelstat clinical trials, with fatigue, gastrointestinal symptoms (specifically nausea, diarrhea, constipation, and vomiting) and cytopenias being the most frequently observed adverse events. At least one abnormal LFT was observed in laboratory findings in all patients in the trial, with some patients experiencing persistent low grade LFT abnormalities with longer dosing. With longer dosing, Grade 1 increases in alkaline phosphatase were observed, associated with mostly Grade 1 to some Grade 2 unconjugated hyperbilirubinemia. The clinical significance, long-term consequences and reversibility of such persistent low grade LFT abnormalities is currently undetermined.

The high hematologic and molecular response rates reported in the Phase 2 ET trial led us to explore the feasibility of further development of imetelstat in ET. However, if the FDA lifts the full clinical hold on our IND, or partially lifts the full clinical hold, we plan to pursue other hematologic myeloid malignancies, such as MF, MDS, or AML, where there is an unmet medical need for a product that could potentially be disease-modifying.

Clinical Development in Myelofibrosis

MF is a myeloproliferative neoplasm among related diseases, such as ET, and is characterized by clonal proliferation of malignant hematopoietic progenitor cells in the bone marrow that causes bone marrow fibrosis, elevation in bone density, known as osteosclerosis, and abnormal rapid proliferation of blood vessels, known as pathological angiogenesis. MF patients may exhibit abnormally low red blood cells/hemoglobin, known as progressive anemia, abnormally low white blood cells, known as leukopenia, abnormally high white blood cells, known as leukocytosis, abnormally low platelets, known as thrombocytopenia, abnormally high platelets, known as thrombocytosis, immature blood cells, known as peripheral blood leukoerythroblastosis, and abnormally high precursor cells in the blood, known as excess circulating blasts. In addition, impaired blood production from the bone marrow causes blood production to shift to other organs such as the spleen and liver, known as extramedullary

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hematopoiesis, which leads to an enlarged spleen, known as splenomegaly, or an enlarged liver, known as hepatomegaly. MF patients can also suffer from debilitating constitutional symptoms, such as drenching night sweats, fatigue, severe itching, known as pruritus, fever and bone pain. The estimated prevalence of MF in the United States is approximately 13,000 patients, with an annual incidence of approximately 3,000 patients. Approximately 70% of MF patients have two to three risk factors (intermediate-2) or four or more risk factors (high risk), as defined by the Dynamic International Prognostic Scoring System Plus, or DIPSS Plus, described in a 2011 Journal of Clinical Oncology article. These patients have a median survival of approximately one to three years, representing a significant unmet medical need.

Allogeneic hematopoietic cell transplantation, or allo-HCT, is the only current treatment approach for MF that can lead to complete remission of the disease with normalization of peripheral blood counts, regression of bone marrow fibrosis, disappearance of cytogenetic abnormalities, normalization of spleen size and resolution of constitutional symptoms. However, use of allo-HCT is limited to a very small number of eligible patients due to the lack of suitable donors, older age and/or co-morbid conditions. In addition, graft vs. host disease and life-threatening infections are other limitations of allo-HCT treatment.

Investigator-Sponsored Clinical Trial in Myelofibrosis

Based on the data from the Phase 2 ET trial, in November 2012, Dr. Ayalew Tefferi of Mayo Clinic initiated the Myelofibrosis IST. The Myelofibrosis IST is an open-label trial in patients with PMF, post-ET MF, or post-PV MF who have two to three risk factors (intermediate-2) or four or more risk factors (high risk) as defined by DIPSS Plus. In the Myelofibrosis IST, imetelstat is administered as a single agent over a two-hour intravenous infusion to patients in multiple patient cohorts. In the first cohort, Cohort A, imetelstat is given once every three weeks. In the second cohort, Cohort B, imetelstat is given weekly for four weeks, followed by one dose every three weeks. Under the protocol, patients in Cohorts A and B may receive an intensified dosing regimen, up to once per week, after the initial six cycles of treatment. The starting dose of imetelstat in Cohorts A and B is 9.4mg/kg, with dose reductions and dose holds allowed for toxicity. The primary endpoint in the Myelofibrosis IST is overall response rate, which is defined by the proportion of patients who are classified as responders, which means that they have achieved either a clinical improvement, or CI, partial remission, or PR, or complete remission, or CR, consistent with the criteria of the 2013 International Working Group for Myeloproliferative Neoplasms Research and Treatment, or IWG-MRT criteria, described in a 2013 Blood article. Secondary endpoints include reduction of spleen size by palpation, improvement in anemia or inducement of red blood cell transfusion independence, safety and tolerability.

At the ASH annual meeting in December 2013, the investigator presented preliminary efficacy data from the Myelofibrosis IST for the first 22 patients enrolled sequentially in Cohorts A and B, and preliminary safety data from the first 33 patients treated in the same two cohorts in the trial.

Effective January 22, 2014, the Myelofibrosis IST has been closed to new patient enrollment. The remaining patients in the Myelofibrosis IST continue to receive imetelstat treatment and are being followed under the Myelofibrosis IST protocol. We believe that approximately 79 patients have been enrolled in the Myelofibrosis IST, which includes nine patients with blast-phase MF and nine patients with RARS, and that approximately 20 patients have discontinued from the study since its inception. In Mayo Clinic's notification informing us of its decision to cease new patient enrollment, Mayo Clinic did not indicate that the decision to cease patient enrollment was due to any efficacy or safety outcomes or concerns observed in the Myelofibrosis IST.

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Geron's Analysis of the Efficacy Data for the First 22 Patients Enrolled in the Myelofibrosis IST

We have reviewed data made available to us in October 2013 for the first 22 patients enrolled sequentially (11 in Cohort A and 11 in Cohort B) in the Myelofibrosis IST. These data included summary tables, patient listings and pathology reports. We also performed an onsite review at Mayo Clinic of source documents and the clinical database.

Patient Demographics and Status

Below is a table setting forth our analysis of the demographics of the first 22 patients enrolled sequentially in the Myelofibrosis IST, including certain disease characteristics and exposure to any prior treatments:

	Cohort A (n = 11)[1]	**Cohort B (n = 11)[2]**	**Total (n = 22)**
Median Age (range; years)	68.0 (54.0 - 76.0)	69.0 (53.0 - 79.0)	68.0 (53.0 - 79.0)
Male	7 (63.6%)	9 (81.8%)	16 (72.7%)
Myelofibrosis Subtype			
Primary Myelofibrosis	4 (36.4%)	5 (45.5%)	9 (40.9%)
Post-ET Myelofibrosis	1 (9.1%)	5 (45.5%)	6 (27.3%)
Post-PV Myelofibrosis	6 (54.5%)	1 (9.1%)	7 (31.8%)
DIPSS Plus Risk Status			
Intermediate-2 Risk	7 (63.6%)	1 (9.1%)	8 (36.4%)
High Risk	4 (36.4%)	10 (90.9%)	14 (63.6%)
Palpable Splenomegaly[3]	7 (63.6%)	6 (54.5%)	13 (59.1%)
Palpable Hepatomegaly	1 (9.1%)	2 (18.2%)	3 (13.6%)
Constitutional Symptoms[4]	8 (72.7%)	7 (63.6%)	15 (68.2%)
Any Prior Treatment	8 (72.7%)	10 (90.9%)	18 (81.8%)[5]

(1) Cohort A was administered imetelstat once every three weeks.

(2) Cohort B was administered imetelstat weekly for four weeks, followed by one dose every three weeks.

(3) Median spleen size by palpation at baseline for Cohort A was 19.0 cm (range: 13.0 - 25.0 cm) and for Cohort B was 11.0 cm (range 8.0 - 23.0 cm). Total median spleen size was 16.0 cm (range 8.0 - 25.0 cm). Baseline spleen sizes by palpation for patients achieving either CR or PR were either below the median or only had a spleen tip (palpable but generally less than 5 cm below the left costal margin).

(4) DIPSS Plus assessment of symptoms at baseline: Includes unexplained persistent fever > 38.3°C (or > 101°F) during the past six months, unexplained non-menopausal night sweats during the past six months, unexplained weight loss > 10% body weight in the previous six months, and unexplained non-articular bone pain during the past six months.

(5) Primary prior treatments include hydroxyurea (10/22, 45.5%), JAK inhibitors (9/22, 40.9%), anagrelide (3/22, 13.6%), pomalidomide (3/22, 13.6%) and splenectomy (2/22, 9.1%).

As of October 2013, the median duration of follow-up for all 22 patients was 5.3 months (range 1.3 - 10.4 months) with 7.6 months (1.3 - 10.4 months) for Cohort A and 4.8 months (1.6 - 5.6 months) for Cohort B. Duration of follow-up is defined as the time between the date of first dose and the date of last contact in the clinical database as of the data cut-off date.

Of these 22 patients, a total of 17 patients remained on imetelstat treatment as of October 2013, and the five discontinuations were due to death (n=2), disease progression (n=1) and other reasons (n=2). Of the two deaths in the first 22 patients in the study, one was due to an intracranial

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hemorrhage with febrile neutropenia after prolonged myelosuppression, which was assessed as possibly related to imetelstat by the investigator, and one was due to an upper gastrointestinal hemorrhage which was considered unrelated to imetelstat by the investigator. A non-responding patient whose spleen became palpable, or measurable in length by physical exam due to increased size, was considered by us as a case of disease progression. One patient discontinued after transformation to chronic myelomonocytic leukemia, or CMML, and subsequent to study discontinuation died from AML. Another patient discontinued due to lack of response.

Preliminary Efficacy Data

The following table presents our analysis of the preliminary (as of October 2013) efficacy data for the first 22 sequentially-enrolled patients in the Myelofibrosis IST, using the IWG-MRT criteria:

Best Response per IWG-MRT Criteria	**Cohort A (n = 11)**	**Cohort B (n = 11)**	**Total (n = 22)**
Remission (CR+PR)	2 (18.2%)	3 (27.3%)	5 (22.7%)
Complete Remission (CR)	2 (18.2%)*	1 (9.1%)	3 (13.6%)
Partial Remission (PR)		2 (18.2%)	2 (9.1%)
Clinical Improvement (CI)	1 (9.1%)	3 (27.3%)**	4 (18.2%)
Overall Response (CR+PR+CI)	3 (27.3%)	6 (54.5%)	9 (40.9%)

Two patients are pending an assessment demonstrating durability of response for at least 12 weeks:

* One patient who achieved a PR on April 30, 2013 and subsequently achieved a CR on October 9, 2013 (Cohort A); and

** One patient who achieved a CI by meeting the criteria for a reduction in liver size on October 14, 2013 (Cohort B).

The median onset time to remission (CR or PR) was 2.8 months (range 1.4 - 3.0 months). Four of the patients who achieved remission (CR or PR) experienced reversal of bone marrow fibrosis and recovery of normal megakaryocyte morphology, and one patient achieved PR based on meeting all the criteria for CR except bone marrow remission. Four patients met the criteria for clinical improvement: anemia response (n=1), spleen response (n=2) and liver response (n=1), with a median onset of 1.4 months (range 0.7 - 4.4 months).

Additional response rates evaluated by us included spleen and anemia responses and resolution of constitutional symptoms, circulating blasts, leukocytosis and thrombocytosis.

Five of 13 patients (38.5%) with splenomegaly achieved spleen responses by palpation, which is defined as either ≥ 50% decrease if baseline ≥ 10 centimeters or becoming non-palpable if baseline 5 to < 10 centimeters.

Three of 12 patients (25.0%) achieved anemia responses which are defined as either becoming transfusion independent if dependent at baseline or gaining ≥ 2 gram per deciliter in hemoglobin level if transfusion-independent but with a hemoglobin level < 10 gram per deciliter at baseline.

10 of 13 patients (76.9%) who had constitutional symptoms at baseline achieved symptoms response, defined as 50% reduction from baseline in grade, as assessed by the investigator.

11 of 14 patients (78.6%) with circulating blasts at baseline achieved complete resolution.

Seven of 15 patients (46.7%) with leukocytosis at baseline achieved normalization of white cell count.

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Seven of 9 patients (77.8%) with thrombocytosis at baseline achieved normalization of platelet count.

Investigator's Presentation of Preliminary Safety Data

At the ASH annual meeting in December 2013, the investigator presented preliminary safety results from the first 33 patients treated in Cohorts A and B in the Myelofibrosis IST. In the presentation, the investigator noted that 24 of 33 patients remained on imetelstat treatment as of December 2013, and the nine patients who discontinued treatment were due to lack of response (n=6), transformation to CMML (n=1), death unrelated to imetelstat treatment (n=1) and death possibly related to imetelstat treatment (n=1).

Non-hematologic adverse events in these patients as reported by the investigator were generally mild to moderate and not dose-limiting. Non-hematologic treatment-related toxicities of imetelstat reported by the investigator were:

Non-Hematologic Adverse Event, Not Related to Myelosuppression	**All Patients (n=33)**
Grade 1 nausea	5 (15%)
Grade 1 vomiting	1 (3%)
Grade 1/2 fatigue	4 (12%)
Grade 2 hyperbilirubinemia	2 (6%)
Grade 2 APTT increase	1 (3%)

In addition, the investigator reported all Grade 3/4 extramedullary adverse events not related to myelosuppression, regardless of attribution:

Non-Hematologic Adverse Event, Regardless of Attribution	**Cohort A (n=19)**	**Cohort B (n=14)**	**All Patients (n=33)**
Fatigue	1 (5%)	2 (14%)	3 (9%)
Atrial fibrillation	2 (11%)		2 (6%)
Alkaline phosphatase	1 (5%)	1 (7%)	2 (6%)
Heart failure	1 (5%)		1 (3%)
Hyponatremia	1 (5%)		1 (3%)
Gastrointestinal bleed	1 (5%)		1 (3%)
Hyperkalemia		1 (7%)	1 (3%)
Pruritus		1 (7%)	1 (3%)
Intestinal obstruction		1 (7%)	1 (3%)

Hematologic adverse events related to imetelstat as reported by the investigator were the primary dose-limiting toxicity and included:

Hematologic Adverse Events	**Cohort A (n=19)**	**Cohort B (n=14)**	**All Patients (n=33)**
Grade 3/4 neutropenia	2 (11%)	5 (36%)	7 (21%)
Grade 3/4 thrombocytopenia	5 (26%)	5 (36%)	10 (30%)
Grade 3/4 anemia	1 (5%)	3 (21%)	4 (12%)
Grade 4 neutropenia	1 (5%)	3 (21%)	4 (12%)
Grade 4 thrombocytopenia		4 (29%)	4 (12%)
Grade 5 febrile neutropenia with intracranial hemorrhage, resulting in patient death		1 (7%)	1 (3%)

Based on the investigator's presentation of the preliminary safety data, we believe myelosuppression was the principal dose-limiting toxicity in the Myelofibrosis IST. During the Myelofibrosis IST, however, more persistent and profound myelosuppression, particularly thrombocytopenia, was observed with imetelstat administered on a weekly basis. This included one case

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of febrile neutropenia after prolonged myelosuppression with intracranial hemorrhage resulting in a patient death, which was assessed as possibly related to imetelstat by the investigator. To mitigate the risk of severe, persistent cytopenias, the protocol for the Myelofibrosis IST was amended to raise the hematologic threshold for retreatment and include more stringent monitoring and dose adjustment criteria. Since then, no further episodes of significant bleeding events associated with thrombocytopenia, or infections, or additional episodes of febrile neutropenia have been reported to us by the investigator. As a result, we believe that the myelosuppressive effect of the drug may be manageable through dose hold rules and dose modifications. We intend to assess the data and information available to us from the Myelofibrosis IST with respect to any hepatotoxicity or LFT abnormalities observed in the Myelofibrosis IST.

Since the ongoing Myelofibrosis IST is an investigator-sponsored trial, we do not have control over the data or the timing and reporting of additional data from the Myelofibrosis IST, including data regarding any hepatotoxicity or LFT abnormalities observed in the Myelofibrosis IST. Furthermore, additional data from the remaining patients enrolled in the Myelofibrosis IST is generated on an ongoing basis and is not reflected in the preliminary data discussed above. In this regard, additional and updated safety and efficacy data generated from the Myelofibrosis IST may be materially different from the preliminary data discussed above. In addition, the safety and efficacy data from the first two cohorts of the Myelofibrosis IST discussed above are preliminary, and therefore, the final data may be materially different from the preliminary data. Accordingly, the preliminary data discussed above should be considered carefully and with caution. Please refer to the risk factor entitled "Risks Related to Our Business Success in early clinical trials may not be indicative of results in subsequent clinical trials. Likewise, data reported by investigators from time-to-time is subject to audit and verification procedures that could result in material differences to final data and may change as more patient data becomes available" under Item 1A, "Risk Factors" of this annual report on Form 10-K.

Impact of Full Clinical Hold on Phase 2 Clinical Trial in Myelofibrosis and Potential Imetelstat Clinical Development in Other Hematologic Myeloid Malignancies

We believe that the preliminary efficacy data from the first two cohorts in the Myelofibrosis IST suggest that imetelstat treatment may produce clinical improvement in certain MF patients, and also possibly partial or even complete remissions, which may include bone marrow normalization, peripheral blood morphologic remission and resolution of splenomegaly and constitutional symptoms for some period of time, and that imetelstat may have potential disease-modifying activity by possibly affecting the underlying malignant progenitor cells in the bone marrow driving the disease. However, we will be required to demonstrate through multiple Geron-sponsored clinical trials, including larger-scale randomized Phase 3 clinical trials, that imetelstat is safe and effective for use in a diverse population before we can seek to obtain regulatory approval for its commercial sale.

In January 2014, we announced that we were planning to initiate a Geron-sponsored multi-center, Phase 2 clinical trial of imetelstat in MF in mid-2014. However, in March 2014, we received notice from the FDA that our IND for imetelstat has been placed on full clinical hold following their review of data related to hepatotoxicity in our then-ongoing clinical studies. Therefore, initiation of this potential Geron-sponsored Phase 2 clinical trial will be delayed indefinitely and may not occur at all. Until the FDA lifts the full clinical hold, or partially lifts the full clinical hold, for example by permitting us to study imetelstat in indications other than ET or MM, we are unable to submit any new clinical trial protocols to the FDA under our IND for imetelstat and are unable to initiate any new clinical trials for imetelstat in the United States. If the FDA does not lift the full clinical hold, we will likely be unable to pursue the development of imetelstat.

In their notice to us, the FDA cited the following safety issues as the basis for the clinical hold: lack of evidence of reversibility of hepatotoxicity, risk for chronic liver injury and lack of adequate follow-up in patients who experienced hepatotoxicity. To address the clinical hold, we are required to:

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provide clinical follow-up information in patients who experienced LFT abnormalities until LFT abnormalities have resolved to normal or baseline; and provide information regarding the reversibility of the liver toxicity after chronic drug administration in animals. Accordingly, we intend to compile and submit to the FDA preclinical and clinical data and information from our own studies of imetelstat, as well as data and information available to us from other imetelstat studies, such as the Myelofibrosis IST, regarding LFT abnormalities and the incidence and reversibility of hepatotoxicity. In this regard, our ability to obtain information and data from the Myelofibrosis IST in a timely manner is important for our further development of imetelstat. If the FDA were to place a full clinical hold on the investigator's IND for the Myelofibrosis IST, our ability to obtain such information and data, and to pursue development of imetelstat, would be delayed even if such a clinical hold were eventually lifted. We plan to work diligently with the FDA to seek the release of the full clinical hold. If the FDA lifts the full clinical hold, or partially lifts the clinical hold, we expect to pursue development of imetelstat in one or more indications, such as MF, MDS or AML, where we believe there is a greater unmet medical need for a new product than is the case for diseases such as ET, for which survival is minimally affected by the disease.

Research and Development

Since our inception, we have devoted a significant amount of resources to develop our current and former product candidates. For information regarding research and development expenses incurred during 2013, 2012 and 2011, see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations Research and Development Expenses".

Intellectual Property

Intellectual property, including patent protection, is very important to our business. We file patent applications in the United States and other jurisdictions, and we also rely on trade secret protection and contractual arrangements to protect aspects of our business. An enforceable patent with appropriate claim coverage can provide an advantage over competitors who may seek to employ similar approaches to develop therapeutics, and so our future commercial success will be in part dependent on our intellectual property strategy. The information provided in this section should be reviewed in the context of the section entitled "Risks Related to Protecting Our Intellectual Property" under Item 1A, "Risk Factors".

The development of biotechnology products, including ours, typically includes the early development of a technology, followed by rounds of increasingly focused innovation around a product opportunity, including identification and definition of a specific product candidate and uses thereof, manufacturing processes, product formulation and administration methods. The result of this process is that biotechnology products are often protected by several families of patent filings that are filed at different times during product development and cover different aspects of the product. Consequently, earlier filed, broad technology patents will usually expire ahead of patents covering later developments such as product formulations, so that patent expirations on a product may span several years. Patent coverage may also vary from country to country based on the scope of available patent protection. There are also opportunities to obtain extension of patent coverage for a product in certain countries, which add further complexity to the determination of patent life.

We endeavor to monitor worldwide patent filings by third parties that are relevant to our business. Based on this monitoring, we may determine that an action is appropriate to protect our business interests. Such actions may include negotiating patent licenses where appropriate, filing oppositions or reexaminations against a patent, or filing a request for the declaration of an interference with a U.S. patent application or issued patent.

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Imetelstat

The following table shows the estimated latest expiration dates for the composition of matter patents or patent applications for our sole product candidate, imetelstat, and in the case of patent applications, assuming issued patents result from such applications. Composition of matter patents generally provide the most material coverage, and therefore may convey competitive advantages. Because imetelstat is still under development, subsequent innovation and associated patent filings may provide additional patent coverage with later expiration dates. Examination of overseas patent applications typically lags behind U.S. examination particularly where cases are filed first in the United States. The stated U.S. expiration date includes a patent term adjustment for delays in prosecution by the U.S. Patent and Trademark Office, but does not account for a potential patent term extension that may be available to compensate us for delays in U.S. Food and Drug Administration, or FDA, regulatory review of a new drug application.

Product Candidate	U.S. Patent Status / Expiration Date	Europe Patent Status / Expiration Date	Japan Patent Status / Expiration Date
Imetelstat	Issued / 2025	Issued / 2020*	Issued / 2024

*

An additional composition of matter patent application for imetelstat has been filed that, if issued, would provide European patent protection until 2024.

Our patent rights for imetelstat include those covering the nucleic acid sequence of hTR, the RNA component of telomerase, against which the oligonucleotide component of imetelstat is targeted, and the amidate nucleic acid chemistry used in that oligonucleotide, as well as manufacturing processes for the drug and composition claims to the drug molecule. These patents and patent applications are wholly owned by Geron. The U.S. expiration dates on these patent families currently range from 2014 to 2025.

Our patent rights relating to telomerase cover the cloned genes that encode the RNA component (hTR) and the catalytic protein component (hTERT) of human telomerase, cells that are immortalized by expression of recombinant hTERT, and cancer diagnostics based on detecting the expression of telomerase in cancer cells. Certain of these patents are in-licensed or co-owned with other entities including the Universities of Colorado, California and Texas Southwestern Medical Center. Our proprietary nucleic acid chemistry is covered by patent families that we acquired in 2002 from Lynx Therapeutics, Inc., as well as in patents that we filed for further developments of this chemistry.

Licensing

We have granted licenses to a number of other organizations in the ordinary course of our business to utilize aspects of our technologies to develop and commercialize products outside of our imetelstat program. These include:

licenses to several biotechnology and pharmaceutical companies to use telomerase-immortalized cells in drug discovery research;

licenses to several companies to commercialize telomerase-immortalized cells for drug discovery applications;

licenses to several companies to sell antibodies specific to telomerase for research purposes;

licenses to several companies to develop and commercialize reagent kits, or to provide services, for the measurement of telomere length or telomerase activity for research purposes;

a license to a company to develop and commercialize a particular telomerase-based technology for cancer detection; and

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a license to a company for the development of cancer immunotherapies for veterinary applications.

We had also granted licenses to third parties with respect to certain of our former stem cell assets, and upon the closing of the asset contribution agreement, or the Contribution Agreement, we entered into in January 2013 with BioTime, Inc., or BioTime, and BioTime's wholly owned subsidiary, Asterias Biotherapeutics, Inc., or Asterias (formerly known as BioTime Acquisition Corporation), such licenses were divested to Asterias. For further information, see the sections entitled "Concentration of Revenues" and "Stem Cell Divestiture; Asterias Series A Distribution," below.

Competition

The pharmaceutical and biotechnology industries are intensely competitive. Other pharmaceutical and biotechnology companies and research organizations currently engage in or have in the past engaged in efforts related to the biological mechanisms that are the focus of our imetelstat program, including the study of telomeres and telomerase.

We believe that the quality and breadth of our technology platform, the skills of our employees and our ability to recruit and retain skilled employees, our patent portfolio and our clinical development capabilities are competitive strengths. However, many large pharmaceutical and biotechnology companies have significantly larger intellectual property estates than we do, more substantial capital resources than we have, and greater capabilities and experience than we do in preclinical and clinical development, sales, marketing, manufacturing and regulatory affairs.

Many companies are developing alternative therapies to treat cancer and, in this regard, are competitors of ours. There are more than 200 approved anti-cancer products on the market in the United States, and several thousand in clinical development. Pharmaceutical companies developing and marketing these competing products (e.g., GlaxoSmithKline, Bristol-Myers Squibb Company, Novartis AG, Incyte Corporation and Gilead Sciences, Inc.) have significantly greater financial resources and expertise than we do in research and development, manufacturing, preclinical and clinical testing, obtaining regulatory approvals and marketing, sales and distribution.

Smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Academic institutions, government agencies and other public and private research organizations may also conduct research, seek patent protection and establish collaborative arrangements for research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified clinical, regulatory and management personnel as well as in acquiring technologies complementary to our imetelstat program.

We believe that our ability to successfully compete will depend on, among other things:

our ability to provide the required data and information to the FDA to address the full clinical hold on our IND for imetelstat;

the FDA lifting the full clinical hold, or partially lifting the full clinical hold by allowing us to continue to study imetelstat in other indications besides ET or MM;

the efficacy, safety and reliability of imetelstat;

the timing and scope of regulatory approvals and clearances;

the speed at which we develop imetelstat;

our ability to complete preclinical testing and clinical development and obtain regulatory approvals and clearances for imetelstat;

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our ability to manufacture and sell commercial quantities of imetelstat to the market;

the availability of reimbursement for imetelstat use in approved indications;

the acceptance of imetelstat by physicians and other health care providers as an effective treatment;

the quality and breadth of our technology;

the skills of our employees and our ability to recruit and retain skilled employees;

the protection of our intellectual property; and

the availability of substantial capital resources to fund development and commercialization activities.

Imetelstat is likely to be in highly competitive markets. We are aware of products in research or development by our competitors that address the diseases we are targeting, and any of these products may compete with imetelstat. Our competitors may succeed in developing their products before we do, obtaining approvals from the FDA or other regulatory agencies for their products more rapidly than we do, or developing products that are more effective than imetelstat. These products or technologies might render our technology obsolete or noncompetitive. There may also be product candidates of which we are not aware at an earlier stage of development that may compete with imetelstat.

In addition, imetelstat may need to compete or combine with existing therapies, many with long histories of use. Currently, the only approved drug therapy in the United States available for MF patients is Incyte Corporation's ruxolitinib, or Jakafi®, an orally administered, non-specific inhibitor of the JAK-STAT kinase pathway, or JAK inhibitor, which has shown benefit in reducing spleen size and providing symptom relief in MF patients. Recently, there have also been reports of overall survival benefit as well as improvement in bone marrow fibrosis from Jakafi® treatment. To date, the reported activity of Jakafi® and other JAK inhibitors in clinical development has been consistent with a cytokine-related mechanism of action, but does not provide evidence that the drugs affect the underlying malignant progenitor cells in the bone marrow driving the disease. Other treatment modalities for MF include hydroxyurea for the management of splenomegaly, leukocytosis, thrombocytosis and constitutional symptoms; splenectomy and splenic irradiation for the management of splenomegaly and co-existing cytopenias, or low blood cells; chemotherapy and pegylated interferon. Drugs for the treatment of MF-associated anemia include erythropoiesis-stimulating agents, androgens, danazol, corticosteroids, thalidomide and lenalidomide. Investigational treatments include other inhibitors of the JAK-STAT pathway, histone deacetylase inhibitors, inhibitors of heat shock protein 90, hypomethylating agents, PI3 Kinase and mTOR inhibitors, hedgehog inhibitors, anti-LOX2 inhibitors, recombinant pentraxin 2 protein, KIP-1 activators, TGF-beta inhibitors, FLT inhibitors, and other tyrosine kinase inhibitors. Presently there are no available drugs that reliably achieve clinical and pathologic remissions in patients with MF. Approved and established therapies in MDS include the immunomodulatory agent lenalidomide, or Revlimid®, and the hypomethylating agents 5-azacitidine, or Vidaza®, and 5-aza-2-deoxycitidine, or Dacogen®, and antithymocyte globulin, or ATG and cyclosporine. Approved and established therapies in AML include chemotherapeutic regimens, such as cytarabine with daunorubicin or idarubicin, or all-trans retinoic acid, or ATRA, and arsenic trioxide. Imetelstat may compete or combine with these or other therapies.

Government Regulation

Regulation by governmental authorities in the United States and other countries is a significant factor in the development, manufacture and marketing of our sole product candidate, imetelstat. We anticipate that imetelstat will require regulatory approval by governmental agencies prior to commercialization. In particular, potential human therapeutic products, such as imetelstat, are subject

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to rigorous preclinical and clinical testing and other approval procedures of the FDA and similar regulatory authorities in European and other countries. Various governmental statutes and regulations also govern or influence testing, manufacturing, safety, labeling, storage and recordkeeping related to such products and their marketing. The process of obtaining these approvals and the subsequent compliance with appropriate statutes and regulations require the expenditure of substantial time and money, and there can be no guarantee that approvals will be granted.

United States Food and Drug Administration Regulatory Approval Process

Prior to commencement of clinical trials involving humans, preclinical testing of new pharmaceutical products is generally conducted on animals in the laboratory to evaluate the potential efficacy and safety of a product candidate. The results of these trials are submitted to the FDA as part of an IND application, which must be cleared by the FDA before clinical testing in humans can begin. Typically, clinical evaluation involves a time-consuming and costly three-phase trial process. In Phase 1, clinical trials are conducted with a small number of healthy volunteers or patients afflicted with a specific disease to assess safety and to evaluate the pattern of drug distribution and metabolism within the body. In Phase 2, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety. The Phase 2 trials can be conducted comparing the investigational treatment to a comparator arm, or not. If used, a comparator usually includes standard of care therapy. Safety and efficacy data from Phase 2 clinical trials, even if favorable, may not provide sufficient rationale for proceeding to a Phase 3 clinical trial. In Phase 3, large-scale, multi-center, comparative trials are conducted with patients afflicted with a target disease to provide sufficient data to demonstrate the efficacy and safety required by the FDA. The FDA closely monitors the progress of each of the three phases of clinical testing and may, at its discretion, re-evaluate, alter, suspend, or terminate the trials. For example, in March 2014, we received written notice from the FDA that our IND for imetelstat has been placed on full clinical hold following their review of data related to hepatotoxicity in our then-ongoing clinical studies. A full clinical hold is an order that the FDA issues to a trial sponsor to suspend all ongoing clinical trials and delay all proposed trials. With this clinical hold, any patients in an ongoing Geron-sponsored clinical trial cannot receive any further treatment with imetelstat. Therefore, we have stopped imetelstat treatment in our Phase 2 Geron-sponsored clinical trials in ET and MM. For our Phase 2 ET trial, eight patients are affected and for our Phase 2 MM trial, two patients are affected. We plan to work diligently with the FDA to seek the release of the full clinical hold, but we cannot assure you this will occur in a timely manner or at all.

The results of the preclinical and clinical testing of small molecules and many biologic drugs are submitted to the FDA in the form of a New Drug Application, or NDA, for review and for approval prior to commencement of commercial sales. In the case of blood products, vaccines, or gene and cell therapies, the results of clinical trials are submitted to the FDA as a Biologics License Application, or BLA. In responding to an NDA/BLA submission, the FDA may grant a marketing authorization, impose limitations on a marketing authorization, request additional information, deny the application if it determines that the application does not provide an adequate basis for approval, or refuse to review an application that has been submitted if it determines that the application does not provide an adequate basis for filing and review.

European and Other Regulatory Approval Process

Prior to initiating clinical trials in a region outside of the United States, a clinical trial application will need to be submitted and reviewed by the appropriate regulatory authority regulating the country in which the trial will be conducted. Whether or not FDA clearance or approval has been obtained, approval of a product by comparable regulatory authorities in Europe and other countries will be necessary prior to commencement of marketing the product in such countries. The regulatory

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authorities in each country may impose their own requirements and may refuse to grant an approval, or may require additional data before granting it, even though the relevant product has been cleared or approved by the FDA or another authority. As with the FDA, the regulatory authorities in the European Union, or EU, and other developed countries have lengthy approval processes for pharmaceutical products. The process for gaining approval in particular countries varies, but generally follows a similar sequence to that described for FDA approval. In Europe, the European Medicine Agency, or EMA, and the European Committee for Proprietary Medicinal Products, or CPMP, provide a mechanism for EU-member states to exchange information on all aspects of product licensing. The EU has established the EMA for the evaluation of medical products, with both a centralized procedure with which the marketing authorization is recognized in all EU-member states and a decentralized procedure, the latter being based on the principle of licensing within one member country followed by mutual recognition by the other member countries.

Other Regulations

We are also subject to various and often changing federal, state, local and international laws, rules, regulations, guidelines and recommendations relating to safe working conditions and manufacturing practices.

Manufacturing

A typical sequence of steps in the manufacture of imetelstat drug product includes the following key components:

- starting materials, which are well-defined raw materials that are used to make bulk drug substance;
- bulk drug substance, which is the active pharmaceutical ingredient in a drug product that provides pharmacological activity or other direct effect in the treatment of disease; and
- final drug product, which is the finished dosage form that contains the drug substance that is shipped to the clinic for patient treatment.

The final imetelstat drug product we use in clinical trials is produced by third-party contractors. We have no long-term commitments or commercial supply agreements with any of our imetelstat suppliers. If we are able to achieve regulatory approval in the United States or other countries to market and sell imetelstat, we intend to continue to rely on third party contractors for the production of necessary supplies. We are not planning to establish our own manufacturing capabilities.

We currently employ a third-party strategy for production of starting materials used in the manufacture of imetelstat, as well as for production of imetelstat bulk drug substance and final drug product. These manufacturers currently provide our clinical supply requirements on a proposal-by-proposal basis under master supply agreements. Our third-party manufacturers may need to make substantial investments to enable sufficient capacity increases and cost reductions, and to implement those regulatory and compliance standards necessary for successful Phase 3 clinical trials and commercial production. Our manufacturers may not be able to achieve such capacity increases, cost reductions, or regulatory and compliance standards, and even if they do, such achievements may not be at a commercially reasonable cost to us.

We currently have a master service agreement with two contractors for labeling and packaging of imetelstat final drug product and for distribution of imetelstat to clinical sites in North America. In addition, we have two contractors for release and distribution of imetelstat drug product to clinical sites in Europe. These contractors provide services on a proposal-by-proposal basis.

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We have also entered into quality agreements with our imetelstat bulk drug substance and final drug product manufacturers, and our labeling, packaging and distribution service providers. The master and quality agreements are designed to ensure product quality, compliance with current Good Manufacturing Practices, or cGMP, and oversight of third parties for all critical aspects of imetelstat production, testing, release, labeling and packaging, storage and distribution.

Concentration of Revenues

In 2013, the majority of our revenues were from license fees and royalties under licenses granted to several biotechnology and pharmaceutical companies to use telomerase-immortalized cells in drug discovery research and for drug discovery applications. In 2012 and 2011, the majority of our revenues were from license fees and royalties related to our license and collaboration agreement with GE Healthcare UK, Limited, or GE Healthcare, for the development and commercialization of cellular assay products and our license agreement with Asia Biotech Corporation related to our telomerase activation technology. Upon the closing of the stem cell divestiture under the Contribution Agreement on October 1, 2013, the license agreement with GE Healthcare, including any future revenue payments thereunder, was transferred to Asterias. In December 2012, we assigned our telomerase activation technology to Telomerase Activation Sciences, Inc. and terminated our license agreement with Asia Biotech Corporation. Future royalty obligations by Asia Biotech Corporation under the license agreement have been terminated. We operate in one operating segment and have operations solely in the United States. Information regarding total revenues, net loss and total assets is set forth in our financial statements included in Item 8 of this annual report on Form 10-K.

Stem Cell Divestiture; Asterias Series A Distribution

Background

On October 1, 2013, we closed the transaction to divest our human embryonic stem cell assets and our autologous cellular immunotherapy program pursuant to the terms of the Contribution Agreement we entered into with BioTime and Asterias in January 2013. Under the terms of the Contribution Agreement, on October 1, 2013, we contributed to Asterias our human embryonic stem cell assets, including intellectual property and certain licenses, human embryonic stem cell lines and other assets related to our discontinued human embryonic stem cell programs, including our Phase I clinical trial of oligodendrocyte progenitor cells, or GRNOPC1, in patients with acute spinal cord injury, as well as our autologous cellular immunotherapy program, including data from the Phase I/II clinical trial of the autologous cellular immunotherapy in patients with AML. On October 1, 2013, Asterias assumed all post-closing liabilities with respect to all of the assets contributed by us, including any liabilities related to the GRNOPC1 and autologous cellular immunotherapy clinical trials. Additionally, Asterias was substituted for us as a party in an appeal by us of two rulings in favor of ViaCyte, Inc. by the United States Patent and Trademark Office's Board of Patent Appeals and Interferences, filed by us in the United States District Court for the Northern District of California in September 2012, or the ViaCyte Appeal, and Asterias assumed all liabilities arising after October 1, 2013 with respect to the ViaCyte Appeal.

In accordance with the terms of the Contribution Agreement, on October 1, 2013 we received 6,537,779 shares of Asterias Series A common stock representing 21.4% of Asterias' outstanding common stock as a class as of that date. Under the terms of the Contribution Agreement and subject to certain conditions and applicable law, following a record date to be declared by our board of directors in the future, we are contractually obligated to distribute all of the shares of Asterias Series A common stock to our stockholders on a pro rata basis, other than with respect to fractional shares and shares that would otherwise be distributed to Geron stockholders residing in certain excluded jurisdictions, as described below, which shares, as required by the Contribution Agreement, will be sold with the net cash proceeds therefrom distributed ratably to the stockholders who would otherwise be

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entitled to receive such shares. We refer to the anticipated distribution by us of the Asterias Series A common stock as the Series A Distribution.

On October 1, 2013, BioTime contributed to Asterias 8,902,077 shares of BioTime common stock, five-year warrants to purchase 8,000,000 additional shares of BioTime common stock at an exercise price of $5.00 per share, or the BioTime Warrants, minority stakes in two of BioTime's subsidiaries and rights to use certain human embryonic stem cell lines. In addition, BioTime had previously loaned Asterias $5,000,000 in cash and the principal amount of this debt was cancelled as part of the closing under the Contribution Agreement. In consideration of BioTime's contributions, on October 1, 2013, Asterias issued to BioTime 21,773,340 shares of Asterias Series B common stock representing 71.6% of Asterias' outstanding common stock as a class as of that date, and three-year warrants to purchase 3,150,000 additional shares of Asterias Series B common stock at an exercise price of $5.00 per share. Upon completion of the Series A Distribution, Asterias is contractually obligated under the Contribution Agreement to distribute the BioTime Warrants on a pro rata basis to the holders of Asterias Series A common stock.

Status of Anticipated Series A Distribution

Prior to our ability to set a record date for the Series A Distribution, we must receive notice from BioTime and Asterias that certain securities registration or qualification requirements have been met by them, including notice that the registration statement that Asterias filed with the Securities and Exchange Commission, or SEC, covering the Series A Distribution has been declared effective by the SEC and is otherwise available to effect the Series A Distribution, which may not occur on a timely basis or at all. In this regard, our ability to effect the Series A Distribution has been delayed beyond our expectations, and we have no control over when and whether the Asterias registration statement will ultimately be declared effective by the SEC and available to us in order to effect the Series A Distribution. Likewise, Asterias may be unable to distribute to the Asterias Series A stockholders the BioTime Warrants received by them from BioTime under the Contribution Agreement. These anticipated distributions may be further delayed, perhaps substantially, or precluded altogether for a variety of reasons, including the failure of BioTime and/or Asterias to obtain or maintain required federal and state registrations and qualifications necessary to enable us to effect the Series A Distribution and/or to enable Asterias to complete the distribution of the BioTime Warrants.

In the event that the conditions to our obligation to effect the Series A Distribution are met, our board of directors will declare a dividend on shares of our common stock payable in shares of Asterias Series A common stock. In that event, only Geron stockholders as of the close of business on the record date declared by our board of directors for the Series A Distribution and holding shares of our common stock in certain jurisdictions would receive shares of Asterias Series A common stock in the Series A Distribution. Accordingly, if the Series A Distribution occurs, in order to receive any shares of Asterias Series A common stock in the Series A Distribution, Geron stockholders would need to continue to hold shares of our common stock through the record date and Geron stockholders would also need to reside in one of the following jurisdictions: The United States, Anguilla, Argentina, Austria, Australia, Belgium, Bulgaria, Canada, Cayman Islands, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Guam, Guernsey, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Korea, Latvia, Lebanon, Liechtenstein, Luxembourg, Malta, Mexico, Monaco, Netherlands, Norway, Panama, Poland, Portugal, Puerto Rico, Romania, Saudi Arabia, Singapore, Slovenia, Slovakia, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates, United Kingdom, Uruguay, British Virgin Islands, and the U.S. Virgin Islands. If the anticipated Series A Distribution occurs, in lieu of Geron distributing the Asterias Series A common stock in jurisdictions other than those set forth above, the Asterias Series A common stock that would otherwise be distributed to Geron stockholders who reside in such jurisdictions will instead be sold for cash and the net cash proceeds will be distributed ratably to such stockholders. Fractional shares will also be sold

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for cash with the net cash proceeds to be distributed ratably to the Geron stockholders who were entitled to receive fractional shares of Asterias Series A common stock. In the event that the conditions to our obligation to effect the Series A Distribution are met, we will publicly announce the record date at least ten days prior to the record date. If the anticipated Series A Distribution occurs and Geron stockholders sell their shares of Geron common stock prior to the record date for the Series A Distribution, they will not receive any shares of Asterias Series A common stock (or cash in lieu thereof) in the Series A Distribution.

Asterias is a newly organized, development stage company in the start-up phase, and has only recently commenced its primary product development programs. To date, Asterias' operations have been primarily limited to organizing and staffing its company and completing the acquisition of our former stem cell assets. Accordingly, it is difficult if not impossible to predict Asterias' future performance or to evaluate its business and prospects. In addition, there is currently no existing public market for either the Asterias Series A common stock (or any other Asterias securities) or the BioTime Warrants, and there can be no assurance that an active public market for either the Asterias Series A common stock or BioTime Warrants will ever develop. For these and other reasons, any value ascribed to the Asterias Series A common stock or the BioTime Warrants is highly speculative and an investment decision in our common stock should be based solely on an evaluation of our company, its business and its prospects. In addition, we do not know when, if ever, the anticipated Series A Distribution will occur and it is possible that it may never occur. Please see the risk factor entitled "Our stockholders may realize little or no value from the divestiture of our stem cell assets, and as a result our stock price may decline, we could be subject to litigation, and our business may be adversely affected" under Item 1A, "Risk Factors" of this annual report on Form 10-K.

Tax Consequences of Anticipated Series A Distribution

If the anticipated Series A Distribution occurs, the Series A Distribution will not qualify as a tax-free spin-off under Section 355 of the Internal Revenue Code of 1986, as amended, or the Code. Accordingly, the fair market value of the Asterias Series A common stock at the time of the Series A Distribution, if it occurs, and the amount of any cash distributed will be treated as dividend income for U.S. federal income tax purposes for Geron stockholders to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles), if any. We did not have accumulated earnings and profits as of the end of 2013, and we expect that we also will have no current earnings and profits for 2014. Accordingly, we do not believe the distribution of the Asterias Series A common stock and any cash distributed will result in dividend income to Geron stockholders provided that such distribution occurs in 2014. However, because the amount of our 2014 current earnings and profits, if any, cannot be known before the end of 2014, because we have not performed a formal study of our accumulated earnings and profits as of the end of 2013, and because both the timing and occurrence of the Series A Distribution is uncertain and so could be made after the end of 2014, if at all, we can provide no assurance that the Series A Distribution, should it occur, would not result in any dividend income to Geron stockholders. In addition, we cannot tell you whether Asterias has earnings and profits and therefore whether the anticipated distribution of the BioTime Warrants by Asterias will result in dividend income. If a "Non-U.S. Holder" (as defined below) is treated as receiving dividend income, such Non-U.S. Holder would generally be subject to U.S. federal withholding tax at a 30% rate (or lower applicable treaty rate). For the purposes of this discussion, a "Non-US. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (a) an individual who is a citizen or resident of the U.S., (b) a corporation or other entity treated as a corporation created or organized in or under the laws of the U.S., any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source or

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(d) a trust if it (1) is subject to the primary supervision of a court within the U.S. and has one or more U.S. persons that have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

To the extent that the fair market value of the Asterias Series A common stock and the amount of any cash distributed exceeds our current and accumulated earnings and profits, if any, they will first reduce Geron stockholders' adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess. Any gain resulting from the Series A Distribution will be short-term capital gain if the Geron stockholder has held our stock for one year or less at the time of the Series A Distribution. The distribution by Asterias of the BioTime Warrants, if it occurs, will be subject to similar U.S. federal income tax treatment except that the amount of dividend income, if any, would be based on the current or accumulated earnings and profits of Asterias, and any fair market value of BioTime Warrants in excess of any such dividend amount would result in gain to the extent such excess value exceeded the adjusted tax basis of the Asterias Series A common stock. Any gain resulting from the distribution of the BioTime Warrants will be short-term capital gain if the Geron stockholder has held the Asterias Series A common stock for one year or less at the time of the distribution of the BioTime Warrants.

If any dividend income or gain were recognized by Geron stockholders in respect of our anticipated distribution of the Asterias Series A common stock and cash, if any, or the anticipated distribution by Asterias of the BioTime Warrants, as described above, then Geron stockholders could incur U.S. federal income taxes with respect to the receipt of such distribution. The lack of an existing market for the Asterias Series A common stock could limit or preclude the ability of our stockholders to sell a sufficient quantity of Asterias Series A common stock to satisfy such potential tax liabilities. As a result, if the anticipated Series A Distribution occurs, Geron stockholders may incur tax liabilities, but be unable to realize value from any Asterias Series A common stock distributed by Geron and/or the BioTime Warrants to be distributed by Asterias. Because no further action is required on the part of Geron stockholders to receive the Asterias Series A common stock and the related BioTime Warrants in the distributions, if the anticipated Series A Distribution occurs and Geron stockholders do not want to receive the Asterias Series A common stock and the related BioTime Warrants in the anticipated distributions (or cash in lieu thereof), the only recourse for Geron stockholders will be to divest their Geron common stock prior to the record date set by our board of directors for the Series A Distribution. Prospective investors are urged to consult their tax advisors with respect to the tax consequences of the anticipated distributions generally and in their particular circumstances, including the consequences of any proposed change in applicable law.

This foregoing discussion of the anticipated Series A Distribution is for informational purposes only and shall not constitute an offer to sell or the solicitation of an offer to buy any securities of Asterias or BioTime, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

Discontinued Programs

We conducted two randomized, controlled Phase 2 clinical trials of imetelstat in solid tumors. One evaluated imetelstat in patients with metastatic breast cancer and the other evaluated imetelstat in patients with advanced non-small cell lung cancer, or NSCLC. We discontinued development of imetelstat in these solid tumor settings, including closing of the related clinical trials in 2013, and are currently focusing on the clinical development of imetelstat in hematologic myeloid malignancies.

In April 2013, we announced the decision to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility located at 200 Constitution Drive, Menlo Park, California.

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In June 2013, we terminated our license for GRN1005 and returned the GRN1005 program to Angiochem Inc. We decided to discontinue development of GRN1005 in December 2012 based on an interim analysis for futility in our Phase 2 clinical trial in patients with brain metastases arising from breast cancer and study enrollment challenges in our Phase 2 clinical trial in patients with brain metastases arising from NSCLC. Our obligations for the GRN1005 Phase 2 clinical trials also ceased in June 2013.

See Note 7 on Restructurings in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of the discontinued programs.

Consultants

We have consulting agreements with a number of leading academic scientists, clinicians and regulatory experts. These individuals serve as key consultants, expert witnesses, or as members of clinical advisory panels with respect to our imetelstat program or in legal proceedings. They also serve as important contacts for us throughout the broader scientific and clinical communities. They are distinguished individuals with expertise in numerous fields, including telomere and telomerase biology, cellular biology, molecular biology, oncology and drug regulations.

We retain each consultant according to the terms of a consulting agreement. Under such agreements, we pay them a consulting fee and reimburse them for out-of-pocket expenses incurred in performing their services for us. In addition, some consultants hold options to purchase our common stock and restricted stock awards, subject to the vesting requirements contained in the consulting agreements. Our consultants may be employed by other entities and therefore may have commitments to their employer, or may have other consulting or advisory agreements that may limit their availability to us.

Executive Officers of the Company

The following table sets forth certain information with respect to our executive officers as of January 31, 2014:

Name	Age	Position
John A. Scarlett, M.D.	62	President and Chief Executive Officer
Olivia K. Bloom	45	Senior Vice President, Finance, Chief Financial Officer and Treasurer
Andrew J. Grethlein, Ph.D.	49	Executive Vice President, Technical Operations
Stephen N. Rosenfield, J.D.	64	Executive Vice President, General Counsel and Corporate Secretary
Melissa A. Kelly Behrs	50	Senior Vice President, Portfolio and Alliance Management
Craig C. Parker	52	Senior Vice President, Corporate Development

John A. Scarlett, M.D., has served as our Chief Executive Officer and a director since September 2011 and President since January 2012. Prior to joining Geron, Dr. Scarlett served as President, Chief Executive Officer and a member of the board of directors of Proteolix, Inc., a privately held, oncology-oriented biopharmaceutical company, from February 2009 until its acquisition by Onyx Pharmaceuticals, Inc., an oncology-oriented biopharmaceutical company, in November 2009. From February 2002 until its acquisition by Ipsen, S.A. in October 2008, Dr. Scarlett served as the Chief Executive Officer and a member of the board of directors of Tercica, Inc., an endocrinology-oriented biopharmaceutical company, and also as its President from February 2002 through February 2007. From March 1993 to May 2001, Dr. Scarlett served as President and Chief Executive Officer of Sensus Drug Development Corporation. In 1995, he co-founded Covance Biotechnology Services, Inc. and served as

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a member of its board of directors from inception to 2000. From 1991 to 1993, Dr. Scarlett headed the North American Clinical Development Center and served as Senior Vice President of Medical and Scientific Affairs at Novo Nordisk Pharmaceuticals, Inc., a wholly owned subsidiary of Novo Nordisk A/S. Dr. Scarlett received his B.A. degree in chemistry from Earlham College and his M.D. from the University of Chicago, Pritzker School of Medicine.

Olivia K. Bloom has served as our Senior Vice President and Chief Financial Officer since December 2012 and Treasurer since February 2011. Ms. Bloom previously served as our Chief Accounting Officer from September 2010 to December 2012 and Vice President from January 2007 to December 2012. Ms. Bloom joined the Company in 1994 as a Senior Financial Analyst and from 1996 to 2011 served as our Controller. Prior to Geron, Ms. Bloom started her career in public accounting at KPMG Peat Marwick and became a Certified Public Accountant in 1994. Ms. Bloom graduated Phi Beta Kappa with a B.S. in Business Administration from the University of California at Berkeley.

Andrew J. Grethlein, Ph.D., has served as our Executive Vice President, Technical Operations since September 2012. Prior to joining Geron, Dr. Grethlein was Executive Vice President and Chief Operating Officer for Inspiration Biopharmaceuticals, a biopharmaceutical company, from January 2010 to September 2012. From October 2008 until January 2010, Dr. Grethlein was Senior Vice President of Biotechnology and Portfolio Management Team Leader for Hematology at Ipsen S.A., a global specialty pharmaceutical company. His responsibilities at Ipsen included planning and execution of worldwide strategy for product and portfolio development in the hematologic therapeutic area. From 2003 to 2008, Dr. Grethlein served as Senior Vice President of Pharmaceutical Operations at Tercica, Inc., an endocrinology-oriented biopharmaceutical company. In this role, he was a member of the senior executive team that governed corporate strategy, business planning and company operations, and had responsibility for all manufacturing and quality functions. Before joining Tercica, Dr. Grethlein served in various positions at Elan Corporation, a biotechnology company, from 1997 to 2003, including as Senior Director, South San Francisco Pharmaceutical Operations, where he had responsibility as site head for commercial manufacturing operations. From 1995 to 1997, Dr. Grethlein served as Manager, Biologics Development and Manufacturing, for Athena Neurosciences, Inc., a pharmaceutical company. Prior to this, he served in various engineering positions for the Michigan Biotechnology Institute, a nonprofit technology research and business development corporation. Dr. Grethlein received his A.A. degree in liberal arts from Simon's Rock Early College, his B.S. in biology from Bates College, and his M.S. and Ph.D. in chemical engineering from Michigan State University.

Stephen N. Rosenfield, J.D., has served as our Executive Vice President, General Counsel and Corporate Secretary since February 2012, General Counsel and Secretary since January 2012 and Secretary since October 2011. From July 2009 to February 2012, Mr. Rosenfield has been a consultant to private companies. From October 2008 until June 2009, Mr. Rosenfield was the General Counsel and Secretary of Tercica, Inc., a U.S. subsidiary of Ipsen, SA., a global specialty pharmaceutical company. From June 2004 until October 2008, Mr. Rosenfield was the General Counsel and Secretary of Tercica, Inc., an endocrinology-oriented biopharmaceutical company, and from January 2006 until October 2008, he was also the Executive Vice President of Legal Affairs. Mr. Rosenfield received a B.S. from Hofstra University and a J.D. from Northeastern University School of Law.

Melissa A. Kelly Behrs has served as our Senior Vice President, Portfolio and Alliance Management since September 2012, and previously as our Senior Vice President, Strategic Portfolio Management and Product Development and Manufacturing, since May 2011. She served as Senior Vice President, Therapeutic Development, Oncology, from January 2007 until May 2011, and as Vice President, Oncology from January 2003 until January 2007. From April 2002 until January 2003, Ms. Behrs served as our Vice President, Corporate Development. From April 2001 until April 2002, Ms. Behrs served as our General Manager, Research and Development Technologies. Ms. Behrs joined us in November 1998 as Director of Corporate Development. From 1990 to 1998, Ms. Behrs worked at Genetics Institute, Inc., a biotechnology research and development company, serving initially as

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Assistant Treasurer and then as Associate Director of Preclinical Operations where she was responsible for all business development, regulatory, and project management activities for the Preclinical Development function. Ms. Behrs received a B.S. from Boston College and an M.B.A. from Babson College.

Craig C. Parker has served as our Senior Vice President, Corporate Development since December 2012. Mr. Parker was most recently Senior Vice President, Strategy and Corporate Development at Human Genome Sciences, Inc., a biopharmaceutical company focused on developing protein and antibody drugs, from August 2011 until its sale to GlaxoSmithKline in October 2012. From December 2009 to July 2011, Mr. Parker was co-founder and Chief Executive Officer of Vega Therapeutics, a drug discovery stage biotechnology start-up in the emerging field of inflammation, insulin resistance and energy balance. Before founding Vega Therapeutics, Mr. Parker was Senior Vice President of Corporate Development and Finance at Proteolix, a clinical development stage biotechnology company developing novel oncology drug candidates, from March 2009 until its sale to Onyx Pharmaceuticals in October 2009. From May 2007 to February 2009, Mr. Parker was President of DCD BioConsulting LLC, a strategic and financial advisory firm to the biotechnology industry. From 1999 to 2001, Mr. Parker served as Senior Vice President and General Manager of the Specialty Therapeutics Franchise at Immunex Corporation, a biopharmaceutical company focused in immunology, oncology and neurology. Mr. Parker's career includes 12 years as a Wall Street research analyst. From 2002 to 2007, he was a Managing Director and head of Biotechnology Equity Research at Lehman Brothers. Mr. Parker also covered the biotechnology industry as the senior biotechnology analyst at Donaldson, Lufkin & Jenrette from 1998 to 1999, and as an analyst at JP Morgan & Co. from 1994 to 1998. His additional investment experience includes serving as a Partner at Sprout Group, the venture capital affiliate of Credit Suisse Group, from 2001 to 2002. Mr. Parker received his undergraduate degree in Biological Sciences from the University of Chicago and an M.B.A. from the University of Michigan Stephen M. Ross School of Business, and attended the Georgetown University School of Medicine.

Employees

As of December 31, 2013, we had 46 employees, of whom 6 hold Ph.D. degrees and 14 hold other advanced degrees. Of this current total workforce, 24 employees were engaged in, or directly supported, our research and development activities, and 22 employees were engaged in business development, legal, finance and administration. None of our employees are covered by a collective bargaining agreement; nor have we experienced work stoppages. We consider relations with our employees to be good.

Corporate Information

Geron Corporation was incorporated in the State of Delaware on November 28, 1990.

Available Information

Our internet address is www.geron.com. Information included on our website is not part of this annual report on Form 10-K. We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. In addition, copies of our annual reports are available free of charge upon written request. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is www.sec.gov.

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ITEM 1A. RISK FACTORS

Our business is subject to various risks and uncertainties that may have a material adverse effect on our business, financial condition or results of operations. You should carefully consider the risks and uncertainties described below, together with all of the other information included in this annual report on Form 10-K. Our business faces significant risks and uncertainties, and those described below may not be the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial may also significantly impair our business, financial condition or results of operations. If any of these risks or uncertainties occur, our business, results of operations or financial condition could suffer, the market price of our common stock could decline and you could lose all or part of your investment in our common stock.

RISKS RELATED TO OUR BUSINESS

The FDA has placed a full clinical hold on our IND for imetelstat, and if the FDA does not lift the full clinical hold in a timely manner, or at all, or permit us to study imetelstat for other indications, such as under the terms of a partial clinical hold, our business will be severely harmed and we could potentially cease operations.

We may be unable to submit to the FDA, in a timely manner, or at all, the clinical follow-up information for patients who experienced LFT abnormalities until LFT abnormalities have resolved to normal or baseline, and/or information regarding the reversibility of the liver toxicity after chronic drug administration in animals. Even if we are able to provide such information, the FDA may not deem the information to be sufficient to lift the full clinical hold on our IND for imetelstat. Accordingly, the FDA may require us to pursue new clinical safety trials or pre-clinical studies before the FDA will consider lifting the full clinical hold, if at all. If we are unable to submit the required information to the FDA in a timely manner, or at all, or if the FDA does not lift the full clinical hold in a timely manner, or at all, or if the FDA does not permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, our business will be severely harmed and we could potentially cease operations. In addition, even if the FDA does not place a full clinical hold on the investigator's IND for the Myelofibrosis IST or for other investigator-sponsored studies of imetelstat, this would not be an indication of whether the FDA will lift the full clinical hold on our IND and under what conditions, and you should not assume that any action taken by the FDA with respect to any other IND holder will affect or otherwise impact the FDA's full clinical hold on our IND. In this regard, even if the FDA does not place a full clinical hold on the investigator's IND for the Myelofibrosis IST, we will still be required to adequately address the FDA's concerns in its notice to us prior to our being able to initiate any further development of imetelstat, including in MF.

If the FDA places a full clinical hold on the investigator's IND for the Myelofibrosis IST, and the FDA does not lift such a clinical hold in a timely manner or at all, our business will be significantly harmed and we could potentially cease operations.

Our ability to obtain information and data from the Myelofibrosis IST in a timely manner is important for our further development of imetelstat for MF, MDS or AML. If the FDA were to place a full clinical hold on the investigator's IND for the Myelofibrosis IST, our ability to obtain such information and data, and to pursue development of imetelstat, would be delayed even if such a clinical hold were eventually lifted. Such a delay would significantly harm our business. If such a clinical hold were placed on the investigator's IND for the Myelofibrosis IST, and the FDA did not lift the full clinical hold in a timely manner, or at all, our business would be significantly harmed and we could potentially cease operations.

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Our success is solely dependent on the success of one early stage product candidate, imetelstat, and we cannot be certain that we will be able to continue to pursue the development of imetelstat, including advancing to subsequent clinical trials, or that we will be able to receive regulatory approval on a timely basis, or at all.

Our business is at an early stage of development, and we are wholly dependent on the success of imetelstat, our sole product candidate. We do not have any products that are commercially available. Our ability to develop imetelstat to and through regulatory approval and commercial launch is subject to significant risks and uncertainties and our ability to, among other things:

adequately address the concerns of the FDA regarding the safety of imetelstat, in a manner sufficient to cause the FDA to lift the full clinical hold on our IND in a timely manner;

be informed by the investigator in the Myelofibrosis IST if the FDA places a full clinical hold on the Myelofibrosis IST;

receive FDA clearance to permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, and/or to file for and/or obtain marketing approvals for such indications;

receive positive safety and efficacy data from existing and potential future investigator-sponsored trials of imetelstat, such as the Myelofibrosis IST, that provide the clinical rationale for the potential or continued development of imetelstat in hematologic myeloid malignancies;

ascertain that the use of imetelstat does not result in significant liver toxicity or other significant systemic or organ toxicities or other safety issues resulting in an unacceptable benefit-risk profile;

if the full clinical hold on our IND is lifted, or the FDA permits us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, develop clinical plans for, and successfully enroll and complete, potential future Geron-sponsored clinical trials of imetelstat in hematologic myeloid malignancies;

if the full clinical hold is lifted, or if the FDA permits us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, collaborate successfully with clinical trial sites, academic institutions, clinical research organizations, physician investigators, including any physician investigators conducting investigator-sponsored trials of imetelstat, and other third parties;

if the full clinical hold is lifted, or if the FDA permits us to study imetelstat for other indications with higher unmet medical need than ET or MM, obtain positive clinical data from potential future Geron-sponsored clinical trials to enable subsequent clinical trials;

obtain required regulatory clearances and approvals for imetelstat; for example, in addition to seeking to have the FDA lift the full clinical hold on our IND for imetelstat or permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, it is uncertain whether the FDA and regulatory authorities in other countries will require us to obtain and submit additional preclinical, manufacturing, or clinical data to proceed with any potential future Geron-sponsored clinical trials; how the FDA and other regulatory authorities will interpret safety and efficacy data from any clinical trial, including the Myelofibrosis IST; the scope and type of clinical development and other data they might require us to generate and submit before they might grant clearance to initiate clinical trials or to grant a marketing approval, if any; and the length of time and cost for us to complete any such requirements;

enter into arrangements with third parties to provide services needed to further research and develop imetelstat, or to manufacture imetelstat, in each case at commercially reasonable costs;

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enter into arrangements with third parties, or establish internal capabilities, to provide sales, marketing and distribution functions in compliance with applicable laws;

obtain appropriate coverage and reimbursement levels for the cost of imetelstat from governmental authorities, private health insurers and other third-party payors;

maintain and enforce adequate intellectual property protection for imetelstat;

maintain adequate financial resources and personnel to advance imetelstat to and through subsequent clinical trials, regulatory approval and commercial launch; and

obtain financing on commercially reasonable terms to fund our operations.

If we are not able to successfully achieve the above-stated goals and overcome other challenges that we may encounter in the research, development, manufacturing and commercialization of imetelstat, we may be forced to abandon our development of imetelstat, which would severely harm our business and could potentially cause us to cease operations.

We are currently focused on the development of imetelstat in hematologic myeloid malignancies, other than ET and MM, and clinical development of imetelstat is dependent on the FDA lifting the full clinical hold on our IND for imetelstat, or partially lifting the full clinical hold, for example by permitting us to study imetelstat in indications other than ET or MM, and the results of existing and potential future Geron-sponsored and investigator-sponsored clinical trials of imetelstat in hematologic myeloid malignancies, including the Myelofibrosis IST.

If we are unable provide the FDA with preclinical and clinical data and information to address their safety concerns, in order to seek to have the FDA lift the full clinical hold on our IND or to permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, and file for marketing approvals for such indications, this would likely result in our decision to discontinue development of imetelstat in the United States and to potentially cease operations. Even if the full FDA clinical hold is lifted, we may be unable to develop, or initiate the development of, imetelstat in MF or any additional hematologic myeloid malignancy indications, which would likely result in our decision to discontinue development of imetelstat and to potentially cease operations. In any event, imetelstat will require significant additional clinical testing prior to possible regulatory approval in the United States and other countries, and we do not expect imetelstat to be commercially available for many years, if at all. Our clinical development program for imetelstat may not lead to regulatory approval from the FDA and similar foreign regulatory agencies if we fail to demonstrate that imetelstat is safe and effective. We may therefore fail to commercialize imetelstat. Any failure to advance imetelstat to subsequent clinical trials, failure to obtain regulatory approval of imetelstat, or limitations on any regulatory approval that we might receive, would severely harm our business and prospects, and could potentially cause us to cease operations.

Our ability to generate product revenue is dependent on the successful regulatory approval and commercialization of imetelstat. Imetelstat may not prove to be more effective for treating hematologic cancers than current therapies. Competitors or other third parties may also have proprietary rights that prevent us from developing and marketing imetelstat, or our competitors may discover or commercialize similar, superior or lower-cost products that make imetelstat unsuitable for marketing. Imetelstat also may not be able to be manufactured in commercial quantities at an acceptable cost. Any of the factors discussed above could delay or prevent us from developing, commercializing or marketing imetelstat, which would materially adversely affect our business and could potentially cause us to cease operations.

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If imetelstat were to have an unacceptable benefit-risk profile, our business and prospects could be severely harmed.

The FDA placed our IND for imetelstat on full clinical hold due to safety concerns regarding the lack of evidence of reversibility of hepatotoxicity, risk for chronic liver injury and lack of adequate follow-up in patients who experienced hepatotoxicity. If the FDA does not lift the full clinical hold, or if the FDA does not permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, or to file for marketing approvals for such indications, or if there are additional safety results that cause the benefit-risk profile to become unacceptable with respect to patients enrolled in the Myelofibrosis IST or potential future clinical trials of imetelstat conducted by us or any independent investigator, we would be delayed or prevented from advancing imetelstat into further clinical development and may decide or be required to discontinue our development of imetelstat, which would severely harm our business and prospects, and would likely cause us to cease operations.

Imetelstat may prove to have undesirable or unintended side effects or other characteristics adversely affecting its safety, efficacy or cost effectiveness that could prevent or limit its approval for marketing and successful commercial use, or that could delay or prevent the commencement and/or completion of clinical trials for imetelstat. For example, in our Phase 1 clinical trials of imetelstat, we observed dose-limiting toxicities, including reduced platelet count, or thrombocytopenia, when the drug was used as a single agent, and reduced white blood cell count, or neutropenia, when the drug was used in combination with paclitaxel, as well as a low incidence of severe infusion reactions. In our Phase 2 clinical trials of imetelstat in ET, MM and solid tumors, we have observed hematologic toxicities as well as gastrointestinal events, infections, muscular and joint pain, fatigue and infusion reactions. In addition, in our Phase 2 clinical trials of imetelstat, we have observed abnormal liver function tests, the clinical significance, long-term consequences and reversibility of which is currently undetermined. In the Myelofibrosis IST, myelosuppression has been the primary dose-limiting toxicity reported to date, consistent with our observations in previous Geron-sponsored imetelstat studies. However, during the Myelofibrosis IST, more persistent and profound myelosuppression, particularly thrombocytopenia, was observed with imetelstat administered on a weekly basis. This included one case of febrile neutropenia after prolonged myelosuppression with intracranial hemorrhage resulting in patient death, which was assessed as possibly related to imetelstat by the investigator. If the FDA lifts the full clinical hold, or the FDA permits us to study imetelstat for other indications with higher unmet medical need than ET or MM, we may in the future observe or report dose-limiting or hematologic toxicities or other safety issues in potential future Geron or investigator-sponsored trials of imetelstat. Likewise, because the Myelofibrosis IST is still ongoing, the investigator may observe or report additional or more severe toxicities or safety issues in the Myelofibrosis IST, including additional serious adverse events and LFT abnormalities, as patient treatment continues and more data becomes available. If such toxicities or other safety issues in any Geron-sponsored or investigator-sponsored clinical trial of imetelstat result in an unacceptable benefit-risk profile, this would likely delay or prevent the commencement and/or completion of our potential future clinical trials or investigator-sponsored trials, including the Myelofibrosis IST, might result in any such Geron-sponsored or investigator-sponsored clinical trial being placed on clinical hold or halted by regulators, such as the current full clinical hold on our IND for imetelstat, and might require us to conduct additional, unforeseen trials or to abandon our development of imetelstat entirely which would materially adversely affect our business.

Success in early clinical trials may not be indicative of results in subsequent clinical trials. Likewise, data reported by investigators from time-to-time is subject to audit and verification procedures that could result in material differences to final data and may change as more patient data becomes available.

A number of new drugs and biologics have shown promising results in initial clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory

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approvals. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval.

Data from our preclinical studies and Phase 1 and Phase 2 clinical trials of imetelstat, as well as preliminary, additional or updated data from investigator-sponsored trials, including the Myelofibrosis IST, should not be relied upon as evidence that subsequent or larger-scale clinical trials will succeed. The positive results we have obtained from the patients enrolled in the Phase 2 clinical trial of imetelstat in ET may not predict the future therapeutic benefit of imetelstat, if any, in other hematologic myeloid malignancies, including MF. For example, the known LFT abnormalities and dose-limiting toxicities associated with imetelstat, such as profound thrombocytopenia and febrile neutropenia and other safety issues, including death, that have been observed in both Geron and investigator-sponsored trials, including the Myelofibrosis IST, could cause complexities in treating patients with MF and could result in the discontinuation of any of these trials. Also, the IWG-MRT criteria used to assess efficacy in the Myelofibrosis IST has not been validated for clinical use and may not be considered by the FDA or other regulatory agencies to be accurate predictors of efficacy for different endpoints that may be required by the FDA or other regulatory agencies for Phase 3 clinical trials.

In addition, because the Myelofibrosis IST is not a Geron-sponsored trial, the clinical testing of imetelstat in the Myelofibrosis IST requires us to rely on the investigator's plan, design and conduct of the trial, and the evaluation and reporting of results of the Myelofibrosis IST by the investigator, all of which we do not control. The preliminary efficacy results of the Myelofibrosis IST are based solely on data from the first two cohorts of the Myelofibrosis IST, consisting of 22 patients, and we will need to seek to replicate the results of the Myelofibrosis IST across one or more larger Phase 2 and Phase 3 trials in MF at multiple treating centers, assuming we are able to obtain release by the FDA of the full clinical hold on our IND for imetelstat. The results reported by the investigator in the Myelofibrosis IST may not be replicated in any trials conducted by Geron or by any other investigator or group of investigators, or in any trial enrolling a larger number of patients or conducted at multiple treating centers, and thus should not be relied upon as indicative of future clinical results of imetelstat in MF or any other hematologic myeloid malignancy.

In addition, from time-to-time, we may report or announce preliminary data from investigator-sponsored trials and potential future Geron-sponsored trials. For example, we have announced our analysis of preliminary efficacy data from the first two cohorts of the Myelofibrosis IST. Since this data is preliminary, the final data from the trial may be materially different than the data we have previously reported. The preliminary data is also subject to the risk that one or more of the clinical outcomes may materially change as patient treatment continues and additional and updated patient data becomes available. Since the Myelofibrosis IST is ongoing, safety and efficacy data continues to be generated, and such additional and updated data is not reflected in the preliminary data presented by the investigator at the ASH annual meeting in December 2013. Because the additional and updated safety and efficacy data may be materially different from the preliminary data reported, such preliminary data should be considered carefully and with caution. Additional and updated data is also subject to our audit and verification procedures, and since this could result in material differences from the data reported by the investigator, additional or updated data that may be reported from the Myelofibrosis IST should be considered carefully and with caution.

Material adverse changes in final data could significantly harm our business prospects. Even if final safety and efficacy data from the Myelofibrosis IST are positive, significant additional clinical testing will be necessary for the future development of imetelstat in MF. Any such final safety and efficacy data from the Myelofibrosis IST may not be reproducible in future clinical trials.

We will be required to demonstrate through multiple Geron-sponsored clinical trials, including larger-scale Phase 3 clinical trials, that imetelstat is safe and effective for use in a diverse population

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before we can seek to obtain regulatory approval for its commercial sale. There is typically an extremely high rate of attrition from the failure of drug candidates proceeding through clinical trials. If we are unable to develop imetelstat in future clinical trials, including Phase 3 clinical trials, our business may fail.

Our research and development of imetelstat is subject to numerous risks and uncertainties.

The science and technology of telomere biology, telomerase and our proprietary oligonucleotide chemistry are relatively new. There is no precedent for the successful commercialization of a therapeutic product candidate based on these technologies. We must undertake significant research and development activities to develop imetelstat based on these technologies, which will require significant additional funding beyond the net proceeds received from our public offering of common stock that closed on February 4, 2014, and may take years to accomplish, if at all.

Because of the significant scientific, regulatory and commercial milestones that must be reached for our research and development of imetelstat to be successful, our development of imetelstat in hematologic myeloid malignancies, including MF, or any other indication, may be delayed or abandoned, even after we have expended significant resources on it. Our decisions to discontinue our Phase 2 clinical trial of imetelstat in metastatic breast cancer in September 2012, and to discontinue our development of imetelstat in solid tumors with short telomeres in April 2013, are examples of this. Any further delay or abandonment of our development of imetelstat in hematologic myeloid malignancies, including as a result of our inability to obtain release by the FDA of the full clinical hold on our IND for imetelstat, would have a material adverse effect on, and likely result in the failure of, our business.

Our stockholders may realize little or no value from the divestiture of our stem cell assets, and as a result our stock price may decline, we could be subject to litigation, and our business may be adversely affected.

The completion of our obligations under the Contribution Agreement among us, BioTime and Asterias to effect the Series A Distribution is subject to numerous risks and uncertainties. We may be unable to complete the Series A Distribution, including payment of cash in lieu of either fractional shares or shares that would otherwise be distributed to stockholders in certain excluded jurisdictions, in a timely manner or at all, in each case as contemplated by the Contribution Agreement. Prior to our ability to set a record date for the Series A Distribution, we must receive notice from BioTime and Asterias that certain securities registration or qualification requirements have been met by them, including notice that the registration statement that Asterias filed with the SEC covering the Series A Distribution has been declared effective by the SEC and is otherwise available to effect the Series A Distribution, which may not occur on a timely basis or at all. In this regard, our ability to effect the Series A Distribution has been delayed beyond our expectations, and we have no control over when and whether the Asterias registration statement will ultimately be declared effective by the SEC and available to us in order to effect the Series A Distribution. Likewise, Asterias may be unable to distribute to the Asterias Series A stockholders the BioTime Warrants received by them from BioTime under the Contribution Agreement. These anticipated distributions may be further delayed, perhaps substantially, or precluded altogether for a variety of reasons, including the failure of BioTime and/or Asterias to obtain or maintain required federal and state registrations and qualifications necessary to enable us to effect the Series A Distribution and/or to enable Asterias to complete the distribution of the BioTime Warrants.

In addition, there is currently no existing public market for either the Asterias Series A common stock (or any other Asterias securities) or the BioTime Warrants, and there can be no assurance that an active public market for either the Asterias Series A common stock or BioTime Warrants will ever develop. The absence of an active public market for these securities would make it difficult for holders of Asterias Series A common stock to sell their shares of Asterias Series A common stock or BioTime

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Warrants and would adversely affect the value of the Asterias Series A common stock and the BioTime Warrants. While Asterias plans to arrange for the trading of the Asterias Series A common stock on the OTC Bulletin Board upon the completion of the Series A Distribution, if it occurs, the Asterias Series A common stock may be thinly traded or not at all, and may be subject to the SEC's "penny stock" rules that impose restrictive sales practice requirements on broker-dealers who sell penny stocks and provide for certain additional disclosure requirements in connection with the sale of penny stocks. These rules may have the effect of reducing the level of trading activity for the Asterias Series A common stock. In addition, until such time as the Asterias Series A common stock is listed on a national securities exchange, which may never occur, applicable state securities laws may restrict the states in which and conditions under which Geron stockholders who receive shares of Asterias Series A common stock in the Series A Distribution (if it occurs) can sell such shares. For these and other reasons, if the anticipated Series A Distribution occurs, Geron stockholders may not be able to sell their shares of Asterias Series A common stock in a timely manner or at an orderly market price, if at all, and Geron stockholders may otherwise find it difficult to sell their Asterias Series A common stock. In addition, Asterias is a newly organized, development stage company in the start-up phase, and has only recently commenced its operations. To date, Asterias' operations have been primarily limited to organizing and staffing its company and completing the acquisition of our former stem cell assets. Accordingly, it is difficult if not impossible to predict Asterias' future performance or to evaluate its business and prospects. For these and other reasons, any value ascribed to the Asterias Series A common stock or the BioTime Warrants is highly speculative and an investment decision in our common stock should be based solely on an evaluation of our company, its business and its prospects.

The anticipated distributions of the Asterias Series A common stock by us, and the BioTime Warrants by Asterias, and related transactions, as well as the asset contribution transaction itself, could also result in litigation against us, including litigation arising from or related to the value, if any, from the Asterias Series A common stock and/or the BioTime Warrants or our role as a named underwriter with respect to the Series A Distribution, or litigation based on other matters related to the Contribution Agreement or the transactions contemplated thereby. For example, some of our investors purchased shares of our common stock because they were interested in the opportunities presented by our human embryonic stem cell programs. Thus, certain stockholders may attribute substantial financial value to our stem cell assets. If our stockholders believe that the financial value which is or may be received by us or them from the divestiture of our former stem cell assets is inadequate, our stock price may decline and litigation may occur. Likewise, those Geron stockholders residing in certain excluded jurisdictions will not receive any Asterias Series A common stock or BioTime Warrants in the distributions should they occur, and will receive only cash instead, which may be viewed as inadequate, and which will result in those Geron stockholders having no continuing interest in our divested human embryonic stem cell programs as stockholders or otherwise, which could also result in litigation against us. As a result of these and other factors, we may be exposed to a number of risks, including declines or fluctuations in our stock price, additional advisor and legal fees, and distractions to our management caused by activities undertaken in connection with resolving any disputes related to the transaction. The occurrence of any one or more of the above could have an adverse impact on our business and financial condition.

We may not be able to successfully manage our growth and expand our operations.

If the FDA lifts the full clinical hold on our IND for imetelstat, we plan to advance imetelstat through clinical trials in the United States and abroad. To do so, we will need to expand our clinical development, regulatory, manufacturing, and corporate capabilities, and contract with additional third parties to support our development efforts. As our operations potentially expand, we expect that we will need to manage new, additional relationships with various development partners, service providers, vendors, suppliers, and other third parties. Such potential growth and expansion will require members of our management to assume significant added responsibilities. Our performance in managing any

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such future growth, if ineffective, could negatively impact our financial performance. We may not successfully manage our ongoing development efforts and potential future clinical trials effectively, including obtaining release by the FDA of the current full clinical hold on our IND for imetelstat, or receiving permission from the FDA to allow us to study imetelstat for other indications with higher unmet medical need than ET or MM. If we fail to achieve key development goals, our abilities to grow as a company could be prevented or hindered.

RISKS RELATED TO CLINICAL AND COMMERCIALIZATION ACTIVITIES

The ability to conduct and complete potential future Geron-sponsored or any investigator-sponsored trials of imetelstat on a timely basis is subject to risks and uncertainties related to factors such as performance by investigator-sponsors, availability of drug supply, patient enrollment and regulatory authorization.

Delays or terminations of our potential future clinical trials and of investigator-sponsored trials could be caused by matters such as:

- our inability to obtain release by the FDA of the full clinical hold on our IND in a timely manner, or at all, or to have the FDA permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, in a timely manner, or at all;
- not obtaining regulatory clearance to commence subsequent clinical trials in a timely manner, or at all;
- lack of effectiveness of imetelstat during clinical trials or results that do not demonstrate statistically significant efficacy;
- safety issues, side effects or dose-limiting toxicities, including any additional or more severe safety issues related to imetelstat which may be observed in Geron-sponsored or investigator-sponsored trials, whether or not in the same indications or therapeutic areas;
- disruptions due to drug supply or quality issues;
- failure by independent physicians conducting existing or future investigator-sponsored trials of imetelstat to timely commence, enroll, complete or report data from such investigator-sponsored trials;
- not receiving timely regulatory clearances or approvals in any jurisdiction, whether within or outside of the United States, including, for example, if the FDA does not lift the full clinical hold of our IND for imetelstat, in a timely fashion, or at all, or if we do not obtain regulatory clearance to commence studies of imetelstat for other indications in a timely manner or at all, or if we do not receive acceptance of new manufacturing specifications or procedures or clinical trial protocol amendments by regulatory authorities;
- not receiving timely institutional review board or ethics committee approval of clinical trial protocols or protocol amendments;
- delays in patient enrollment due to size and nature of patient population, nature of protocols, proximity of patients to clinical sites, availability of effective treatments for the relevant disease and eligibility criteria for the trial;
- difficulty in obtaining or accessing necessary clinical data, including from the Myelofibrosis IST and the Phase 2 ET and MM trials, which may result in incomplete data sets and/or our inability to provide adequate clinical data and information to address the FDA's safety concerns in order to obtain release of the full clinical hold on our IND;

unavailability of any study-related treatment (including comparator therapy);

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lack of adequate funding to continue any clinical trial, including funding requirements resulting from unforeseen costs due to enrollment delays or discontinued participation by patients;

issues with key vendors of clinical services, such as contract research organizations and laboratory service providers; or

governmental or regulatory delays, information requests, clinical holds, including the current full clinical hold on our IND for imetelstat, and changes in regulatory requirements, policies and guidelines.

Our enrollment goals for potential future clinical trials of imetelstat and the enrollment goals of independent physicians conducting existing or potential future investigator-sponsored trials of imetelstat, may not be met. In addition, our inability to retain or treat, or the inability of independent physicians conducting investigator-sponsored trials of imetelstat to retain or treat, patients who have enrolled in a clinical trial but may be prone to withdraw due to side effects from imetelstat, lack of efficacy or personal issues, or who are lost to further follow-up, could result in clinical trial delays, the inability to complete clinical trials, or incomplete data sets. Further, any of our future clinical trials may be overseen by an internal safety monitoring committee, or ISMC, and an ISMC may determine to delay or suspend one or more of these trials due to safety or futility findings based on events occurring during a clinical trial. Data that we receive from independent physician investigators may be flawed or incomplete if the investigators fail to follow appropriate clinical or quality practices. Delays in timely initiation or completion of clinical testing of imetelstat, in clinical trials conducted by us or by independent physician investigators, could increase research and development costs and could prevent or would delay us from obtaining regulatory approval for imetelstat, both of which would likely have a material adverse effect on our business. In addition, clinical development of imetelstat is dependent on the FDA lifting any clinical hold on our IND and on us obtaining positive results from existing and potential future Geron-sponsored and investigator-sponsored clinical trials of imetelstat in hematologic myeloid malignancies, including the Myelofibrosis IST. Our ability to obtain information and data from the Myelofibrosis IST in a timely manner is important for our further development of imetelstat for MF, MDS or AML. Accordingly, a delay in the timely completion of or reporting of data from the Myelofibrosis IST, including any delay caused by the FDA placing a full clinical hold on the investigator's IND for the Myelofibrosis IST, could have a material adverse effect on our ability to further develop imetelstat or to advance imetelstat to subsequent clinical trials. Also, adverse safety results from investigator-sponsored trials of imetelstat, including those results that have been reported and those that may in the future be reported from the Myelofibrosis IST, could delay or prevent the initiation or continuation of Geron-sponsored clinical development of imetelstat.

Delays in the initiation of, or our inability to initiate, subsequent clinical trials of imetelstat could result in increased costs to us and would delay our ability to generate or prevent us from generating revenues.

To date, we have not initiated any clinical trials evaluating imetelstat in any hematologic myeloid malignancies (other than ET), including MF. We are currently focused on the development of imetelstat in hematologic myeloid malignancies, other than ET, and clinical development of imetelstat is dependent on the FDA lifting any clinical hold on our IND and on us obtaining positive results of existing and potential future Geron-sponsored and investigator-sponsored clinical trials of imetelstat in hematologic myeloid malignancies, including the Myelofibrosis IST. With respect to investigator-sponsored trials, including the Myelofibrosis IST, because investigator-sponsored trials are not Geron-sponsored trials, the clinical testing of imetelstat in investigator-sponsored trials requires us to rely on the applicable investigator's design and conduct of the trial, which we do not control, and it is possible that the FDA or other regulatory agencies will not view these investigator-sponsored trials, including the Myelofibrosis IST, as providing adequate support for future clinical trials, whether controlled by us or third parties, for any one or more reasons, including elements of the design or execution of these investigator-sponsored trials or safety concerns or other trial results. Accordingly, failure by physician

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investigators to properly design or conduct existing or potential future investigator-sponsored trials of imetelstat could produce results that might delay or prevent us from advancing imetelstat into further clinical development. In addition, we do not have control over the timing and reporting of the data from the Myelofibrosis IST or any other investigator-sponsored trials, nor do we own the data from the trials. Our arrangements with investigators may provide us certain information rights with respect to the trials, including access to and the ability to use and reference the data, including for our own regulatory filings, resulting from the trials. If these obligations are breached by the investigators, or if the data prove to be inadequate compared to the first-hand knowledge we might have gained had the trials been Geron-sponsored clinical trials, or if the data cannot be audited or verified by us, then our ability to design and conduct any Geron-sponsored clinical trials may be adversely affected. Additionally, the FDA or other regulatory agencies may disagree with our interpretation of clinical data generated by any investigator-sponsored trials. If so, in addition to being required to submit to the FDA preclinical and clinical data and information sufficient to address the safety concerns raised by the FDA and to otherwise obtain release of the full clinical hold on our IND for imetelstat, the FDA or other regulatory agencies may require us to obtain and submit additional preclinical, manufacturing, or clinical data before we may initiate potential future Geron-sponsored clinical trials of imetelstat and/or may not accept such additional data as adequate to initiate any such Geron-sponsored clinical trials. Further, if we are unable to verify, confirm or replicate the results from the Myelofibrosis IST or if negative results are obtained, we would likely be further delayed or prevented from advancing imetelstat into further clinical development and might decide to discontinue our development of imetelstat, which would severely harm our business and prospects, and could potentially cause us to cease operations.

In addition to the matters discussed above, the commencement of subsequent clinical trials for imetelstat could be delayed or abandoned for a variety of reasons, including as a result of failures or delays in:

- our ability to obtain release of the full clinical hold on our IND for imetelstat in a timely manner, or at all, or to have the FDA permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, in a timely manner or at all;
- our obtaining regulatory clearance to commence subsequent clinical trials in a timely manner, or at all;
- commencing, enrolling or completing clinical trials conducted by physician investigators conducting investigator-sponsored trials, or independent physician investigators promptly or adequately reporting data from such trials;
- demonstrating sufficient safety and efficacy in Phase 2 clinical trials conducted by us or by independent physician investigators, including the Phase 2 ET and MM trials and the Myelofibrosis IST, to obtain regulatory clearance to commence subsequent clinical trials;
- obtaining sufficient funding;
- manufacturing sufficient quantities of imetelstat;
- producing imetelstat in a manner that meets the quality standards of the FDA and other regulatory agencies;
- ensuring our ability to manufacture imetelstat at acceptable costs for Phase 3 clinical trials and commercialization;
- obtaining clearance or approval of proposed trial designs or manufacturing specifications from the FDA and other regulatory authorities;

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reaching agreement on acceptable terms and on a timely basis, if at all, with collaborators and vendors located in the United States or in foreign jurisdictions, including contract research organizations, laboratory service providers, and the trial sites, on all aspects of clinical trials;

obtaining institutional review board or ethics committee approval to conduct a clinical trial at a prospective site; and

securing and successfully screening appropriate subjects for participation in clinical trials.

The occurrence of any of these events could adversely affect our ability to initiate, maintain or successfully complete any subsequent clinical trials, which could increase our development costs or our ability to generate revenues could be impaired, either of which could adversely impact our financial results and have a material adverse effect on our business.

We may not be able to manufacture imetelstat at costs or scales necessary to conduct our clinical trials or potential future commercialization activities.

Imetelstat is likely to be more expensive to manufacture than most other treatments currently available today or that may be available in the future. The commercial cost of manufacturing imetelstat will need to be significantly lower than our current costs in order for imetelstat to become a commercially successful product. Oligonucleotides are relatively large molecules produced using complex chemistry, and the cost of manufacturing an oligonucleotide like imetelstat is greater than the cost of making typical small-molecule drugs. Our present imetelstat manufacturing processes are conducted at a relatively modest scale appropriate for our potential future clinical trials and investigator-sponsored trials. We may not be able to achieve sufficient scale increases or cost reductions necessary for successful commercial production of imetelstat. Additionally, given the complexities of our manufacturing processes, the resulting costs that we incur to conduct our clinical trials may be higher than for other comparable treatments, requiring us to expend relatively larger amounts of cash to complete our clinical trials, which would negatively impact our financial condition and could increase our need for additional capital.

Manufacturing imetelstat is subject to process and technical challenges and regulatory risks.

We face numerous risks and uncertainties with regard to manufacturing imetelstat. Regulatory requirements for oligonucleotide products are less well-defined than for small-molecule drugs, and there is no guarantee that we will achieve sufficient product quality standards required for Phase 3 clinical trials or for commercial approval and manufacturing of imetelstat. Changes in our manufacturing processes or formulations for imetelstat that may be made during later stages of clinical development, including during Phase 3 clinical trials, may result in regulatory delays, the need for further clinical trials, rejection of a marketing application, or limitation on marketing authorization by regulatory authorities, which would result in a material adverse effect on our business.

We have never conducted large-scale, Phase 3 clinical trials, nor do we have experience as a company in those areas required for the successful commercialization of imetelstat.

We have never conducted large-scale, Phase 3 clinical trials. We cannot be certain that any large-scale, Phase 3 clinical trials of imetelstat will begin or be completed on time, if at all. In order to initiate large-scale, randomized, Phase 3 clinical trials, we will need to obtain regulatory clearances to initiate and then to complete one or more Geron-sponsored Phase 2 clinical trials with positive data generated from those trials. Phase 3 clinical trials also will require additional financial and management resources and reliance on third-party clinical investigators, clinical research organizations, lab service providers, trial sites and consultants. Relying on third-party clinical investigators or clinical research organizations may cause delays that are outside of our control. Any such delays could have a material adverse effect on our business.

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We also do not have commercialization capabilities for imetelstat, and we will need to establish sales, marketing and distribution capabilities or establish and maintain agreements with third parties to market and sell imetelstat. Developing internal sales, marketing and distribution capabilities is an expensive and time-consuming process. We may not be able to enter into third-party sales, marketing and distribution agreements on terms that are economically attractive, or at all. Even if we do enter into such agreements, these third parties may not successfully market or distribute imetelstat, which may materially harm our business.

Obtaining regulatory clearances and approvals to develop and market imetelstat in the United States and other countries is a costly and lengthy process, and we cannot predict whether or when we will be permitted to develop and commercialize imetelstat.

Federal, state and local governments in the United States and governments in other countries have significant regulations in place that govern many of our activities and may prevent us from successfully conducting our development efforts or from commercializing imetelstat. Imetelstat must receive all relevant regulatory approvals before it may be marketed in the United States or other countries. Obtaining regulatory approval is a lengthy, expensive and uncertain process. Because imetelstat involves the application of new technologies and a new therapeutic approach, it may be subject to substantial additional review by various government regulatory authorities, and, as a result, the process of obtaining regulatory approvals for imetelstat may proceed more slowly than for product candidates based upon more conventional technologies, and any approval that we may receive could limit the use of imetelstat.

Prior to submission of any regulatory application seeking approval to commence commercial sales of imetelstat, we will be required to conduct extensive preclinical and clinical testing. If our interpretation of safety and efficacy data obtained from preclinical and clinical studies varies from interpretations by the FDA or regulatory authorities in other countries, this would likely delay, limit or prevent further development and approval of imetelstat and have a material adverse effect on our business. For example, the FDA and regulatory authorities in other countries may require more or different data than what has been generated from our previously ongoing Geron-sponsored Phase 2 clinical trials, such as the Phase 2 ET trial, or that may be generated from potential future Geron-sponsored clinical trials. In addition, delays or rejections of regulatory approvals, or limitations in marketing authorizations, may be encountered as a result of changes in regulatory environment or regulatory agency policy during the period of product development and/or the period of review of any application for regulatory agency approval for imetelstat. We do not expect to receive regulatory approvals for imetelstat for many years, if at all.

Delays in obtaining regulatory agency clearances and approvals or limitations in the scope of such clearances or approvals could:

- significantly harm the commercial potential of imetelstat;
- impose costly procedures upon our activities;
- diminish any competitive advantages that we may attain; or
- adversely affect our ability to receive royalties and generate revenues and profits.

Even if we commit the necessary time and resources, the required regulatory agency clearances and approvals may not be obtained for imetelstat. If we obtain regulatory agency clearances and approvals for imetelstat, they may entail limitations on the indicated uses or other aspects of the product label for which it can be marketed that could limit the potential commercial use of imetelstat. The occurrence of any of these events could materially adversely affect our business.

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Failure to achieve continued compliance with government regulation over our products, if any, could delay or halt commercialization of imetelstat, our sole product candidate.

Approved products and their manufacturers are subject to continual review, and discovery of previously unknown problems with a product or its manufacturer may result in restrictions on the product or manufacturer, including importation, seizure and withdrawal of the product from the market. The future sale by us of any commercially viable product will be subject to government regulation related to numerous matters, including the processes of:

manufacturing;

advertising and promoting;

selling and marketing;

labeling; and

distribution.

If, and to the extent that, we are unable to comply with these regulations, our ability to earn revenues from product sales will be materially and negatively impacted.

Failure to comply with regulatory requirements can result in severe civil and criminal penalties, including but not limited to:

recall or seizure of products;

injunction against the manufacture, distribution, sales and marketing of products; and

criminal prosecution.

The imposition of any of these penalties or other commercial limitations could significantly impair our business, financial condition and results of operations.

Significant disruptions of information technology systems or breaches of data security could adversely affect our business.

Our business is increasingly dependent on critical, complex and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. The size and complexity of our computer systems make them potentially vulnerable to breakdown, malicious intrusion and computer viruses that may result in the impairment of key business processes.

In addition, our systems are potentially vulnerable to data security breaches whether by employees or others that may expose sensitive data to unauthorized persons. Such data security breaches could lead to the loss of trade secrets or other intellectual property, or could lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients, customers and others.

Such disruptions and breaches of security could have a material adverse effect on our business, financial condition and results of operations.

RISKS RELATED TO PROTECTING OUR INTELLECTUAL PROPERTY

Our success will depend on our ability to protect our technologies and our sole product candidate, imetelstat, through patents and other intellectual property rights and to operate without infringing the rights of others.

Protection of our proprietary technology is critically important to our business. Our success will depend in part on our ability to obtain, enforce and extend our patents and maintain trade secrets,

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both in the United States and in other countries. If we are unsuccessful in either of these regards, the value of our technologies and imetelstat will be adversely affected, and we may be unable to continue our development of imetelstat. By way of example, we do not yet have issued compound patent coverage for imetelstat in Europe after 2020. Further, our patents may be challenged, invalidated or circumvented, and our patent rights may not provide proprietary protection or competitive advantages to us. In the event that we or our licensors are unsuccessful in obtaining and enforcing patents, we may not be able to further develop or commercialize imetelstat and our business may be negatively impacted, and we may be unable to continue our operations.

Publication of discoveries in scientific or patent literature tends to lag behind actual discoveries by at least several months and sometimes several years. Therefore, the persons or entities that we or our licensors name as inventors in our patents and patent applications may not have been the first to invent the inventions disclosed in the patent applications or patents, or the first to file patent applications for these inventions. As a result, we may not be able to obtain patents for discoveries that we otherwise would consider patentable and that we consider to be extremely significant to our future success.

The patent positions of pharmaceutical and biopharmaceutical companies, including ours, are highly uncertain and involve complex legal and technical questions. In particular, legal principles for biotechnology and pharmaceutical patents in the United States and in other countries are evolving, and the extent to which we will be able to obtain patent coverage to protect our technologies and imetelstat, or enforce issued patents, is uncertain. If we infringe the patents of others, we may be blocked from continuing development work or be required to obtain licenses on terms that may impact the value of imetelstat or cause it to be commercially impracticable.

In addition, on September 16, 2011, the Leahy-Smith America Invents Act, or the AIA, was signed into law. The AIA includes a number of significant changes to United States patent law. These include provisions that affect the way patent applications will be prosecuted and may affect patent litigation. The United States Patent and Trademark Office, or the Patent Office, has developed new and untested regulations and procedures to govern the full implementation of the AIA. Many of the substantive changes to patent law associated with the AIA, and in particular, the first to file provisions, became effective on March 16, 2013. For example, under the AIA, patent rights are awarded to the first inventor to file a patent application with respect to a particular invention. Thus, after March 16, 2013, our ability to protect our patentable intellectual property depends, in part, on our ability to be the first to file patent applications with respect to our inventions. Delay in the filing of a patent application for any purpose, including further development or refinement of an invention, may result in the risk of loss of patent rights. The AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

The U.S. Supreme Court, or the Court, has also issued decisions for which the full impact is not yet understood. On June 13, 2013, in *Association for Molecular Pathology v. Myriad Genetics, Inc.* the Court held that claims to isolated genomic DNA were not patentable subject matter, but claims to complementary DNA (cDNA) molecules were patentable subject matter. The effect of the decision on patents for other isolated natural products is uncertain. On March 20, 2012, in *Mayo Collaborative Services, DBA Mayo Medical Laboratories, et al. v. Prometheus Laboratories, Inc.*, the Court held that several claims drawn to measuring drug metabolite levels from patient samples and correlating them to drug doses were not patentable subject matter. The decision has created uncertainty around the ability to patent certain biomarker-related method patents. These decisions have increased the uncertainty with regard to our ability to obtain patents in the future as well as the value of current and future patents, once obtained. Depending on decisions by the U.S. federal courts and the Patent Office, the interpretation of laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents, all of which could have a material adverse effect on our business.

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Challenges to our patent rights can result in costly and time-consuming legal proceedings that may prevent or limit development of imetelstat.

Our patents may be challenged through administrative or judicial proceedings. Such proceedings are typically lengthy and complex, and an adverse decision can result in the loss of important patent rights. For example, where more than one party seeks U.S. patent protection for the same technology, the Patent Office may declare an interference proceeding in order to ascertain the party to which the patent should be issued. Patent interferences are typically complex, highly contested legal proceedings, subject to appeal. They are usually expensive and prolonged, and can cause significant delay in the issuance of patents. Our pending patent applications, or our issued patents, may be drawn into interference proceedings or be challenged through post-grant review procedures, which may delay or prevent the issuance of patents, or result in the loss of issued patent rights.

Under the AIA, interference proceedings have been eliminated for patent applications filed on or after March 16, 2013, and have been replaced with other types of proceedings, including derivation proceedings. The AIA also includes post-grant review procedures subjecting U.S. patents to post-grant review procedures similar to European oppositions. U.S. patents owned or licensed by us may therefore be subject to post-grant review procedures, as well as other forms of review and re-examination. A decision in such proceedings adverse to our interests could result in the loss of valuable patent rights and negatively impact our business.

Certain jurisdictions, such as Europe, New Zealand and Australia, permit oppositions to be filed against granted patents or patents proposed to be granted. Because our intent is to commercialize imetelstat internationally if approved for commercial sale, securing both proprietary protection and freedom to operate outside of the United States is important to our business. We have been involved in both opposing the grant of patents to others through such opposition proceedings and in defending our patent applications against oppositions filed by others.

These opposition proceedings required significant time and costs required to protect our intellectual property rights. If we are unable to commit these types of resources for our imetelstat patent rights, we could be prevented or limited in the development of imetelstat, which would have a material adverse effect on our business. For example, we have been involved in several patent oppositions before the European Patent Office, or EPO, with a series of companies (GemVax, Pharmexa and KAEL-GemVax) developing GV1001, a cancer vaccine that employs a short telomerase peptide to induce an immune response against telomerase. Pharmexa originally obtained a European patent with broad claims to the use of telomerase vaccines for the treatment of cancer. We opposed that patent and during the opposition proceedings and subsequent appeal the original claims were revoked and, new, narrower claims of the Pharmexa patent were allowed. In February 2010 and in March 2012, GemVax, AS, a company related to KAEL-GemVax, was granted two further related European patents covering its telomerase peptide vaccine, which we also opposed. In March 2013, GemVax, AS amended certain patent claims in these two patents to narrow their scope, and we withdrew our oppositions to GemVax's patents. On appeal, the Opposition Division, or OD, has approved the amended claims for one patent, and we are waiting for a decision on the other patent.

As more groups become engaged in scientific research and product development in the areas of telomerase biology, the risk of our patents or patents that we have in-licensed being challenged through patent interferences, derivation proceedings, oppositions, re-examinations, litigation or other means will likely increase. Challenges to our patents through these procedures can be extremely expensive and time-consuming, even if the outcome is favorable to us. An adverse outcome in a patent dispute could severely harm our business by:

causing us to lose patent rights in the relevant jurisdiction(s);

subjecting us to litigation, or otherwise preventing us from commercializing imetelstat in the relevant jurisdiction(s);

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requiring us to obtain licenses to the disputed patents;

forcing us to cease using the disputed technology; or

requiring us to develop or obtain alternative technologies.

We may be subject to infringement claims that are costly to defend, and which may limit our ability to use disputed technologies and prevent us from pursuing research and development or commercialization of imetelstat.

Our commercial success depends upon our ability to develop, manufacture, market and sell imetelstat without infringing or otherwise violating the intellectual property and other proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries, and many pharmaceutical companies, including our competitors, have substantial patent portfolios. For example, we are aware that certain potential competitors have or may be prosecuting broad patent estates, and while we believe these patents will expire before imetelstat is commercialized and/or that these patents are invalid and/or would not be infringed by the manufacture, use or sale of imetelstat, it is possible that the owner of these patents will assert claims against us in the future. In addition, we may not be aware of all intellectual property rights potentially relating to imetelstat and its uses. Thus, we do not know with certainty that imetelstat, or our intended commercialization thereof, does not and will not infringe or otherwise violate any third party's intellectual property. Any infringement claims against us would likely be expensive to resolve, and if we are unable to resolve these successfully, could subject us to an injunction which would prevent us from commercializing imetelstat, and could also require us to pay substantial damages. In addition to infringement claims, in the future we may also be subject to other claims relating to intellectual property, such as claims that we have misappropriated the trade secrets of third parties.

In addition, we may become aware of discoveries and technologies controlled by third parties that are advantageous to developing imetelstat. In the event our technologies infringe the rights of others or we require the use of discoveries and technologies controlled by third parties, we may be prevented from pursuing research, development or commercialization of imetelstat, or may be required to obtain licenses to those patents or other proprietary rights or develop or obtain alternative technologies. We initiate negotiations for licenses to other technologies as the need or opportunity arises. We may not be able to obtain a license to a technology required for the research, development or commercialization of imetelstat on commercially favorable terms, or at all, or our licenses may be terminated on certain grounds, including as a result of our failure to comply with our obligations under such licenses. If we do not obtain a necessary license or if such a license is terminated, we may need to redesign our technologies or obtain rights to alternate technologies, which may not be possible, and even if possible, could cause delays in our development efforts for imetelstat. In cases where we are unable to license necessary technologies, we could be subject to litigation and prevented from developing imetelstat. Our failure to obtain alternative technologies or a license to any technology that we may require to research, develop or commercialize imetelstat would significantly and negatively affect our business. We expect that as imetelstat continues to progress in development, we will see more efforts by others to obtain patents that are positioned to cover imetelstat. Our success therefore depends significantly on our ability to operate without infringing patents and the proprietary rights of others.

Much of the information and know-how that is critical to our business is not patentable, and we may not be able to prevent others from obtaining this information and establishing competitive enterprises.

We sometimes rely on trade secrets to protect our proprietary technology, especially in circumstances in which we believe patent protection is not appropriate or available. We attempt to protect our proprietary technology in part by confidentiality agreements with our employees, consultants, collaborators and contractors. We cannot provide assurance that these agreements will not

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be breached, that we would have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors, any of which would harm our business significantly.

RISKS RELATED TO OUR RELATIONSHIPS WITH THIRD PARTIES

We depend on other parties to help us develop and test imetelstat, and our ability to research, develop and commercialize imetelstat may be impaired or delayed if collaborations are unsuccessful.

Our strategy for the research, development, clinical testing and commercialization of imetelstat may require us to enter into collaborations with clinical research organizations, investigators, academic institutions, vendors, clinical trial sites, corporate partners, licensors, licensees and others. We are dependent upon the ability of these parties to perform their responsibilities reliably. By way of example, we contracted two clinical research organizations that have been primarily responsible for the execution of clinical site related activities for our imetelstat Phase 2 clinical trials, including clinical trial site monitoring activities. In addition, for our imetelstat program, we have contracted with a single vendor to develop and maintain the clinical database and a single vendor to maintain our safety database. For any future clinical trials of imetelstat that may be conducted by us, we may rely on new or different vendors, or other third parties, with which we may have little or no prior experience.

Accordingly, if the performance of these services is not of the highest quality, or does not achieve necessary regulatory compliance standards, or if such organization or vendor stops or delays its performance for any reason, it would impair and delay our ability to report data from our clinical trials and make the necessary representations to regulatory authorities, if at all. In addition, licensors or licensees could terminate their agreements with us, and we may not receive any development or milestone payments. If we do not achieve milestones or perform diligence obligations set forth in agreements that we have entered into with others, or if our licensors or licensees breach or terminate their agreements with us, our business may be materially harmed.

Our imetelstat development strategy is also dependent on the results of existing and potential future Geron-sponsored and investigator-sponsored clinical trials of imetelstat in hematologic myeloid malignancies, including the Myelofibrosis IST. With respect to investigator-sponsored trials, including the Myelofibrosis IST, because investigator-sponsored trials are not Geron-sponsored trials, the clinical testing of imetelstat in investigator-sponsored trials requires us to rely on the applicable investigator's design and conduct of the trial, which we do not control, and it is possible that the FDA or other regulatory agencies will not view these investigator-sponsored trials, including the Myelofibrosis IST, as providing adequate support for future clinical trials, whether controlled by us or third parties, for any one or more reasons, including elements of the design or execution of these investigator-sponsored trials or safety concerns or other trial results. Accordingly, failure by physician investigators to properly design or conduct existing or potential future investigator-sponsored trials of imetelstat could produce results that might delay or prevent us from advancing imetelstat into further clinical development. In addition, we do not have control over the timing and reporting of the data from the Myelofibrosis IST or any other investigator-sponsored trials, nor do we own the data from the trials. Our arrangements with investigators may provide us certain information rights with respect to the trials, including access to and the ability to use and reference the data, including for our own regulatory filings, resulting from the trials. If these obligations are breached by the investigators, or if the data prove to be inadequate compared to the first-hand knowledge we might have gained had the trials been Geron-sponsored clinical trials, or if the data cannot be audited or verified by us, then our ability to design and conduct any Geron-sponsored clinical trials may be adversely affected. Additionally, the FDA or other regulatory agencies may disagree with our interpretation of clinical data generated by any investigator-sponsored trials. If so, in addition to being required to submit to the FDA preclinical and clinical data and information sufficient to address the safety concerns raised by the FDA and to otherwise obtain release of the full clinical hold on our IND for imetelstat, the FDA or other regulatory agencies may

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require us to obtain and submit additional preclinical, manufacturing, or clinical data before we may initiate potential future Geron-sponsored clinical trials of imetelstat and/or may not accept such additional data as adequate to initiate any such Geron-sponsored clinical trials. Further, if we are unable to verify, confirm or replicate the results from the Myelofibrosis IST or if negative results are obtained, we would likely be further delayed or prevented from advancing imetelstat into further clinical development and might decide to discontinue our development of imetelstat, which would severely harm our business and prospects, and could potentially cause us to cease operations.

Our ability to manufacture imetelstat is uncertain because we must rely on third parties for manufacturing.

We rely on other companies for certain process development, supply of starting materials, manufacturing of drug substance and drug product or other technical and scientific work with respect to imetelstat, but we do not have direct control over their personnel or operations. We rely on these manufacturers to produce and deliver sufficient quantities of imetelstat to support our clinical trials, including investigator-sponsored trials, on a timely basis and to comply with applicable regulatory requirements. If these companies do not perform the work which they are contracted to perform, fail to comply with applicable cGMP regulations, do not complete the work within the expected timelines, fail to produce materials which are suitable for use in clinical trials or choose to exit the business, our ability to develop or manufacture imetelstat could be significantly harmed. For example, we may need to change one or more of our suppliers due to these or other reasons and the change could lead to delays in drug supply. Manufacturing delays could adversely impact the initiation or completion of ongoing or future clinical trials, including investigator-sponsored trials.

In addition, our manufacturers may need to make substantial investments to enable sufficient capacity increases and cost reductions, and to implement those regulatory and compliance standards necessary for successful Phase 3 clinical trials and commercial production. Our manufacturers may not be able to achieve such capacity increases, cost reductions, or regulatory and compliance standards, and even if they do, such achievements may not be at a commercially reasonable cost to us. We have not established long-term manufacturing commitments, and changing manufacturers may be prolonged and difficult due to inherent technical complexities and because the number of potential manufacturers is limited. It may be difficult or impossible for us to find a replacement manufacturer on acceptable terms, or at all.

There are other risks and uncertainties that we face with respect to manufacturing. For example, one of our suppliers of active pharmaceutical ingredient for imetelstat is currently restricted by the FDA from importing materials into the United States. As another example, certain commonly used reagents and solvents may experience market shortages and, if these shortages occur, they may adversely impact our ability to manufacture imetelstat.

Our reliance on investigators, scientific consultants, research institutions, and contractors whose activities are not wholly within our control may lead to delays in development of imetelstat.

We rely extensively upon and have relationships with investigators, scientific consultants, collaborators, and contractors at academic, commercial and other institutions. Some of the investigators, scientific consultants, collaborators and contractors upon whom we rely conduct research and development activities at our request or initiate investigator-sponsored clinical trials to test imetelstat, and others assist us in formulating and/or executing our research and development and clinical and regulatory strategy or other matters related to imetelstat. These investigators, scientific consultants, collaborators and contractors are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. We have limited control over the activities of these investigators, scientific consultants, collaborators and contractors and, except as otherwise required by our collaboration and consulting agreements, can expect only limited amounts of their time to be dedicated to our activities. If any of these third parties

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are unable or refuse to contribute to projects on which we need their help, our ability to generate advances in our technologies and develop imetelstat could be significantly harmed.

RISKS RELATED TO OUR FINANCIAL POSITION AND NEED FOR ADDITIONAL FINANCING

We have a history of losses and anticipate continued future losses, and our continued losses could impair our ability to sustain operations.

We have incurred operating losses every year since our operations began in 1990. As of December 31, 2013, our accumulated deficit was approximately $892.8 million. Losses have resulted principally from costs incurred in connection with our research and development activities and from general and administrative costs associated with our operations. We expect to incur additional operating losses and, as our clinical development activities continue, our operating losses may increase in size.

Substantially all of our revenues to date have been research support payments under collaboration agreements and milestones, royalties and other revenues from our licensing arrangements. We may be unsuccessful in entering into any new corporate collaboration or license agreements that result in revenues, or existing collaboration agreements or license arrangements may be terminated or expire. Any revenues generated from ongoing collaboration agreements and revenues from our licensing arrangements will not be sufficient alone to continue or expand our research or development activities and otherwise sustain our operations.

We also expect to experience negative cash flow for the foreseeable future as we fund our operating losses and capital expenditures. This will result in decreases in our working capital, total assets and stockholders' equity, which may not be offset by future financings. We will need to generate significant revenues to achieve profitability. We may not be able to generate these revenues, and we may never achieve profitability. Our failure to achieve profitability could negatively impact the market price of our common stock and our ability to sustain operations. Even if we do become profitable, we may not be able to sustain or increase profitability on a quarterly or annual basis.

We will need substantial additional capital to conduct our operations and develop imetelstat, and our ability to obtain the necessary funding is uncertain.

We will need to obtain substantial capital resources in order to conduct our operations and develop imetelstat, and we cannot assure you that our existing capital resources, equipment financing arrangement, future interest income and potential future sales of our common stock, including pursuant to our At-The-Market Sales Agreement, or sales agreement, with MLV & Co, LLC, or MLV, will be sufficient to fund future planned operations. The timing and degree of any future capital requirements will depend on many factors, including:

- the accuracy of the assumptions underlying our estimates for our capital needs for 2014 and beyond;
- changes in our development plans for imetelstat, including changes which may result from the current or any other clinical holds on our IND or any other INDs for imetelstat;
- our ability to meaningfully reduce manufacturing costs of imetelstat;
- the magnitude and scope of our imetelstat research and development program, including the number of indications we intend to pursue;
- the progress made, if any, in our imetelstat research and development programs, including existing or potential future Geron-sponsored and investigator-sponsored clinical trials;
- our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing of imetelstat;

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the time and costs involved in obtaining regulatory clearances and approvals;

expenses associated with the pending and potential additional related purported securities class action lawsuits, as well as any unforeseen litigation; and

the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims.

In addition, changes in our business may occur that would consume available capital resources sooner than we expect. Additional financing through strategic collaborations, public or private equity financings, capital lease transactions or other financing sources may not be available on acceptable terms, or at all. We may raise equity capital at a stock price or on other terms that could result in substantial dilution of ownership for our stockholders. The receptivity of the public and private equity markets to proposed financings is substantially affected by the general economic, market and political climate and by other factors which are unpredictable and over which we have no control. Our ability to raise additional funds will be severely impaired if we are unable to obtain the release of the current or any other clinical holds on our IND or any other INDs for imetelstat, or if imetelstat fails to show adequate safety or efficacy in existing or potential future Geron-sponsored and investigator-sponsored clinical trials, including the Myelofibrosis IST.

Further, in the event that we obtain additional funds through arrangements with collaborative partners, these arrangements may require us to relinquish some or all of our rights to imetelstat, which could adversely affect our future business or operations.

If sufficient capital is not available, we may be required to delay, reduce the scope of, suspend or eliminate some or all of the elements of our imetelstat program, any of which could have a material adverse effect on our business.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Under Section 382 of the Code, if a corporation undergoes an "ownership change," generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change taxable income or taxes may be limited. Changes in our stock ownership, some of which are outside of our control, may have resulted or could in the future result in an ownership change. If a limitation were to apply, utilization of a portion of our domestic net operating loss and tax credit carryforwards could be limited in future periods. In addition, a portion of the carryforwards may expire before being available to reduce future income tax liabilities.

RISKS RELATED TO COMPETITIVE FACTORS

The loss of key personnel could slow our ability to conduct research and develop imetelstat.

Our future success depends to a significant extent on the skills, experience and efforts of our executive officers and key members of our clinical and scientific staff. We face intense competition for qualified individuals from numerous pharmaceutical, biopharmaceutical and biotechnology companies, as well as academic and other research institutions. The recent restructurings we implemented or the recent full clinical hold the FDA has placed on our IND could have an adverse impact on our ability to retain and recruit qualified personnel or we may incur unanticipated inefficiencies caused by our reduced personnel resources. We may be unable to retain our current personnel or attract or assimilate other highly qualified management and scientific personnel in the future on acceptable terms. The loss of any or all of these individuals could harm our business and might significantly delay or prevent the achievement of research, development or business objectives.

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Some of our competitors may develop technologies that are superior to or more cost-effective than ours, which may significantly impact the commercial viability of imetelstat and damage our ability to sustain operations.

The pharmaceutical and biotechnology industries are intensely competitive. Other pharmaceutical and biotechnology companies and research organizations currently engage in or have in the past engaged in efforts related to the biological mechanisms that are the focus of our imetelstat program, including the study of telomeres, telomerase and our proprietary oligonucleotide chemistry, and the research and development of therapies for the treatment of hematologic myeloid malignancies. In addition, other products and therapies that could directly compete with imetelstat currently exist or are being developed by pharmaceutical and biopharmaceutical companies and by academic institutions, government agencies and other public and private research organizations.

Many companies are developing alternative therapies to treat hematologic myeloid malignancies and, in this regard, are competitors of ours. For example, if approved for commercial sale for the treatment of MF, imetelstat would compete against Incyte Corporation's ruxolitinib, or Jakafi®, which is orally administered. In clinical trials, Jakafi® reduced spleen size, abdominal discomfort, early satiety, bone pain, night sweats and itching in MF patients. Recently, there have also been reports of overall survival benefit as well as improvement in bone marrow fibrosis from Jakafi® treatment. Other treatment modalities for MF include hydroxyurea for the management of splenomegaly, leukocytosis, thrombocytosis and constitutional symptoms; splenectomy and splenic irradiation for the management of splenomegaly and co-existing cytopenias, or low blood cells; chemotherapy and pegylated interferon. Drugs for the treatment of MF-associated anemia include erythropoiesis-stimulating agents, androgens, danazol, corticosteroids, thalidomide and lenalidomide. There are other investigational treatments further along in development than imetelstat, such as momelitinib by Gilead Sciences, Inc. and pacritinib by Cell Therapeutics, Inc., which are currently in Phase 3 clinical trials, and other inhibitors of the JAK-STAT pathway, as well as several investigational treatments in early phase testing such as histone deacetylase inhibitors, inhibitors of heat shock protein 90, hypomethylating agents, PI3 Kinase and mTOR inhibitors, hedgehog inhibitors, anti-LOX2 inhibitors, recombinant pentraxin 2 protein, KIP-1 activators, TGF-beta inhibitors, FLT inhibitors, and other tyrosine kinase inhibitors.

There are more than 200 approved anti-cancer products on the market in the United States, and several thousand in clinical development. Pharmaceutical companies developing and marketing these competing products (e.g. Sanofi S.A., Bristol-Myers Squibb Company, Novartis AG, Incyte Corporation and Gilead Sciences, Inc.) have significantly greater financial, technical and human resources than we do, and greater expertise than we do in:

- research and development;
- manufacturing;
- preclinical and clinical testing;
- obtaining regulatory clearances and approvals; and
- marketing, sales and distribution.

Smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. We anticipate increased competition in the future as new companies explore treatments for hematologic myeloid malignancies, which may significantly impact the commercial viability of imetelstat. Academic institutions, government agencies and other public and private research organizations may also conduct research, seek patent protection and establish collaborative arrangements for research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel as well as in acquiring technologies complementary to our imetelstat program.

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In addition to the above factors, if we are able to obtain the release of the full clinical hold on our IND in order to proceed with our development of imetelstat, or to have the FDA permit us to study imetelstat for other indications with higher unmet medical need than ET or MM, such as under the terms of a partial clinical hold, we expect to face competition in the following areas:

- product efficacy and safety;
- the timing and scope of regulatory consents;
- availability of resources;
- reimbursement coverage;
- price; and
- patent position, including potentially dominant patent positions of others.

As a result of the foregoing, our competitors may develop more effective or more affordable products, or achieve earlier patent protection or product commercialization than us. Our competitors have developed, or are in the process of developing, technologies that are, or in the future may be, competitive to imetelstat. Some of these products may have an entirely different approach or means of accomplishing therapeutic effects similar to those demonstrated by imetelstat. Our competitors may develop products that are safer, more effective or less costly than imetelstat, or more convenient to administer to patients and, therefore, present a serious competitive threat to imetelstat. In addition, our competitors may price their products below what we may determine to be an acceptable price for imetelstat, may receive better third-party payor coverage and/or reimbursement, or may be more cost effective than imetelstat. Such competitive products or activities by our competitors may render imetelstat obsolete, which would negatively impact our business and ability to sustain operations.

To be successful, imetelstat must be accepted by the health care community, which can be very slow to adopt or unreceptive to new technologies and products.

If approved for marketing, imetelstat may not achieve market acceptance since hospitals, physicians, patients or the medical community in general may decide not to accept and utilize imetelstat. If approved for commercial sale, imetelstat will compete with a number of conventional and widely accepted drugs and therapies manufactured and marketed by major pharmaceutical companies. The degree of market acceptance of imetelstat will depend on a number of factors, including:

- our establishment and demonstration to the medical community of the clinical efficacy and safety of imetelstat;
- our ability to demonstrate that imetelstat is superior to alternatives currently on the market;
- our ability to establish in the medical community the potential advantage of imetelstat over alternative treatment methods;
- the label and promotional claims allowed by the FDA or other regulatory agencies for imetelstat, if any;
- sales, marketing and distribution support for imetelstat; and
- reimbursement policies of government and third-party payors.

The established use of conventional products competitive with imetelstat may limit or preclude the potential for imetelstat to receive market acceptance upon any commercialization. We may be unable to demonstrate any pharmacoeconomic advantage for imetelstat compared to established or standard-of-care therapies, or newly developed therapies, for hematologic myeloid malignancies. Third-party payors may decide that any potential improvement that imetelstat may provide to clinical

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outcomes in hematologic myeloid malignancies is not adequate to justify the costs of treatment with imetelstat. If third-party payors do not view imetelstat as offering a better balance between clinical benefit and treatment cost compared to standard-of-care therapies or other treatment modalities currently in development, imetelstat may not be commercially viable. If the health care community does not accept imetelstat for any of the foregoing reasons, or for any other reason, our business would be materially harmed.

If we fail to obtain acceptable prices or adequate reimbursement for imetelstat, the use of imetelstat could be severely limited.

Our ability to successfully commercialize imetelstat will depend significantly on our ability to obtain acceptable prices and the availability of reimbursement to the patient from third-party payors. In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively known as the Affordable Care Act, became law and substantially changed the way healthcare will be financed by both governmental and private insurers, and significantly impacted the pharmaceutical industry. The Affordable Care Act contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement changes and fraud and abuse, which will impact existing government healthcare programs and will result in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program. Additionally, the Affordable Care Act:

- mandates a further shift in the burden of Medicaid payments to the states;
- increases the minimum level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1%;
- requires collection of rebates for drugs paid by Medicaid managed care organizations;
- requires manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D, beginning January 2011; and
- imposes a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" to specified federal government programs.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. The American Taxpayer Relief Act of 2012, signed into law in January 2013, among other things, also reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. On March 1, 2013, the President signed an executive order implementing sequestration, and on April 1, 2013, Medicare payment reductions of 2% went into effect.

While the Affordable Care Act may increase the number of patients who have insurance coverage for imetelstat, its cost containment measures could also adversely affect reimbursement for imetelstat. Cost control initiatives could decrease the price that we receive for imetelstat in the future. If imetelstat is not considered cost-effective or if we fail to generate adequate third-party reimbursement for the users of imetelstat, then we may be unable to maintain price levels sufficient to realize an appropriate return on our investment for imetelstat, which could have an adverse impact on our business.

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RISKS RELATED TO ENVIRONMENTAL AND PRODUCT LIABILITY

Our activities involve hazardous materials, and improper handling of these materials by our employees, contractors, or agents could expose us to significant legal and financial penalties.

If we are unable to comply with federal, state and county environmental and safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of biohazardous materials, chemicals and various radioactive compounds previously used by us in our discontinued research facility, we could be subject to considerable additional cost or liability that would have a material adverse effect on our financial condition. We, our contractors or agents may be required to incur significant costs to comply with current or future environmental laws and regulations and may be adversely affected by the cost of compliance with these laws and regulations.

Although we believe that the safety procedures previously used by us for using, handling, storing and disposing of hazardous materials in our discontinued research facility complied with the standards prescribed by state and federal regulations, we may incur significant unanticipated costs associated with the closure and exit of our research facility. Further, any failure by us to control the use, disposal, removal or storage, or to adequately restrict the discharge, or assist in the clean up, of hazardous chemicals or hazardous, infectious or toxic substances in connection with the closure of our research facility could subject us to significant liabilities, including joint and several liability under certain statutes. Any such liability or costs could exceed our resources and could have a material adverse effect on our business, financial condition and results of operations. Additionally, an accident could damage the manufacturing facilities and operations of any third party contracted by us to perform services with respect to our imetelstat program. Additional federal, state and local laws and regulations affecting us may be adopted in the future. We, our contractors and agents may incur substantial costs to comply with these laws and regulations and substantial fines or penalties if we violate any of these laws or regulations, which would adversely affect our business.

We may not be able to obtain or maintain sufficient insurance on commercially reasonable terms or with adequate coverage against potential liabilities in order to protect ourselves against product liability claims.

Our business exposes us to potential product liability risks that are inherent in the testing, manufacturing and marketing of human therapeutic and diagnostic products. We may become subject to product liability claims if the use of imetelstat is alleged to have injured patients, including any injuries alleged to arise from any hepatotoxicity from imetelstat. We currently have limited clinical trial liability insurance and we may not be able to maintain this type of insurance for any of our clinical trials. In addition, product liability insurance is becoming increasingly expensive. Being unable to obtain or maintain product liability insurance in the future on acceptable terms or with adequate coverage against potential liabilities could have a material adverse effect on our business.

Our headquarters are located near known earthquake fault zones, and the occurrence of an earthquake or other catastrophic disaster could cause damage to our offices and equipment, which could cause delays or even require us to cease or curtail operations.

Our headquarters are located in the San Francisco Bay Area near known earthquake fault zones and are vulnerable to significant damage from earthquakes. We do not carry earthquake insurance. We are also vulnerable to damage from other types of disasters, including fires, floods, power loss, communications failures, terrorism and similar events. If any disaster were to occur, our ability to operate our business at our offices would be seriously, or potentially completely, impaired. The insurance we maintain may not be adequate to cover our losses from such disasters or other business interruptions.

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RISKS RELATED TO OUR COMMON STOCK AND FINANCIAL REPORTING

Historically, our stock price has been extremely volatile.

Historically, our stock price has been extremely volatile. Between January 1, 2004 and December 31, 2013, our stock has traded as high as $12.44 per share and as low as $0.91 per share. Between January 1, 2011 and December 31, 2013, the price has ranged between a high of $7.79 per share and a low of $0.91 per share. The significant market price fluctuations of our common stock have been due to and may in the future be influenced by a variety of factors, including:

- our obtaining the release of the full clinical hold on our IND in a timely manner, or at all, or receiving permission from the FDA to study imetelstat for other indications with higher unmet medical need than ET or MM, in a timely manner;
- our obtaining regulatory clearance to commence subsequent clinical trials in a timely manner, or at all;
- announcements regarding our research and development of imetelstat, including clinical trial results or delays in any future clinical trials of imetelstat, or announcements regarding the results of or delays in investigator-sponsored trials of imetelstat, and investor perceptions thereof;
- announcements regarding the safety of imetelstat, including announcements similar to our March 2014 announcement that the FDA had placed a full clinical hold on our IND for imetelstat due to safety concerns;
- announcements regarding our plans to discontinue certain programs or clinical trials, such as our prior announcements regarding the discontinuation of our stem cell programs and certain clinical trials;
- our ability to complete the Series A Distribution and perception by our stockholders about the adequacy of the consideration received for the divestiture of our stem cell assets to Asterias;
- the demand in the market for our common stock;
- the experimental nature of imetelstat;
- fluctuations in our operating results;
- our declining cash balance as a result of operating losses;
- general market conditions or market conditions relating to the biopharmaceutical and pharmaceutical industries;
- announcements of technological innovations, new commercial products, or clinical progress or lack thereof by us, our collaborative partners or our competitors;
- announcements concerning regulatory developments, proprietary rights and our collaborations;

comments by securities analysts;

large stockholders exiting their position in our common stock;

announcements of or developments concerning pending and/or potential future litigation;

the issuance of common stock to partners, vendors or to investors to raise additional capital; and

the occurrence of any other risks and uncertainties discussed under the heading "Risk Factors."

Stock prices and trading volumes for many biopharmaceutical companies fluctuate widely for a number of reasons, including factors which may be unrelated to their businesses or results of operations, such as media coverage, legislative and regulatory measures and the activities of various interest groups or organizations. In addition to other risk factors described in this section, overall market volatility, as well as general domestic or international economic, market and political conditions, could materially and adversely affect the market price of our common stock and the return on your investment.

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If we fail to meet continued listing standards of NASDAQ, our common stock may be delisted, which could have a material adverse effect on the liquidity of our common stock.

Our common stock is currently traded on the Nasdaq Global Select Market. The NASDAQ Stock Market LLC has requirements that a company must meet in order to remain listed on NASDAQ. In particular, NASDAQ rules require us to maintain a minimum bid price of $1.00 per share of our common stock. If the closing bid price of our common stock were to fall below $1.00 per share for 30 consecutive trading days or we do not meet other listing requirements, we would fail to be in compliance with NASDAQ's listing standards. There can be no assurance that we will continue to meet the minimum bid price requirement, or any other requirement in the future. If we fail to meet the minimum bid price requirement, The NASDAQ Stock Market LLC may initiate the delisting process with a notification letter. If we were to receive such a notification, we would be afforded a grace period of 180 calendar days to regain compliance with the minimum bid price requirement. In order to regain compliance, shares of our common stock would need to maintain a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive trading days. If our common stock were to be delisted, the liquidity of our common stock would be adversely affected and the market price of our common stock could decrease.

We have been named a defendant in a purported securities class action lawsuit. This, and potential similar or related litigation, could result in substantial damages, divert management's time and attention from our business, and have a material adverse effect on our results of operations. Any litigation to which we are subject will be costly to defend or pursue and is uncertain in its outcome.

Securities-related class action litigation has often been brought against companies, including many biotechnology companies, which experience volatility in the market price of their securities. This risk is especially relevant for us because biotechnology and biopharmaceutical companies often experience significant stock price volatility in connection with their product development programs.

In this regard, on March 14, 2014, a purported securities class action lawsuit was commenced in the United States District Court for the Northern District of California, naming as defendants us and certain of our officers. The lawsuit alleges violations of the Securities Exchange Act of 1934 in connection with allegedly false and misleading statements made by us related to our Phase 2 trial of imetelstat in patients with ET or PV. The plaintiff alleges, among other things, that we failed to disclose facts related to the occurrence of persistent low-grade LFT abnormalities observed in our Phase 2 trial of imetelstat in ET/PV patients and the potential risk of chronic liver injury following long-term exposure to imetelstat. The plaintiff seeks damages and an award of reasonable costs and expenses, including attorney's fees. It is possible that additional suits will be filed, or allegations received from stockholders, with respect to these same matters and also naming us and/or our officers and directors as defendants. This lawsuit and any other related lawsuits are subject to inherent uncertainties, and the actual defense and disposition costs will depend upon many unknown factors. The outcome of the litigation is necessarily uncertain. We could be forced to expend significant resources in the defense of these suits and we may not prevail. In addition, we may incur substantial legal fees and costs in connection with the litigation. We currently are not able to estimate the possible cost to us from these matters, as this lawsuit is currently at an early stage, and we cannot be certain how long it may take to resolve these matters or the possible amount of any damages that we may be required to pay. We have not established any reserve for any potential liability relating to this lawsuit. It is possible that we could, in the future, incur judgments or enter into settlements of claims for monetary damages. A decision adverse to our interests on these actions could result in the payment of substantial damages, or possibly fines, and could have a material adverse effect on our cash flow, results of operations and financial position.

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In addition, if the results of our business activities are not successful, including without limitation, if:

- the final or any preliminary results from the Myelofibrosis IST, or any subsequent clinical trial of imetelstat, are not deemed to be successful;
- we or any investigators ascertain that the use of imetelstat results in significant systemic or organ toxicities, including hepatoxicity, or other safety issues resulting in an unacceptable benefit-risk profile;
- we are unable to continue development of imetelstat due to regulatory actions, such as the full clinical hold placed by the FDA on our IND for imetelstat in March 2014, or if we are unable to cause the FDA to lift the full clinical hold on our IND for imetelstat;
- we or any investigators discontinue the further development of imetelstat; or
- our stockholders believe the consideration received from the divestiture of our stem cell assets to be inadequate;

our stock price would likely decline further, and may result in future and additional litigation. A decision adverse to our interests in the current or potential future lawsuits could result in the payment of substantial damages by us, and could have a material adverse effect on our cash flow, results of operations and financial position.

Our business may bring us into conflict with our licensees, licensors, or others with whom we have contractual or other business relationships, or with our competitors or others whose interests differ from ours. If we are unable to resolve those conflicts on terms that are satisfactory to all parties, we may become involved in litigation brought by or against us. In addition, the conduct of clinical trials, including any subsequent clinical trials of imetelstat and any investigator-sponsored trials, are inherently risky and may expose us to liability for matters such as patient injury or death, or for any failure to meet regulatory and compliance requirements. Monitoring, initiating and defending against legal actions, including the currently pending litigation, are time-consuming for our management, are likely to be expensive and may detract from our ability to fully focus our internal resources on our business activities. The outcome of litigation is always uncertain, and in some cases could include judgments against us that require us to pay damages, enjoin us from certain activities, or otherwise affect our legal or contractual rights, which could have a significant adverse effect on our business. In addition, the inherent uncertainty of the currently pending litigation and any future litigation could lead to increased volatility in our stock price and a decrease in the value of your investment in our common stock.

The sale of a substantial number of shares may adversely affect the market price of our common stock.

The sale of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could significantly and negatively affect the market price of our common stock. As of December 31, 2013, we had 300,000,000 shares of common stock authorized for issuance and 130,677,949 shares of common stock outstanding. In addition, we had reserved 33,666,145 shares of our common stock for future issuance pursuant to our option and equity incentive plans and outstanding warrants as of December 31, 2013. On February 4, 2014, we issued 25,875,000 shares of our common stock in connection with the closing of the public offering of our common stock in February 2014. Issuing additional shares could negatively affect the market price of our common stock and the return on your investment.

Future sales of our common stock, including pursuant to our sales agreement with MLV, or the issuance of common stock to satisfy our current or future cash payment obligations or to acquire technology, property, or other businesses, could cause immediate dilution and adversely affect the market price of our common stock. In addition, under the universal shelf registration statement filed by

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us in July 2012 and declared effective by the SEC in October 2012, we may sell any combination of common stock, preferred stock, debt securities and warrants in one or more offerings, up to a cumulative value of $96.5 million. The sale or issuance of our securities, as well as the existence of outstanding options and shares of common stock reserved for issuance under our option and equity incentive plans and outstanding warrants also may adversely affect the terms upon which we are able to obtain additional capital through the sale of equity securities.

Our undesignated preferred stock may inhibit potential acquisition bids; this may adversely affect the market price of our common stock and the voting rights of holders of our common stock.

Our certificate of incorporation provides our board of directors with the authority to issue up to 3,000,000 shares of undesignated preferred stock and to determine or alter the rights, preferences, privileges and restrictions granted to or imported upon these shares without further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change in control transaction without further action by our stockholders. As a result, the market price of our common stock may be adversely affected.

In addition, if we issue preferred stock in the future that has preference over our common stock with respect to the payment of dividends or upon our liquidation, dissolution or winding up, or if we issue preferred stock with voting rights that dilute the voting power of our common stock, the rights of holders of our common stock or the market price of our common stock could be adversely affected.

Provisions in our charter, bylaws and Delaware law may inhibit potential acquisition bids for us, which may prevent holders of our common stock from benefiting from what they believe may be the positive aspects of acquisitions and takeovers.

Provisions of our charter documents and bylaws may make it substantially more difficult for a third party to acquire control of us and may prevent changes in our management, including provisions that:

prevent stockholders from taking actions by written consent;

divide the board of directors into separate classes with terms of office that are structured to prevent all of the directors from being elected in any one year; and

set forth procedures for nominating directors and submitting proposals for consideration at stockholders' meetings.

Provisions of Delaware law may also inhibit potential acquisition bids for us or prevent us from engaging in business combinations. In addition, we have severance agreements with several employees and a severance plan which could require an acquiror to pay a higher price. Either collectively or individually, these provisions may prevent holders of our common stock from benefiting from what they may believe are the positive aspects of acquisitions and takeovers, including the potential realization of a higher rate of return on their investment from these types of transactions.

We do not intend to pay cash dividends on our common stock in the foreseeable future.

Other than in connection with the anticipated Series A Distribution, we do not anticipate paying cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will depend upon our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors.

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Our stockholders may incur U.S. federal income taxes as a result of the divestiture of our stem cell assets, and non-U.S. stockholders may be subject to withholding taxes with respect to the divestiture.

If the anticipated Series A Distribution occurs, the Series A Distribution will not qualify as a tax-free spin-off under Section 355 of the Code. Accordingly, the fair market value of the Asterias Series A common stock at the time of the Series A Distribution, if it occurs, and the amount of any cash distributed could be treated as dividend income for U.S. federal income tax purposes for Geron stockholders. Similarly, we can provide no assurance that the distribution of BioTime Warrants by Asterias will not result in dividend income. As described in Item 1. "Business" under the section entitled "Stem Cell Divestiture; Asterias Series A Distribution Tax Consequences of Anticipated Series A Distribution," any gain recognized by a Geron stockholder from the Series A Distribution or the distribution of the BioTime Warrants will be short-term capital gain if the Geron stockholder has held our stock or, as applicable, the Asterias Series A common stock for one year or less at the time of the relevant distribution.

If any dividend income or gain were recognized by Geron stockholders in respect of our distribution of the Asterias Series A common stock and cash, if any, or the distribution by Asterias of the BioTime Warrants, as described in Item 1. "Business" under the section entitled "Stem Cell Divestiture; Asterias Series A Distribution Tax Consequences of Anticipated Series A Distribution," then Geron stockholders could incur U.S. federal income taxes with respect to the receipt of such distribution. In addition, "Non-U.S. Holders" (as defined in Item 1. "Business" under the section entitled "Stem Cell Divestiture; Asterias Series A Distribution Tax Consequences of Anticipated Series A Distribution") may be subject to U.S. federal withholding. The lack of an existing market for the Asterias Series A common stock could limit or preclude the ability of our stockholders to sell a sufficient quantity of Asterias Series A common stock to satisfy such potential tax liabilities. As a result, if the anticipated Series A Distribution occurs, Geron stockholders may incur tax liabilities, but be unable to realize value from any Asterias Series A common stock distributed by Geron and/or the BioTime Warrants to be distributed by Asterias. Because no further action is required on the part of Geron stockholders to receive the Asterias Series A common stock and the related BioTime Warrants in the distributions, if the anticipated Series A Distribution occurs and Geron stockholders do not want to receive the Asterias Series A common stock and the related BioTime Warrants in the anticipated distributions (or cash in lieu thereof), the only recourse for Geron stockholders will be to divest their Geron common stock prior to the record date to be set by our board of directors for the Series A Distribution. Sales of Geron common stock by stockholders who do not want to receive Asterias Series A common stock and the related BioTime Warrants in the anticipated distributions could result in downward pressure on our stock price.

Failure to achieve and maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 could have a material adverse effect on our business and stock price.

Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, requires that we establish and maintain an adequate internal control structure and procedures for financial reporting. Our annual reports on Form 10-K must contain an assessment by management of the effectiveness of our internal control over financial reporting and must include disclosure of any material weaknesses in internal control over financial reporting that we have identified. In addition, our independent registered public accounting firm must annually provide an opinion on the effectiveness of our internal control over financial reporting.

The requirements of Section 404 are ongoing and also apply to future years. We expect that our internal control over financial reporting will continue to evolve as our business develops. Although we are committed to continue to improve our internal control processes and we will continue to diligently and vigorously review our internal control over financial reporting in order to ensure compliance with Section 404 requirements, any control system, regardless of how well designed, operated and evaluated,

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can provide only reasonable, not absolute, assurance that its objectives will be met. Therefore, we cannot be certain that in the future material weaknesses or significant deficiencies will not exist or otherwise be discovered. If material weaknesses or other significant deficiencies occur, these weaknesses or deficiencies could result in misstatements of our results of operations, restatements of our consolidated financial statements, a decline in our stock price, or other material adverse effects on our business, reputation, results of operations, financial condition or liquidity.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

In February 2012, we entered into a lease agreement for our premises at 149 Commonwealth Drive, Menlo Park, California consisting of approximately 30,000 square feet of office space. The term of the lease was set to expire in July 2014. In February 2014, we amended the lease agreement for our premises at 149 Commonwealth Drive to extend the lease term through January 2016 and reduce the space leased by us to approximately 24,000 square feet of office space effective July 2014. Our amended lease at 149 Commonwealth Drive includes an option to extend the lease for one additional period of 18 months. We believe that our facilities are adequate to meet our requirements for the near term.

The lease for our research laboratory facility located at 200 Constitution Drive, Menlo Park, California was originally scheduled to expire in July 2014. In connection with the decision in April 2013 to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility, we entered into an amendment to the lease agreement for the 200 Constitution Drive facility under which the lease terminated effective December 31, 2013. As consideration for the early termination of the lease, we paid the landlord the remaining rents due under the original term of the lease as well as certain facility maintenance costs. See Note 7 on Restructurings in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of the early lease termination.

ITEM 3. LEGAL PROCEEDINGS

On March 14, 2014, a purported securities class action lawsuit was commenced in the United States District Court for the Northern District of California, naming as defendants us and certain of our officers. The lawsuit alleges violations of the Securities Exchange Act of 1934 in connection with allegedly false and misleading statements made by us related to our Phase 2 trial of imetelstat in patients with ET or PV. The plaintiff alleges, among other things, that we failed to disclose facts related to the occurrence of persistent low-grade LFT abnormalities observed in our Phase 2 trial of imetelstat in ET/PV patients and the potential risk of chronic liver injury following long-term exposure to imetelstat. The plaintiff seeks damages and an award of reasonable costs and expenses, including attorney's fees. It is possible that additional suits will be filed, or allegations made by stockholders, with respect to these same matters and also naming us and/or our officers and directors as defendants.

We believe that we have meritorious defenses and intend to defend this lawsuit vigorously. This lawsuit and any other related lawsuits are subject to inherent uncertainties, and the actual defense and disposition costs will depend upon many unknown factors. The outcome of the litigation is necessarily uncertain. We could be forced to expend significant resources in the defense of this and any other related lawsuits and we may not prevail.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is quoted on the Nasdaq Global Select Market under the symbol GERN. The high and low intraday sales prices as reported by the Nasdaq Global Select Market of our common stock for each of the quarters in the years ended December 31, 2013 and 2012 were as follows:

	High	Low
Year ended December 31, 2013		
First quarter	$ 1.78	$ 1.05
Second quarter	$ 1.55	$ 0.98
Third quarter	$ 3.95	$ 1.27
Fourth quarter	$ 7.79	$ 2.65
Year ended December 31, 2012		
First quarter	$ 2.22	$ 1.48
Second quarter	$ 1.78	$ 1.25
Third quarter	$ 2.99	$ 1.21
Fourth quarter	$ 1.74	$ 0.91

As of March 6, 2014, there were approximately 662 stockholders of record of our common stock. This number does not include "street name" or beneficial holders, whose shares are held of record by banks, brokers and other financial institutions. We are engaged in a highly dynamic industry, which often results in significant volatility of our common stock price. On March 6, 2014, the closing sales price for our common stock was $4.57 per share.

Dividend Policy

We have never paid cash dividends on our capital stock and other than in connection with the anticipated Series A Distribution, do not anticipate paying cash dividends in the foreseeable future, but intend to retain our capital resources for reinvestment in our business. Any future determination to pay cash dividends will be at the discretion of the board of directors and will be dependent upon our financial condition, results of operations, capital requirements and other factors the board of directors deems relevant.

Performance Measurement Comparison[(1)]

The following graph compares total stockholder returns of Geron Corporation for the last five fiscal years beginning December 31, 2008 to two indices: the Nasdaq CRSP Total Return Index for the Nasdaq Stock Market-U.S. Companies, or the Nasdaq-US, and the Nasdaq Pharmaceutical Index, or the Nasdaq-Pharmaceutical. The total return for our stock and for each index assumes the reinvestment of dividends, although we have never declared dividends on Geron stock, and is based on the returns of the component companies weighted according to their capitalizations as of the end of each quarterly period. The Nasdaq-US tracks the aggregate price performance of equity securities of U.S. companies traded on the Nasdaq Global Select Market, or NGSM. The Nasdaq-Pharmaceutical, which is calculated and supplied by Nasdaq, represents pharmaceutical companies, including biotechnology companies, trading on Nasdaq under the Standard Industrial Classification (SIC) Code No. 283 Drugs main category (2833 Medicinals & Botanicals, 2834 Pharmaceutical Preparations, 2835 Diagnostic Substances, 2836 Biological Products). Geron common stock trades on the NGSM and is a component of both the Nasdaq-US and the Nasdaq-Pharmaceutical. The stockholder return shown in the graph

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below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.

Comparison of Five Year Cumulative Total Return on Investment Among
Geron Corporation, the Nasdaq-US Index and the Nasdaq-Pharmaceutical Index[2]

(1) This Section is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of Geron Corporation under the Securities Act, or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

(2) Shows the cumulative total return on investment assuming an investment of $100 in each of Geron, the Nasdaq-US and the Nasdaq-Pharmaceutical on December 31, 2008. The cumulative total return on Geron stock has been computed based on a price of $4.67 per share, the price at which Geron common stock closed on December 31, 2008.

Recent Sales of Unregistered Securities

None.

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ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read together with our consolidated financial statements and accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this annual report on Form 10-K. The selected consolidated financial data in this section is not intended to replace our consolidated financial statements and the accompanying notes. Our historical results are not necessarily indicative of our future results.

	Year Ended December 31,				
	2013	2012	2011	2010	2009
	(In thousands, except share and per share data)				
Consolidated Statements of Operations Data:					
Revenues from collaborative agreements	$	$	$ 300	$ 925	$ 450
License fees and royalties	1,283	2,709	2,138	2,638	1,276
Total revenues	1,283	2,709	2,438	3,563	1,726
Operating expenses:					
Research and development	23,155	51,368	69,316	61,687	57,617
Acquired in-process research and development[1]				35,000	
Restructuring charges[2]	1,462	2,702	5,449		
General and administrative	15,624	20,397	23,789	18,043	14,343
Total operating expenses	40,241	74,467	98,554	114,730	71,960
Loss from operations	(38,958)	(71,758)	(96,116)	(111,167)	(70,234)
Unrealized (loss) gain on derivatives	(316)	13	643	190	157
Interest and other income	951	3,097	1,024	2,045	1,374
Losses recognized under equity method investment			(503)	(2,347)	(1,338)
Losses recognized from debt extinguishment[3]			(1,664)		
Interest and other expense	(56)	(233)	(237)	(98)	(143)
Net loss	(38,379)	(68,881)	(96,853)	(111,377)	(70,184)
Deemed dividend on derivatives[4]					(190)
Net loss applicable to common stockholders	$ (38,379)	$ (68,881)	$ (96,853)	$ (111,377)	$ (70,374)
Basic and diluted net loss per share applicable to common stockholders:					
Net loss per share applicable to common stockholders	$ (0.30)	$ (0.54)	$ (0.78)	$ (1.14)	$ (0.80)

Shares used in computing net loss per share applicable to common stockholders	128,380,800	126,941,024	124,506,763	97,601,520	88,078,557

(1) In December 2010, we and Angiochem, Inc., or Angiochem, entered into an exclusive license agreement that provided us with a worldwide exclusive license, with the right to grant sublicenses, to Angiochem's proprietary peptide technology that facilitates the transfer of anti-cancer

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compounds across the blood-brain barrier to be used with tubulin disassembly inhibitors to enable the treatment of primary brain cancers and cancers that have metastasized to the brain. As consideration for the license rights, we paid Angiochem an upfront payment of $7.5 million in cash and issued to Angiochem 5,261,144 shares of common stock on January 5, 2011 as payment of our obligation to issue $27.5 million in stock to Angiochem. Because further clinical and process development of GRN1005 was required before any viable commercial application could be identified or utilized, we concluded that the technology had no alternative future use, and accordingly, expensed the total upfront payment of $35.0 million as acquired in-process research and development at the time of acquisition in 2010.

On December 3, 2012, we provided to Angiochem notice of termination of the exclusive license agreement. We returned the asset to Angiochem in May 2013 and the license agreement terminated effective June 1, 2013. See Note 12 on License Agreements in Notes to Consolidated Financial Statements of this annual report on Form 10-K.

(2)

In April 2013, we announced the decision to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility located at 200 Constitution Drive, Menlo Park, California. With this decision, a total of 20 positions were eliminated, representing approximately 31% of our workforce at that time. In connection with this restructuring, we incurred aggregate restructuring charges of approximately $1.4 million in 2013. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

In December 2012, we announced the decision to discontinue development of GRN1005. With this decision, a total of 43 positions were eliminated, representing a reduction of approximately 40% of our workforce at that time. In connection with the restructuring, we incurred aggregate restructuring charges of approximately $2.8 million, of which $2.7 million was recorded in 2012 and $92,000 was recorded in 2013. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

In November 2011, we discontinued further development of our stem cell programs. With this decision, a total of 66 positions were eliminated, representing a reduction of approximately 38% of our workforce at that time. In connection with the restructuring, we recorded aggregate restructuring charges of approximately $5.4 million in 2011. All actions associated with this restructuring were completed in 2012, and we do not anticipate incurring any further charges in connection with this restructuring. See Note 7 on Restructurings in Notes to Consolidated Financial Statements of this annual report on Form 10-K.

(3)

In November 2011, we repaid the outstanding principal balance, including accrued interest, or Loan Balance, to the California Institute for Regenerative Medicine, or CIRM, representing our entire Loan Balance under our loan agreement with CIRM. In addition, we relinquished our right to future disbursements from CIRM under the loan agreement and gave notice of termination. With the repayment of the entire outstanding Loan Balance, we have no further amounts owed to CIRM. In connection with the early termination of the loan agreement with CIRM, we recognized a debt extinguishment charge of $1.7 million for the unamortized debt discount associated with the loan. See Note 9 on Long-Term Debt in Notes to Consolidated Financial Statements of this annual report on Form 10-K.

(4)

In April 2009, in connection with our continued collaboration with an investor and licensee and the data received under the collaboration relevant to our therapeutic programs, we modified the terms of certain outstanding warrants held by this investor by extending the exercise term and reducing the exercise price. In connection with the modifications, we recognized a deemed dividend of approximately $190,000 for the incremental fair value of the modified warrants. These warrants subsequently expired unexercised.

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	December 31,				
	2013	2012	2011	2010	2009
	(In thousands)				
Consolidated Balance Sheets Data:					
Cash, restricted cash, cash equivalents and marketable securities	$ 66,019	$ 96,329	$ 154,239	$ 221,274	$ 167,070
Working capital	59,470	84,269	112,181	154,168	110,324
Total assets	67,344	99,801	160,047	233,584	180,382
Accumulated deficit	(892,763)	(854,384)	(785,503)	(688,650)	(577,267)
Total stockholders' equity	59,757	85,653	146,603	192,735	172,577

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

The following discussion should be read in conjunction with the audited consolidated financial statements and notes thereto included in Part II, Item 8 of this annual report on Form 10-K.

We are a clinical stage biopharmaceutical company developing a telomerase inhibitor, imetelstat, in hematologic myeloid malignancies. Through a combined strategy of internal efforts and potential future strategic partnerships, we intend to advance the development and commercialization of imetelstat in one or more hematologic myeloid malignancies.

The discovery and early development of imetelstat, our sole product candidate, was based on our core expertise in telomerase and telomere biology. 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 is a potent and specific inhibitor of telomerase. Using our proprietary nucleic acid chemistry, we designed imetelstat to be an oligonucleotide that targets and binds with high affinity to the active site of telomerase, thereby directly inhibiting telomerase activity and impeding malignant cell proliferation. We developed imetelstat from inception and own exclusive worldwide commercial rights with U.S. patent coverage extending through 2025.

Based on the data from our Phase 2 clinical trial evaluating imetelstat in essential thrombocythemia, or ET, which showed durable hematologic and molecular responses in patients, and preliminary data from the first two cohorts of an investigator-sponsored trial at Mayo Clinic evaluating imetelstat in myelofibrosis, which we refer to as the Myelofibrosis IST, we intend, subject to the full clinical hold discussed below, to develop imetelstat to treat one or more hematologic myeloid malignancies such as myelofibrosis, or MF, which includes patients with primary MF, or PMF, post-essential thrombocythemia MF, or post-ET MF, or post-polycythemia vera MF, or post-PV MF, all of which are referred to as MF; myelodysplastic syndromes, or MDS; or acute myelogenous leukemia, or AML.

The Myelofibrosis IST is also evaluating imetelstat in patients with refractory anemia with ringed sideroblasts, or RARS, a subpopulation of MDS, and patients with MF that has transformed into AML, known as blast-phase MF. Data we receive from these additional patients may inform, in part, our decision to initiate, subject to the full clinical hold discussed below, one or more potential pilot studies of imetelstat in MDS or AML. In January 2014, Mayo Clinic closed the Myelofibrosis IST to new patient enrollment. In Mayo Clinic's notification informing us of its decision to cease new patient enrollment, Mayo Clinic did not indicate that its decision was due to any concerns regarding efficacy or safety.

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In March 2014, we received written notice from the U.S. Food and Drug Administration, or the FDA, that our Investigational New Drug application, or IND, for imetelstat has been placed on full clinical hold following their review of data related to hepatotoxicity in our then-ongoing clinical studies. A full clinical hold is an order that the FDA issues to a trial sponsor to suspend all ongoing clinical trials and delay all proposed trials. With this clinical hold, any patients in an ongoing Geron-sponsored clinical trial cannot receive any further treatment with imetelstat. Therefore, we have stopped imetelstat treatment in our Phase 2 Geron-sponsored clinical trials in ET and multiple myeloma, or MM. For our Phase 2 ET trial, eight patients are affected and for our Phase 2 MM trial, two patients are affected.

In their notice to us, the FDA cited the following safety issues as the basis for the clinical hold: lack of evidence of reversibility of hepatotoxicity, risk for chronic liver injury and lack of adequate follow-up in patients who experienced hepatotoxicity. To address the clinical hold, we are required to: provide clinical follow-up information in patients who experienced liver function test, or LFT, abnormalities until LFT abnormalities have resolved to normal or baseline; and provide information regarding the reversibility of the liver toxicity after chronic drug administration in animals. Accordingly, we intend to compile and submit to the FDA preclinical and clinical data and information from our own studies, as well as data and information available to us from other imetelstat studies, such as the Myelofibrosis IST, regarding LFT abnormalities and the incidence and reversibility of hepatotoxicity. We plan to work diligently with the FDA to seek the release of the full clinical hold.

Until the FDA lifts the full clinical hold, we are unable to submit any new clinical trial protocols to the FDA under our IND for imetelstat and are unable to initiate any new clinical trials for imetelstat in the United States. Therefore, the initiation of our previously-announced planned Geron-sponsored Phase 2 clinical trial of imetelstat in patients with MF will be delayed indefinitely and may not occur at all. If the FDA does not lift the full clinical hold, we will likely be unable to pursue the development of imetelstat. If the FDA lifts the full clinical hold, or partially lifts the full clinical hold, we expect to pursue development of imetelstat in one or more indications, such as MF, MDS or AML, where we believe there is a greater unmet medical need for a new product than is the case for diseases such as ET, for which survival is minimally affected by the disease. We have previously announced that our Phase 2 ET trial was a mechanistic proof-of-concept study, and that we did not plan to develop imetelstat for commercial use in ET.

We have incurred operating losses every year since our operations began in 1990. Losses have resulted principally from costs incurred in connection with our research and development activities and from general and administrative costs associated with our operations. For the years ended December 31, 2013, 2012 and 2011, we incurred net losses of $38.4 million, or $0.30 per share, $68.9 million, or $0.54 per share, and $96.9 million, or $0.78 per share, respectively. As of December 31, 2013, we had an accumulated deficit of $892.8 million.

Substantially all of our revenues to date have been research support payments under collaboration agreements and milestones, royalties and other revenues from our licensing arrangements. Revenues generated from these arrangements will not be sufficient alone to continue or expand our research or development activities and otherwise sustain our operations.

As of December 31, 2013, we had cash, restricted cash, cash equivalents and marketable securities of $66.0 million compared to $96.3 million at December 31, 2012 and $154.2 million at December 31, 2011. We estimate that our existing capital resources, in combination with the net cash proceeds of approximately $96.7 million we received in February 2014 from an underwritten public offering of 25,875,000 shares of our common stock as well as amounts available to us under our equipment financing facility and future interest income will be sufficient to fund our current level of operations through at least the next 12 months.

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Discontinuation of Discovery Research and Companion Diagnostics Programs and Closure of Research Laboratory Facility

In April 2013, we announced the decision to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility located at 200 Constitution Drive, Menlo Park, California. See further discussion in this section under the sub-heading "Restructuring Charges".

Divestiture of Human Embryonic Stem Cell Assets

On October 1, 2013, we closed the transaction to divest our human embryonic stem cell assets and our autologous cellular immunotherapy program pursuant to the terms of an asset contribution agreement, or the Contribution Agreement, we entered into in January 2013 with BioTime, Inc., or BioTime, and BioTime's wholly owned subsidiary, Asterias Biotherapeutics, Inc., or Asterias (formerly known as BioTime Acquisition Corporation). See further discussion in Part I, Item 1. "Business" under the section entitled "Stem Cell Divestiture; Asterias Series A Distribution" and in Note 8 on Divestiture of Stem Cell Assets in Notes to Consolidated Financial Statements of this annual report on Form 10-K.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Note 1 of Notes to Consolidated Financial Statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Certain of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of our consolidated financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on our financial condition and results of operations. Specifically, critical accounting estimates have the following attributes: (i) we are required to make assumptions about matters that are highly uncertain at the time of the estimate; and (ii) different estimates we could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on our financial condition or results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. We base our estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as our operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. Based on a critical assessment of our accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that our consolidated financial statements are fairly stated in accordance with accounting principles generally accepted in the United States, and meaningfully present our financial condition and results of operations.

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We believe the following critical accounting policies reflect our more significant estimates and assumptions used in the preparation of our consolidated financial statements:

Fair Value of Financial Instruments

We categorize financial instruments recorded at fair value on our consolidated balance sheet based upon the level of judgment associated with inputs used to measure their fair value. The categories are as follows:

Level 1 Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 Inputs (other than quoted market prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level 3 Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Following is a description of the valuation methodologies used for instruments measured at fair value on our consolidated balance sheet, including the category for such instruments.

We classify inputs to derive fair values for marketable securities available-for-sale as Level 1 and 2. Instruments classified as Level 1 include money market funds, representing 13% of our total financial instruments measured at fair value classified as assets as of December 31, 2013. Instruments classified as Level 2 include U.S. government-sponsored enterprise securities, commercial paper and corporate notes, representing 87% of our total financial instruments measured at fair value classified as assets as of December 31, 2013. The price for each security at the measurement date is derived from various sources. Periodically, we assess the reasonableness of these sourced prices by comparing them to the prices provided by our portfolio managers from broker quotes as well as reviewing the pricing methodologies used by our portfolio managers. Historically, we have not experienced significant deviation between the sourced prices and our portfolio manager's prices.

Warrants to purchase common stock and non-employee options are normally traded less actively, have trade activity that is one way, and/or traded in less-developed markets and are therefore valued based upon models with significant unobservable market parameters, resulting in Level 3 categorization. Instruments classified as Level 3 include derivative liabilities from non-employee options, representing all of our financial instruments measured at fair value classified as liabilities as of December 31, 2013. The fair value for these instruments is calculated using the Black Scholes option-pricing model. The model's inputs reflect assumptions that market participants would use in pricing the instrument in a current period transaction. Use of this model requires us to make assumptions regarding stock volatility, dividend yields, expected term of the non-employee options and risk-free interest rates. Changes to the model's inputs are not changes to valuation methodologies, but instead reflect direct or indirect impacts from changes in market conditions. Accordingly, results from the valuation model in one period may not be indicative of future period measurements. Expected volatilities are based on historical volatilities of our stock. The expected term of non-employee options represents the remaining contractual term of the instruments. The risk-free interest rate is based on the U.S. Zero Coupon Treasury Strip Yields for the remaining term of the instrument. If factors change and we employ different assumptions in future periods, the fair value of these non-employee options reflected as of

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each balance sheet date and the resulting change in fair value that we record may differ significantly from what we have recorded in previous periods. As of December 31, 2013, we have not revised the method in which we derive assumptions in order to estimate fair values of non-employee options classified as liabilities, and we do not expect revisions in the future.

For a further discussion regarding fair value measurements, see Note 2 on Fair Value Measurements in Notes to Consolidated Financial Statements of this annual report on Form 10-K.

Revenue Recognition

Since our inception, substantially all of our revenues have been generated from collaboration agreements and licensing arrangements. Revenue under such agreements typically includes upfront signing or license fees, cost reimbursements, milestone payments and royalties on future product sales.

We recognize upfront non-refundable signing, license or non-exclusive option fees as revenue when rights to use the intellectual property related to the license have been delivered and over the term of the agreement if we have continuing performance obligations. We recognize cost reimbursement revenue under collaborative agreements as the related research and development costs for services are rendered. We recognize revenue from milestone payments, which are subject to substantive contingencies, upon completion of specified milestones, which represents the culmination of an earnings process, according to contract terms. Royalties are generally recognized as revenue upon the receipt of the related royalty payment. Deferred revenue represents the portion of research or license payments received which has not been earned. When payments are received in equity securities, we do not recognize any revenue unless such securities are determined to be realizable in cash.

We estimate the projected future term of license agreements over which we recognize revenue. Our estimates are based on contractual terms, historical experience and general industry practice. Revisions in the estimated terms of these license agreements have the effect of increasing or decreasing license fee revenue in the period of revision. As of December 31, 2013, no revisions to the estimated future terms of license agreements have been made and we do not expect revisions to currently active agreements in the future.

Clinical Trial Accruals

Substantial portions of our preclinical studies and all of our clinical trials have been performed by third-party contract research organizations, or CROs, and other vendors. We accrue expenses for preclinical studies performed by our vendors based on certain estimates over the term of the service period and adjust our estimates as required. We accrue expenses for clinical trial activities performed by CROs based upon the estimated amount of work completed on each study. For clinical trial expenses, the significant factors used in estimating accruals include the number of patients enrolled, the number of active clinical sites, and the duration for which the patients will be enrolled in the study. Pass through costs from CROs include, but are not limited to, regulatory expenses, investigator fees, lab fees, travel costs and other miscellaneous costs, including shipping and printing fees. We accrue pass through costs based on estimates of the amount of work completed for the clinical trial. We monitor patient enrollment levels and related activities to the extent possible through internal reviews, review of contractual terms and correspondence with CROs. We base our estimates on the best information available at the time. However, additional information may become available to us which will allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain.

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Valuation of Stock-Based Compensation

We measure and recognize compensation expense for all stock-based awards to our employees and directors, including stock options, restricted stock awards and employee stock purchases related to our Employee Stock Purchase Plan, or ESPP, based on estimated fair values. We use the Black Scholes option-pricing model to estimate the grant-date fair value of our stock options and employee stock purchases. Option-pricing valuation model assumptions such as expected volatility, risk-free interest rate and expected term impact the fair value estimate.

Further, the estimated forfeiture rate impacts the amount of aggregate stock-based compensation expense recognized during the period. The fair value of stock options and employee stock purchases is amortized over the vesting period of the awards using a straight-line method.

Expected volatilities are based on historical volatilities of our stock since traded options on Geron common stock do not correspond to option terms and trading volume of options is limited. The expected term of options represents the period of time that options granted are expected to be outstanding. In deriving this assumption, we reviewed actual historical exercise and cancellation data and the remaining outstanding options not yet exercised or cancelled. The expected term of employees' purchase rights under our ESPP is equal to the purchase period. The risk-free interest rate is based on the U.S. Zero Coupon Treasury Strip Yields for the expected term in effect on the date of grant. Forfeiture rates are estimated based on historical data and are adjusted, if necessary, over the requisite service period based on the extent to which actual forfeitures differ, or are expected to differ, from their estimate.

We have granted restricted stock awards to employees and directors with three types of vesting schedules: (i) service-based, (ii) performance-based or (iii) market-based. Service-based restricted stock awards generally vest annually over four years. Performance-based restricted stock awards vest upon achievement of discrete strategic corporate goals within a specified performance period, generally three years. Market-based restricted stock awards vest upon achievement of certain market price thresholds of our common stock within a specified performance period, generally three years.

The fair value for service-based restricted stock awards is determined using the fair value of our common stock on the date of grant. The fair value is amortized as stock-based compensation expense over the requisite service period of the award, which is generally the vesting period, on a straight-line basis and is reduced for estimated forfeitures, as applicable.

The fair value for performance-based restricted stock awards is determined using the fair value of our common stock on the date of grant. Stock-based compensation expense for awards with vesting based on performance conditions is recognized over the period from the date the performance condition is determined to be probable of occurring through the date the applicable condition is expected to be met and is reduced for estimated forfeitures, as applicable. If the performance condition is not considered probable of being achieved, no stock-based compensation expense is recognized until such time as the performance condition is considered probable of being met, if at all. If that assessment of the probability of the performance condition being met changes, the impact of the change in estimate would be recognized in the period of the change. If the requisite service period has been met prior to the change in estimate, the effect of the change in estimate would be immediately recognized. We evaluate whether performance conditions are probable of occurring, as well as the expected performance period, on a quarterly basis.

The fair value for market-based restricted stock awards is determined using a lattice valuation model with a Monte Carlo simulation. The model takes into consideration the historical volatility of our stock and the risk-free interest rate at the date of grant. In addition, the model is used to estimate the derived service period for the awards. The derived service period is the estimated period of time that would be required to satisfy the market condition, assuming the market condition will be satisfied. Stock-based compensation expense is recognized over the derived service period for the awards using the straight-line method and is reduced for estimated forfeitures, as applicable, but is accelerated if the market condition is achieved earlier than estimated.

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We evaluate the assumptions used in estimating fair values of our stock-based awards by reviewing current trends in comparison to historical data on an annual basis. We have not revised the methods by which we derive assumptions in order to estimate fair values of our stock-based awards. If factors change and we employ different assumptions in future periods, the stock-based compensation expense that we record for awards to employees and directors may differ significantly from what we have recorded in the current period.

Compensation expense recognized for stock-based awards to employees and directors was $4.4 million, $5.3 million and $15.2 million for the years ended December 31, 2013, 2012 and 2011, respectively. As of December 31, 2013, total compensation cost related to unvested stock-based awards not yet recognized, net of estimated forfeitures and assuming no probability of achievement for outstanding performance-based restricted stock awards, was $6.9 million, which is expected to be recognized over the next 31 months on a weighted-average basis.

For our non-employee stock-based awards, the measurement date on which the fair value of the stock-based award is calculated is equal to the earlier of (i) the date at which a commitment for performance by the counterparty to earn the equity instrument is reached or (ii) the date at which the counterparty's performance is complete. We recognized stock-based compensation expense of $92,000, $135,000 and $114,000 for the fair value of the vested portion of non-employee options and restricted stock awards in our consolidated statements of operations for the years ended December 31, 2013, 2012 and 2011, respectively.

Results of Operations

Our results of operations have fluctuated from period to period and may continue to fluctuate in the future, based upon the progress of our research and development efforts and variations in the level of expenses related to developmental efforts during any given period. Results of operations for any period may be unrelated to results of operations for any other period. In addition, historical results should not be viewed as indicative of future operating results. We are subject to risks common to companies in our industry and at our stage of development, including, but not limited to, risks inherent in our research and development efforts, our dependence on the success of a single product candidate, uncertainty of preclinical and clinical trial results or regulatory approvals or clearances, need for future capital, enforcement of our patent and proprietary rights, reliance upon our collaborators, investigators and other third parties, and potential competition. In order for our sole product candidate, imetelstat, to be commercialized based on our research, we and our collaborators must conduct preclinical tests and clinical trials to demonstrate the safety and efficacy of imetelstat, obtain regulatory approvals or clearances and enter into manufacturing, distribution and marketing arrangements, as well as obtain market acceptance. We do not expect to receive revenues or royalties based on imetelstat for many years, if at all.

Revenues

We recognized revenues from collaborative agreements of $300,000 in 2011 which reflects revenue recognized under our collaboration with GE Healthcare UK, Ltd., or GE Healthcare, which began in July 2009. No comparable amounts were recognized in 2013 and 2012 because the collaboration with GE Healthcare concluded in June 2011.

We have entered into license and option agreements with companies involved with oncology, diagnostics, research tools, agricultural and biologics production. In each of these agreements, we have granted certain rights to our technologies. In connection with the agreements, we are eligible to receive license fees, option fees, milestone payments and royalties on future sales of products, or any combination thereof. We recognized license fee revenues of $933,000, $1.6 million and $1.3 million in 2013, 2012 and 2011, respectively, related to our various agreements. The decrease in license fee

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revenues in 2013 compared to 2012 and the increase in license fee revenues in 2012 compared to 2011 primarily reflects the full recognition of a license payment from GE Healthcare in 2012 upon the exercise of an option to expand the scope of their original license agreement with us to obtain exclusive global rights to intellectual property and know-how for the development and sale of cellular assays derived from induced pluripotent stem cells. In connection with the closing of the divestiture of our human embryonic stem cell assets on October 1, 2013, our license agreement with GE Healthcare, including any future revenue payments thereunder, was transferred to Asterias.

We recognized royalty revenues of $350,000, $1.1 million and $855,000 in 2013, 2012 and 2011, respectively, on product sales of telomerase detection and telomere measurement kits to the research-use-only market, cell-based research products and nutritional products. The decrease in royalty revenues in 2013 compared to 2012 primarily reflects the assignment of our telomerase activation technology to Telomerase Activation Sciences, Inc., or TA Sciences, in December 2012 and termination of our license agreement with Asia Biotech Corporation. See further discussion of the agreement with TA Sciences under the sub-section entitled "Interest and Other Income". Future license and royalty revenues are dependent upon additional agreements being signed and current agreements being maintained. Current revenues may not be predictive of future revenues.

Research and Development Expenses

For each of our research and development programs, we incur direct external, personnel related and other research and development costs. Direct external expenses primarily consist of costs to outside parties to perform laboratory studies, develop manufacturing processes and manufacture raw materials and clinical trial drug materials, conduct and manage clinical trials, including investigator-sponsored clinical trials, and provide advice and consultation for scientific and clinical strategies. Personnel related expenses primarily consist of salaries and wages, stock-based compensation, payroll taxes and benefits for those individuals involved with ongoing research and development efforts. Other research and development expenses primarily consist of laboratory supplies, research-related overhead associated with leasing, operating and maintaining our facilities and equipment depreciation and maintenance. All of these costs apply to our clinical programs, preclinical programs and our historical discovery research efforts. A product candidate is designated a clinical candidate once an investigational new drug application has been filed with the FDA, or a similar filing with regulatory agencies outside the United States, for the purpose of commencing clinical trials in humans. Preclinical programs include product candidates undergoing toxicology, pharmacology, metabolism and efficacy studies and manufacturing process development required before testing in humans can commence.

Research and development expenses were $23.2 million, $51.4 million and $69.3 million for the years ended December 31, 2013, 2012 and 2011, respectively. As shown in the table below, the decrease in research and development expenses in 2013 compared to 2012 primarily reflects lower direct external research and development costs in connection with reduced manufacturing of drug products and reduced clinical trial expenses resulting from the wind-down of our imetelstat trials in metastatic breast cancer and advanced non-small cell lung cancer and our GRN1005 trials in patients with brain metastases. The decrease in research and development expenses also reflects lower personnel related costs resulting from the recent restructurings as well as reduced costs for scientific supplies and services with the discontinuation of our discovery research programs. The decrease in 2012 compared to 2011 primarily reflects the net result of lower direct external research and development costs for the manufacturing of imetelstat drug product resulting from the timing of manufacturing campaigns and reduced costs due to the discontinued development of the stem cell programs, partially offset by increased direct external research and development costs for the Phase 2 clinical trials of GRN1005 in patients with brain metastases that were initiated in December 2011. The discontinuation of the stem cell programs resulted in reduced direct external research and development costs for the Phase 1 trial of GRNOPC1 for the treatment of acute spinal cord injury, decreased personnel related costs and

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lower other research and development expenses, mainly for scientific supplies. Overall, we expect research and development expenses to increase in 2014, if the FDA lifts the clinical hold on our IND, which may not occur in a timely manner or at all, and we are able to continue to advance the development of imetelstat in hematologic myeloid malignancies.

Research and development expenses for the years ended December 31, 2013, 2012 and 2011 were as follows:

	Year Ended December 31,		
(In thousands)	**2013**	**2012**	**2011**
Direct external research and development expenses:			
Clinical program: Imetelstat	$ 7,665	$ 12,907	$ 16,016
Clinical program: GRN1005[(1)]	1,039	10,723	5,289
Clinical program: GRNOPC1[(2)]	202	393	2,703
Preclinical programs	228	1,155	2,367
Personnel related expenses	10,753	19,008	30,042
All other research and development expenses	3,268	7,182	12,899
Total	$ 23,155	$ 51,368	$ 69,316

(1) In December 2012, we discontinued the GRN1005 program and returned the asset to Angiochem, Inc. in May 2013.

(2) On October 1, 2013, we closed the transaction to divest our human embryonic stem cell assets and our autologous cellular immunotherapy program to Asterias. Asterias assumed all post-closing liabilities with respect to all of the assets contributed by us, including any liabilities related to the GRNOPC1 and autologous cellular immunotherapy clinical trials. See Note 8 on Divestiture of Stem Cell Assets in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion.

At this time, we cannot provide reliable estimates of how much time or investment will be necessary to commercialize imetelstat. For a more complete discussion of the risks and uncertainties associated with the development of imetelstat, see the sub-sections entitled "Risks Related to Our Business" and "Risks Related to Clinical and Commercialization Activities" in Part I, Item 1A entitled "Risk Factors" and elsewhere in this annual report on Form 10-K.

Restructuring Charges

In April 2013, we announced the decision to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility located at 200 Constitution Drive, Menlo Park, California. With this decision, a total of 20 positions were eliminated. In connection with this restructuring, we incurred aggregate restructuring charges of approximately $1.4 million in 2013, of which $624,000 related to one-time termination benefits, including $28,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of December 2013 for certain stock options previously granted to terminated employees, $200,000 related to non-cash charges for write-downs of excess equipment and leasehold improvements and $546,000 related to costs associated with the closure of our research laboratory facility. In connection with the decision to close our research laboratory facility, we entered into an amendment to the lease agreement for the 200 Constitution Drive facility under which the lease terminated effective December 31, 2013. As consideration for the early termination of the lease, we paid the landlord the remaining rents due under the original term of the lease as well as certain facility maintenance costs, all of which have been included in restructuring charges. As of December 31, 2013, we have received proceeds of approximately $1.1 million from the sale of excess

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laboratory equipment in connection with the closure of our research laboratory facility. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

In December 2012, we announced the decision to discontinue development of GRN1005. With this decision, a total of 43 positions were eliminated. Of those, ten employees continued to provide services through various dates in the first half of 2013. In connection with this restructuring, we incurred aggregate restructuring charges of approximately $2.8 million, of which $2.7 million was recorded in 2012 and $92,000 was recorded in 2013. The aggregate restructuring charges consisted of $2.5 million related to one-time termination benefits, including $107,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of December 2013 for certain stock options previously granted to terminated employees, and $271,000 related to write-downs of GRN1005 manufacturing equipment. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

In November 2011, we announced the decision to discontinue further development of our stem cell programs. With this decision, a total of 66 positions were eliminated. Of those, 14 employees continued to provide services through various dates in the first half of 2012. In connection with this restructuring, we recorded aggregate restructuring charges of approximately $5.4 million in 2011, of which $4.6 million related to one-time termination benefits, including $174,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of June 2013 and December 2013 for certain stock options previously granted to terminated employees, and $874,000 related to write-downs of excess lab equipment and leasehold improvements and other charges. See Note 7 on Restructurings in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of the restructuring charges.

General and Administrative Expenses

General and administrative expenses were $15.6 million, $20.4 million and $23.8 million for the years ended December 31, 2013, 2012 and 2011, respectively. The decrease in general and administrative expenses in 2013 compared to 2012 primarily reflects lower personnel related expenses of $2.7 million, primarily resulting from the recent restructurings, and reduced legal and consulting fees of $2.3 million associated with our intellectual property portfolio and our stem cell divestiture efforts. The decrease in general and administrative expenses in 2012 compared to 2011 primarily reflects lower non-cash stock-based compensation expense of $6.4 million, partially offset by higher legal and consulting fees of $2.8 million associated with our intellectual property portfolio and our stem cell divestiture efforts. Due to the purported securities class action lawsuit recently filed against us, we expect that our legal expenses will increase in 2014 as we intend to vigorously defend the lawsuit.

Unrealized Gain (Loss) on Derivatives

Unrealized gain (loss) on derivatives reflects a non-cash adjustment for changes in fair value of options held by non-employees that are classified as current liabilities. Derivatives classified as assets or liabilities are marked to fair value at each financial reporting date with any resulting unrealized gain (loss) recorded in the consolidated statements of operations. The derivatives continue to be reported as an asset or liability until such time as the instruments are exercised or expire or are otherwise modified to remove the provisions which require them to be recorded as assets or liabilities, at which time these instruments are marked to fair value and reclassified from assets or liabilities to stockholders' equity. We incurred unrealized losses on derivatives of $316,000 for the year ended December 31, 2013 compared to unrealized gains on derivatives of $13,000 and $643,000 for the years ended December 31, 2012 and 2011, respectively. The unrealized losses on derivatives for 2013 primarily reflect increased fair values of derivative liabilities resulting from increases in the market value of our stock and changes

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in other inputs factored into the estimate of their fair value such as the volatility of our stock. The unrealized gains on derivatives for 2012 and 2011 primarily reflect reduced fair values of derivative liabilities resulting from shortening of their contractual terms, decreases in the market value of our stock and changes in other inputs factored into the estimate of their fair value such as the volatility of our stock. See Note 2 on Fair Value Measurements in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of the fair value of derivatives.

Interest and Other Income

Interest income was $219,000, $597,000 and $1.0 million for the years ended December 31, 2013, 2012 and 2011, respectively. The decrease in 2013 compared to 2012 and 2012 compared to 2011 reflects lower cash and investment balances resulting from the use of cash for operations. Interest earned in future periods will depend on the size of our securities portfolio and prevailing interest rates.

Other income was $732,000 and $2.5 million for the years ended December 31, 2013 and 2012, respectively. No other income was recognized for the year ended December 31, 2011. Other income recognized in 2013 reflects a net gain on the sale of excess laboratory equipment in connection with the closure of our research laboratory facility. Other income recognized in 2012 reflects the receipt a non-refundable upfront payment of $2.5 million for the assignment of our telomerase activation technology to TA Sciences, pursuant to the Termination and Assignment Agreement that we entered into with Asia Biotech Corporation, or Asia Biotech, and TA Sciences in December 2012. See Note 12 on License Agreements in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of the Termination and Assignment Agreement with Asia Biotech and TA Sciences.

Losses Recognized Under Equity Method Investment

We owned 40% of ViaGen, Inc., or ViaGen, a licensee with in-house breeding services and expertise in advanced reproductive technologies for animal cloning. In accordance with the equity method of accounting, we recognized losses of $503,000 for the year ended December 31, 2011, for our proportionate share of ViaGen's losses which has been included in losses recognized under equity method investment in our consolidated statements of operations. No comparable amounts were recognized in 2013 and 2012 because we suspended the equity method of accounting in June 2011 since our proportionate share of net losses exceeded the value of our investment and we had no commitments to provide financial support or obligations to perform services or other activities for ViaGen.

In September 2012, we sold our entire equity interest in ViaGen to Trans Ova Genetics, L.C. See Note 3 on Equity Method Investment in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further discussion of our investment in ViaGen and sale to Trans Ova Genetics, L.C.

Losses Recognized from Debt Extinguishment

In November 2011, we repaid the outstanding principal balance, including accrued interest, or Loan Balance, to the California Institute for Regenerative Medicine, or CIRM, representing our entire Loan Balance under our loan agreement with CIRM. In addition, we relinquished our right to future disbursements from CIRM under the loan agreement and gave notice of termination. With the repayment of the entire outstanding Loan Balance, we have no further amounts owed to CIRM. In connection with the early termination of the loan agreement, we recognized a debt extinguishment charge of $1.7 million for the unamortized debt discount associated with the loan. See Note 9 on Long-Term Debt in Notes to Consolidated Financial Statements of this annual report on Form 10-K for a further discussion of the loan from CIRM.

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Interest and Other Expense

Interest and other expense was $56,000, $233,000 and $237,000 for the years ended December 31, 2013, 2012 and 2011, respectively. The decrease in interest and other expense in 2013 compared to 2012 was primarily due to the recognition of accumulated foreign currency translation adjustments in connection with the dissolution of Geron Bio-Med Ltd. in August 2012 and reduced bank charges as a result of lower cash and investment balances in 2013. The decrease in interest and other expense in 2012 compared to 2011 was the net result of reduced bank charges due to lower cash and investment balances and the absence of interest expense for the loan from CIRM due to the full repayment of the loan in November 2011, partially offset by the recognition of accumulated foreign currency translation adjustments in connection with the dissolution of Geron Bio-Med Ltd. in August 2012.

Net Loss

Net loss was $38.4 million, $68.9 million and $96.9 million for the years ended December 31, 2013, 2012 and 2011, respectively. The decrease in net loss in 2013 compared 2012 was primarily due to reduced research and development expenses as a result of the wind-down of our imetelstat trials in metastatic breast cancer and advanced non-small cell lung cancer and our GRN1005 trials in patients with brain metastases, lower restructuring charges under the April 2013 restructuring plan as compared to the December 2012 restructuring plan and lower general and administrative expenses related to reduced legal costs associated with our patent portfolio and lower costs for consulting services. The decrease in net loss also reflected lower personnel related costs resulting from the recent restructurings as well as reduced costs for scientific supplies and services with the discontinuation of our discovery research programs. The decrease in net loss in 2012 compared to 2011 was primarily due to reduced research and development expenses as a result of discontinuing development of the stem cell programs, lower restructuring charges under the December 2012 restructuring plan as compared to the November 2011 restructuring plan, lower general and administrative expenses related to non-cash stock based compensation expense, the receipt of proceeds in December 2012 as consideration for the assignment of our telomerase activation technology to TA Sciences and the recognition of debt extinguishment charges in November 2011 for the early termination of the loan agreement with CIRM.

Liquidity and Capital Resources

Cash, restricted cash, cash equivalents and marketable securities at December 31, 2013 were $66.0 million, compared to $96.3 million at December 31, 2012 and $154.2 million at December 31, 2011. We have an investment policy to invest these funds in liquid, investment grade securities, such as interest-bearing money market funds, certificates of deposit, municipal securities, U.S. government and agency securities, corporate notes and commercial paper. Our investment portfolio does not contain securities with exposure to sub-prime mortgages, collateralized debt obligations, asset-backed securities or auction rate securities and, to date, we have not recognized any other-than-temporary impairment on our marketable securities or any significant changes in aggregate fair value that would impact our cash resources or liquidity. To date, we have not experienced lack of access to our invested cash and cash equivalents; however, access to our invested cash and cash equivalents may be impacted by adverse conditions in the financial and credit markets. The decrease in cash, restricted cash, cash equivalents and marketable securities in 2013 and 2012 was the result of cash being used for operations.

In February 2014, we completed an underwritten public offering of 25,875,000 shares of our common stock at a public offering price of $4.00 per share, resulting in net cash proceeds of approximately $96.7 million after deducting the underwriting discount and estimated offering expenses payable by us. In October 2012, we entered into an At-the-Market Issuance Sales Agreement, or sales agreement, with MLV & Co. LLC, or MLV, which provides that, upon the terms and subject to the conditions and limitations set forth in the sales agreement, we may elect to issue and sell shares of our common stock having an aggregate offering price of up to $50.0 million from time to time through MLV as our sales agent. We are not obligated to make any sales of common stock under the sales

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agreement. To date, we have not sold any common stock pursuant to the sales agreement and no sales under the sales agreement can be made during the 60-day lock-up period following the underwritten public offering of our common stock completed in February 2014.

We estimate that our existing capital resources, in combination with the net cash proceeds of approximately $96.7 million we received in February 2014 from our underwritten public offering, as well as amounts available to us under our equipment financing facility and future interest income will be sufficient to fund our current level of operations through at least the next 12 months. However, our future capital requirements will be substantial. Changes in our research and development plans or other changes affecting our operating expenses or cash balances may result in the unexpected expenditure of available resources. Factors that may require us to use our available capital resources sooner than we anticipate include:

- the accuracy of the assumptions underlying our estimates for our capital needs for 2014 and beyond;
- changes in our development plans for imetelstat, including changes which may result from the current or any other clinical holds on our IND or any other INDs for imetelstat;
- our ability to meaningfully reduce manufacturing costs of imetelstat;
- the magnitude and scope of our imetelstat research and development program, including the number of indications we intend to pursue;
- the progress made, if any, in our imetelstat research and development programs, including existing or potential future Geron-sponsored and investigator-sponsored clinical trials;
- our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing of imetelstat;
- the time and costs involved in obtaining regulatory clearances and approvals;
- expenses associated with the pending and potential additional related purported securities class action lawsuits, as well as any unforeseen litigation; and
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims.

In addition, changes in our business may occur that would consume available capital resources sooner than we expect. If our existing capital resources, equipment financing arrangement and future interest income are insufficient to meet future capital requirements, we will need to raise additional capital to fund our operations. We anticipate that we will need to seek additional funding through public or private equity financings, including pursuant to our sales agreement with MLV, equipment loans or other financing sources that may be available, including debt financings or collaborative and licensing arrangements. However, we may be unable to raise sufficient additional capital when we need it, on favorable terms or at all. Our ability to raise additional funds will be severely impaired if we are unable to obtain release of the current or any other clinical holds on our IND or any other INDs for imetelstat, or if imetelstat fails to show adequate safety or efficacy in existing or potential future Geron-sponsored and investigator-sponsored clinical trials, including the Myelofibrosis IST. If we are unable to obtain adequate funds on reasonable terms, we may be required to curtail operations significantly or obtain funds by entering into financing, supply or collaboration agreements on unattractive terms or we may be required to relinquish rights to technology or imetelstat or to grant licenses on terms that are unfavorable to us, or we may otherwise be required to delay, reduce the scope of, suspend or eliminate some or all of the elements of our imetelstat program, any of which could have a material adverse effect on our business.

Cash Flows from Operating Activities

Net cash used in operations was $36.7 million, $55.1 million and $62.4 million in 2013, 2012 and 2011, respectively. The decrease in net cash used in operations in 2013 compared to 2012 primarily reflects reduced operating expenses due to the wind-down of our imetelstat trials in metastatic breast

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cancer and advanced non-small cell lung cancer and our GRN1005 trials in patients with brain metastases and recent restructurings. The decrease in net cash used in operations in 2012 compared to 2011 was primarily the result of reduced operating expenses due to discontinuing further development of our stem cell programs in November 2011.

Cash Flows from Investing Activities

Net cash provided by investing activities was $21.1 million, $61.0 million and $32.1 million in 2013, 2012 and 2011, respectively. The decrease in cash flows from investing activities in 2013 compared to 2012 was primarily the result of lower proceeds from maturities of marketable securities relative to purchases of marketable securities during the respective periods. The increase in cash flows from investing activities in 2012 compared to 2011 was primarily the result of higher proceeds from maturities of marketable securities relative to purchases of marketable securities during the respective periods.

For the three years ended December 31, 2013, we have purchased approximately $1.5 million in property and equipment, none of which was financed through equipment financing arrangements. As of December 31, 2013, no payments were due under our equipment financing facility. As of December 31, 2013, we had approximately $500,000 available for borrowing under our equipment financing facility. If we are unable to renew the commitment, we will use our cash resources for capital expenditures.

Cash Flows from Financing Activities

Net cash provided by financing activities in 2013, 2012 and 2011 was $6.6 million, $150,000 and $386,000, respectively. Net cash provided by financing activities in 2013, 2012 and 2011 reflects proceeds from the issuance of common stock under our employee equity plans.

Significant Cash and Contractual Obligations

As of December 31, 2013, our contractual obligations for the next five years and thereafter were as follows:

	Payments Due by Period				
Contractual Obligations[1]	**Total**	**Less Than 1 Year**	**1 - 3 Years**	**4 - 5 Years**	**After 5 Years**
			(In thousands)		
Equipment lease	$ 31	$ 10	$ 21	$	$
Operating leases[2]	529	529			
Research funding and license fees[3]	570	257	133	90	90
Total contractual cash obligations	$ 1,130	$ 796	$ 154	$ 90	$ 90

(1) This table does not include payments under our severance plan if there were a change in control of Geron or severance payments to key employees in the event of an involuntary termination. In addition, this table does not include any royalty obligations under our license agreements as the timing and likelihood of such payments are not known.

(2) In February 2012, we entered into a lease agreement for our premises at 149 Commonwealth Drive. The term of the lease was set to expire in July 2014. In February 2014, we amended the lease agreement for our premises at 149 Commonwealth Drive to extend the lease term through January 2016. Our amended lease at 149 Commonwealth Drive includes an option to extend the lease for one additional period of 18 months. Operating lease obligations in the table above do not include payments due under the amended lease agreement for the extended lease term or assume the exercise by us of any right of termination, or option to extend, if any. See Note 17 on Subsequent Events in Notes to Consolidated Financial Statements of this annual report on Form 10-K for further information on the amended lease agreement.

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(3) Research funding is comprised of sponsored research commitments at various laboratories around the world. License fees are comprised of minimum annual license payments under our existing license agreements with several universities and companies for the right to use intellectual property related to technologies that we have in-licensed.

Off-Balance Sheet Arrangements

We have not engaged in any off-balance sheet arrangements, including the use of structured finance, special purpose entities or variable interest entities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The following discussion about our market risk disclosures contains forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. We are exposed to credit risk and interest rate risk. We do not use derivative financial instruments for speculative or trading purposes.

Credit Risk. We currently place our cash, restricted cash, cash equivalents and marketable securities with five financial institutions in the United States. Deposits with banks may exceed the amount of insurance provided on such deposits. While we monitor the cash balances in our operating accounts and adjust the cash balances as appropriate, these cash balances could be impacted if the underlying financial institutions fail or could be subject to other adverse conditions in the financial markets. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash equivalents and marketable securities. Cash equivalents and marketable securities currently consist of money market funds, U.S. government-sponsored enterprise securities, commercial paper and corporate notes. Our investment policy, approved by the audit committee of our board of directors, limits the amount we may invest in any one type of investment issuer, thereby reducing credit risk concentrations. We limit our credit and liquidity risks through our investment policy and through regular reviews of our portfolio against our policy. To date, we have not experienced any loss or lack of access to cash in our operating accounts or to our cash equivalents and marketable securities in our investment portfolio. The effect of a hypothetical decrease of 10% in the average yield earned on our cash equivalents and marketable securities would have resulted in an immaterial decrease in our interest income for the year ended December 31, 2013.

Interest Rate Risk. The primary objective of our investment activities is to manage our marketable securities portfolio to preserve principal and liquidity while maximizing the return on the investment portfolio through the full investment of available funds without significantly increasing risk. To achieve this objective, we invest in widely diversified investments consisting of both fixed rate and floating rate interest earning instruments, which both carry a degree of interest rate risk. Fixed rate securities may have their fair value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future interest income may fall short of expectations due to changes in market conditions and in interest rates or we may suffer losses in principal if forced to sell securities which may have declined in fair value due to changes in interest rates.

The fair value of our cash equivalents and marketable securities at December 31, 2013 was $62.5 million. These investments include $10.3 million of cash equivalents which are due in less than 90 days and $52.2 million of short-term investments which are due in less than one year. We primarily invest our marketable securities portfolio in securities with at least an investment grade rating to minimize interest rate and credit risk as well as to provide for an immediate source of funds. Although changes in interest rates may affect the fair value of the marketable securities portfolio and cause unrealized gains or losses, such gains or losses would not be realized unless the investments are sold. Due to the nature of our investments, which are primarily money market funds, U.S. government-sponsored enterprise securities, commercial paper and corporate notes, we have concluded that there is no material interest rate risk exposure and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio.

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ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following consolidated financial statements and the related notes thereto, of Geron Corporation and the Report of Independent Registered Public Accounting Firm, Ernst & Young LLP, are filed as a part of this annual report on Form 10-K.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Geron Corporation

We have audited the accompanying consolidated balance sheets of Geron Corporation as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Geron Corporation at December 31, 2013 and 2012, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Geron Corporation's internal control over financial reporting as of December 31, 2013, based on criteria established in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (1992 framework) and our report dated March 17, 2014 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Redwood City, California
March 17, 2014

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GERON CORPORATION

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2013	2012
	(In thousands, except share and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 12,990	$ 22,063
Restricted cash	795	794
Marketable securities	52,234	73,472
Interest and other receivables	564	752
Prepaid assets	474	1,336
Total current assets	67,057	98,417
Property and equipment, net	92	974
Deposits and other assets	195	410
	$ 67,344	$ 99,801
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,397	$ 3,429
Accrued compensation and benefits	3,946	5,216
Accrued restructuring charges	94	1,972
Accrued liabilities	1,783	3,480
Fair value of derivatives	367	51
Total current liabilities	7,587	14,148
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.001 par value; 3,000,000 shares authorized; no shares issued and outstanding at December 31, 2013 and 2012		
Common stock, $0.001 par value; 300,000,000 shares authorized; 130,677,949 and 130,242,695 shares issued and outstanding at December 31, 2013 and 2012, respectively	131	130
Additional paid-in capital	952,403	939,867
Accumulated deficit	(892,763)	(854,384)
Accumulated other comprehensive (loss) income	(14)	40
Total stockholders' equity	59,757	85,653
	$ 67,344	$ 99,801

See accompanying notes.

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GERON CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2013	2012	2011
	(In thousands, except share and per share data)		
Revenues from collaborative agreements	$	$	$ 300
License fees and royalties	1,283	2,709	2,138
Total revenues	1,283	2,709	2,438
Operating expenses:			
Research and development	23,155	51,368	69,316
Restructuring charges	1,462	2,702	5,449
General and administrative	15,624	20,397	23,789
Total operating expenses	40,241	74,467	98,554
Loss from operations	(38,958)	(71,758)	(96,116)
Unrealized (loss) gain on derivatives	(316)	13	643
Interest and other income	951	3,097	1,024
Losses recognized under equity method investment			(503)
Losses recognized from debt extinguishment			(1,664)
Interest and other expense	(56)	(233)	(237)
Net loss	$ (38,379)	$ (68,881)	$ (96,853)
Basic and diluted net loss per share	$ (0.30)	$ (0.54)	$ (0.78)
Shares used in computing basic and diluted net loss per share	128,380,800	126,941,024	124,506,763

See accompanying notes.

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GERON CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year Ended December 31,		
	2013	2012	2011
	(In thousands)		
Net loss	$ (38,379)	$ (68,881)	$ (96,853)
Other comprehensive income (loss):			
Net unrealized (loss) gain on available-for-sale securities	(54)	(38)	6
Foreign currency translation adjustments		16	(1)
Reclassification of accumulated foreign currency translation adjustments		153	
Other comprehensive (loss) income	(54)	131	5
Comprehensive loss	$ (38,433)	$ (68,750)	$ (96,848)

See accompanying notes.

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GERON CORPORATION

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
	(In thousands, except share data)					
Balances at December 31, 2010	122,616,729	$ 123	$ 881,358	$ (688,650)	$ (96)	$ 192,735
Net loss				(96,853)		(96,853)
Other comprehensive income					5	5
Issuance of common stock in connection with acquired in-process research technology	5,261,144	5	28,089			28,094
Stock-based compensation related to issuance of common stock and options in exchange for services	180,954		715			715
Issuance of common stock under equity plans, net of cancellations of non-vested restricted stock	3,031,121	3	3,260			3,263
Stock-based compensation for equity-based awards to employees and directors			15,249			15,249
Debt discount in connection with warrant issuances			1,715			1,715
401(k) contribution	353,200		1,680			1,680
Balances at December 31, 2011	131,443,148	131	932,066	(785,503)	(91)	146,603
Net loss				(68,881)		(68,881)
Other comprehensive income					131	131
Stock-based compensation related to issuance of common stock and options in exchange for services	170,298		135			135
Cancellations of non-vested restricted stock under equity plans, net of issuances of common stock	(2,592,375)	(2)	269			267
Stock-based compensation for equity-based awards to employees and directors			5,311			5,311
401(k) contribution	1,221,624	1	2,086			2,087
Balances at December 31, 2012	130,242,695	130	939,867	(854,384)	40	85,653
Net loss				(38,379)		(38,379)
Other comprehensive loss					(54)	(54)
Stock-based compensation related to issuance of common stock and options in exchange for services	66,853		252			252
Cancellations of non-vested restricted stock under equity plans, net of issuances of common stock	(388,056)		6,553			6,553
Stock-based compensation for equity-based awards to employees and directors			4,435			4,435
401(k) contribution	756,457	1	1,296			1,297
Balances at December 31, 2013	130,677,949	$ 131	$ 952,403	$ (892,763)	$ (14)	$ 59,757

See accompanying notes.

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GERON CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2013	2012	2011
	(In thousands)		
Cash flows from operating activities:			
Net loss	$ (38,379)	$ (68,881)	$ (96,853)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	320	830	1,580
Accretion and amortization on investments, net	1,322	2,184	4,422
Accretion of discount on long-term debt			51
Loss on debt extinguishment			1,664
(Gain) loss on sale/retirement of property and equipment, net	(831)	(142)	5
Loss on write-downs of property and equipment	200	271	874
Loss on sale of marketable securities			2
Issuance of common stock in connection with acquired in-process research technology			594
Stock-based compensation for services by non-employees	252	183	744
Stock-based compensation for employees and directors	4,435	5,311	15,249
Amortization related to 401(k) contributions	458	726	709
Loss on equity method investment			503
Unrealized loss (gain) on derivatives	316	(13)	(643)
Changes in assets and liabilities:			
Interest and other receivables	188	646	401
Prepaid assets	1,081	1,311	4,085
Deposits and other assets	(4)	112	(658)
Accounts payable	(2,032)	449	(482)
Accrued compensation and benefits	(431)	3,548	944
Accrued restructuring charges	(1,878)	(1,758)	3,730
Accrued liabilities	(1,697)	(92)	1,038
Deferred revenue			(350)
Translation adjustment		169	(1)
Net cash used in operating activities	(36,680)	(55,146)	(62,392)
Cash flows from investing activities:			
Restricted cash transfer	(1)	(1)	(1)
Purchases of property and equipment	(3)	(862)	(612)
Proceeds from sales of property and equipment	1,196	170	
Purchases of marketable securities	(88,977)	(79,369)	(144,890)
Proceeds from sales of marketable securities			809
Proceeds from maturities of marketable securities	108,839	141,016	176,832
Proceeds from sale of investment in licensees			1
Net cash provided by investing activities	21,054	60,954	32,139
Cash flows from financing activities:			
Proceeds from issuance of long-term debt			6,422
Repayment of long-term debt			(6,422)
Proceeds from issuance of common stock, net of issuance costs	6,553	150	386
Net cash provided by financing activities	6,553	150	386

Net (decrease) increase in cash and cash equivalents	(9,073)	5,958	(29,867)
Cash and cash equivalents, at beginning of year	22,063	16,105	45,972
Cash and cash equivalents, at end of year	$ 12,990	$ 22,063	$ 16,105
Supplemental disclosure of cash flow information:			
Cash paid for interest	$	$	$ 37

See accompanying notes.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Geron Corporation, or we or Geron, was incorporated in the State of Delaware on November 28, 1990. We are a clinical stage biopharmaceutical company developing a telomerase inhibitor, imetelstat, in hematologic myeloid malignancies. Principal activities to date have included obtaining financing, securing operating facilities and conducting research and development. We have no therapeutic products currently available for sale and do not expect to have any therapeutic products commercially available for sale for a period of years, if at all. These factors indicate that our ability to continue research and development activities is dependent upon the ability of our management to obtain additional financing as required.

Principles of Consolidation

The consolidated financial statements include the accounts of Geron and our former wholly-owned subsidiary, Geron Bio-Med Ltd. (Geron Bio-Med), a United Kingdom company. In March 2012, the board of directors and shareholders of Geron Bio-Med approved actions to commence a voluntary winding up of the company. The full wind up of Geron Bio-Med was completed in August 2012. Prior to 2013, we eliminated intercompany accounts and transactions and prepared the financial statements of Geron Bio-Med using the local currency as the functional currency. We translated the assets and liabilities of Geron Bio-Med at rates of exchange at the balance sheet date and translated income and expense items at average monthly rates of exchange. The resultant translation adjustments were included in accumulated other comprehensive income (loss), a separate component of stockholders' equity.

We have evaluated whether any significant transactions required consideration of the variable interest consolidation model and have concluded that we were not the primary beneficiary of any variable interest entity. See Note 3 on Equity Method Investment.

Net Loss Per Share

Basic earnings (loss) per share is calculated based on the weighted average number of shares of common stock outstanding during the period. Diluted earnings (loss) per share is calculated based on the weighted average number of shares of common stock and potential dilutive securities outstanding during the period. Potential dilutive securities primarily consist of outstanding stock options, restricted stock awards and warrants to purchase common stock and are determined using the treasury stock method at an average market price during the period.

Because we are in a net loss position, diluted loss per share excludes the effects of potential dilutive securities. Had we been in a net income position, diluted earnings per share would have included the shares used in the computation of basic net loss per share as well as an additional 532,120, 11,497 and 294,426 shares for 2013, 2012 and 2011, respectively, related to outstanding stock options, restricted stock awards and warrants (as determined using the treasury stock method at the estimated average market value).

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the amounts reported in

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

the financial statements and accompanying notes. On a regular basis, management evaluates these estimates and assumptions. Actual results could differ from those estimates.

Fair Value of Financial Instruments

Cash Equivalents and Marketable Securities

We consider all highly liquid investments with an original maturity of three months or less to be cash equivalents. We are subject to credit risk related to our cash equivalents and marketable securities. We place our cash and cash equivalents in money market funds, corporate notes and cash operating accounts. Our marketable securities include U.S. government-sponsored enterprise securities, commercial paper and corporate notes with original maturities ranging from four to 12 months.

We classify our marketable securities as available-for-sale. We record available-for-sale securities at fair value with unrealized gains and losses reported in accumulated other comprehensive income (loss) in stockholders' equity. Realized gains and losses are included in interest and other income and are derived using the specific identification method for determining the cost of securities sold and have been insignificant to date. Dividend and interest income are recognized when earned and included in interest and other income in our consolidated statements of operations. We recognize a charge when the declines in the fair values below the amortized cost basis of our available-for-sale securities are judged to be other-than-temporary. We consider various factors in determining whether to recognize an other-than-temporary charge, including whether we intend to sell the security or whether it is more likely than not that we would be required to sell the security. Declines in market value associated with credit losses judged as other-than-temporary result in a charge to interest and other income. Other-than-temporary charges not related to credit losses are included in accumulated other comprehensive income (loss) in stockholders' equity. No other-than-temporary impairment charges were recorded for our available-for-sale securities for the years ended December 31, 2013, 2012 and 2011. See Note 2 on Fair Value Measurements.

Non-Marketable Equity Investments

Investments in non-marketable nonpublic companies, in which we own less than 20% of the outstanding voting stock and do not otherwise have the ability to exert significant influence over the investees, are carried at cost, as adjusted for other-than-temporary impairments. We apply the equity method of accounting for investments in non-marketable nonpublic companies in which we own more than 20% of the outstanding voting stock or otherwise have the ability to exert significant influence over the investees. Under this method, we increase (decrease) the carrying value of our investment by a proportionate share of the investee's earnings (losses). If losses exceed the carrying value of the investment, losses are then applied against any advances to the investee, including any commitment to provide financial support, until those amounts are reduced to zero. Commitments to provide financial support include formal guarantees, implicit arrangements, reputational expectations, intercompany relationships or a consistent past history of providing financial support. The equity method is then suspended until the investee has earnings. Any proportionate share of investee earnings is first applied to the share of accumulated losses not recognized during the period the equity method was suspended. We recognize previously suspended losses to the extent additional investment is determined to represent the funding of prior losses. See Note 3 on Equity Method Investment and Note 8 on Divestiture of Stem Cell Assets.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Fair Value of Derivatives

For non-employee options classified as assets or liabilities, the fair value of these instruments is recorded on the consolidated balance sheet at inception and adjusted to fair value at each financial reporting date. The change in fair value of the non-employee options is recorded in the consolidated statements of operations as unrealized gain (loss) on derivatives. Fair value of non-employee options is estimated using the Black Scholes option-pricing model. The non-employee options continue to be reported as an asset or liability until such time as the instruments are exercised or expire or are otherwise modified to remove the provisions which require this treatment, at which time these instruments are marked to fair value and reclassified from assets or liabilities to stockholders' equity. For non-employee options classified as permanent equity, the fair value of the non-employee options is recorded in stockholders' equity as of their respective vesting dates and no further adjustments are made. See Note 2 on Fair Value Measurements.

Nonmonetary Transactions

We account for nonmonetary transactions based on the fair values of the assets (or services) involved. The cost of a nonmonetary asset acquired in exchange for another nonmonetary asset is the fair value of the asset surrendered to obtain it with a gain or loss recognized on the exchange. We use the fair value of the asset received to measure the cost if it is more clearly evident than the fair value of the asset surrendered. If the fair value of neither the assets received nor the assets relinquished is determinable within reasonable limits, we use the recorded amount (or carrying value) of the nonmonetary assets relinquished to account for the exchange. Similarly, we use carrying value for an exchange of controlled assets that do not meet the definition of a business for a non-controlling equity interest in a non-marketable nonpublic company with no gain or loss recognized for the exchange. See Note 8 on Divestiture of Stem Cell Assets.

Revenue Recognition

We have entered into several license agreements with various oncology, diagnostics, research tools, agricultural and biologics production companies. With certain of these agreements, we receive non-refundable license payments in cash or equity securities, option payments in cash or equity securities, cost reimbursements, milestone payments, royalties on future sales of products, or any combination of these items. Upfront non-refundable signing, license or non-exclusive option fees are recognized as revenue when rights to use the intellectual property related to the license have been delivered and over the term of the agreement if we have continuing performance obligations. We recognize revenue under collaborative agreements as the related research and development costs for services are rendered. Milestone payments, which are subject to substantive contingencies, are recognized as revenue upon completion of specified milestones, representing the culmination of the earnings process, according to contract terms. Royalties are generally recognized upon receipt of the related royalty payment. Deferred revenue represents the portion of research and license payments received which has not been earned. When payments are received in equity securities, we do not recognize any revenue unless such securities are determined to be realizable in cash.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Restricted Cash

Restricted cash consists of funds maintained in separate certificate of deposit accounts for specified purposes. The components of restricted cash were as follows:

	December 31,	
	2013	2012
	(In thousands)	
Certificate of deposit for unused equipment line of credit	$ 530	$ 530
Certificate of deposit for credit card purchases	265	264
	$ 795	$ 794

Research and Development Expenses

Research and development expenses consist of expenses incurred in identifying, developing and testing product candidates resulting from our independent efforts as well as efforts associated with collaborations. These expenses include, but are not limited to, acquired in-process research and development deemed to have no alternative future use, payroll and personnel expense, lab supplies, preclinical studies, clinical trials, including support for investigator-sponsored clinical trials, raw materials to manufacture clinical trial drugs, manufacturing costs for research and clinical trial materials, sponsored research at other labs, consulting, costs to maintain technology licenses and research-related overhead. Research and development costs are expensed as incurred, including payments made under our license agreements.

Clinical Trial Costs

A significant component of our research and development expenses is clinical trial costs. Substantial portions of our preclinical studies and all of our clinical trials have been performed by third-party contract research organizations, or CROs, and other vendors. We accrue expenses for preclinical studies performed by our vendors based on certain estimates over the term of the service period and adjust our estimates as required. We accrue expenses for clinical trial activities performed by CROs based upon the estimated amount of work completed on each study. For clinical trial expenses, the significant factors used in estimating accruals include the number of patients enrolled, the number of active clinical sites and the duration for which the patients will be enrolled in the study. Pass through costs from CROs include, but are not limited to, regulatory expenses, investigator fees, lab fees, travel costs and other miscellaneous costs, including shipping and printing fees. We accrue pass through costs based on estimates of the amount of work completed for the clinical trial. We monitor patient enrollment levels and related activities to the extent possible through internal reviews, review of contractual terms and correspondence with CROs. We base our estimates on the best information available at the time. However, additional information may become available to us which would allow us to make a more accurate estimate in future periods. In this event, we may be required to record adjustments to research and development expenses in future periods when the actual level of activity becomes more certain.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Depreciation and Amortization

We record property and equipment at cost and calculate depreciation using the straight-line method over the estimated useful lives of the assets, generally four years. Leasehold improvements are amortized over the shorter of the estimated useful life or remaining term of the lease.

Stock-Based Compensation

We maintain various stock incentive plans under which stock options and restricted stock awards are granted to employees, directors and consultants. We also have an employee stock purchase plan for all eligible employees. We recognize stock-based compensation expense on a straight-line basis over the requisite service period, which is generally the vesting period. For additional information, see Note 11 on Stockholders' Equity.

Stock Options and Employee Stock Purchase Plan

We use the Black Scholes option-pricing model to estimate the grant-date fair value of our stock options and employee stock plan purchases. The determination of fair value for these stock-based awards on the date of grant using the Black Scholes option-pricing model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include, but are not limited to, the period of time that the awards are expected to be outstanding, which is based on historical exercise and post-vesting cancellation data and our projected stock price volatility over the period of time the awards are expected to be outstanding, which is based on historical volatilities of our stock. We grant service-based stock options under our equity plans to employees, directors and consultants. The vesting period for employee options is generally four years.

Restricted Stock Awards

We grant restricted stock awards to employees and directors with three types of vesting schedules: (i) service-based, (ii) performance-based or (iii) market-based. Service-based restricted stock awards generally vest annually over four years. Performance-based restricted stock awards vest upon achievement of discrete strategic corporate goals within a specified performance period, generally three years. Market-based restricted stock awards vest only upon achievement of certain market price thresholds of our common stock within a specified performance period, generally three years.

The fair value for service-based restricted stock awards is determined using the fair value of our common stock on the date of grant. The fair value is amortized as stock-based compensation expense over the requisite service period of the award, which is generally the vesting period, on a straight-line basis and is reduced for estimated forfeitures, as applicable.

The fair value for performance-based restricted stock awards is determined using the fair value of our common stock on the date of grant. Stock-based compensation expense for awards with vesting based on performance conditions is recognized over the period from the date the performance condition is determined to be probable of occurring through the date the applicable condition is expected to be met and is reduced for estimated forfeitures, as applicable. If the performance condition is not considered probable of being achieved, no stock-based compensation expense is recognized until such time as the performance condition is considered probable of being met, if at all. If that assessment of the probability of the performance condition being met changes, the impact of the change in

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

estimate would be recognized in the period of the change. If the requisite service has been met prior to the change in estimate, the effect of the change in estimate would be immediately recognized.

The fair value for market-based restricted stock awards is determined using a lattice valuation model with a Monte Carlo simulation. The model takes into consideration the historical volatility of our stock and the risk-free interest rate at the date of grant. In addition, the model is used to estimate the derived service period for the awards. The derived service period is the estimated period of time that would be required to satisfy the market condition, assuming the market condition will be satisfied. Stock-based compensation expense is recognized over the derived service period for the awards using the straight-line method and is reduced for estimated forfeitures, as applicable, but is accelerated if the market condition is achieved earlier than estimated.

Non-Employee Stock-Based Awards

For our non-employee stock-based awards, the measurement date on which the fair value of the stock-based award is calculated is equal to the earlier of (i) the date at which a commitment for performance by the counterparty to earn the equity instrument is reached or (ii) the date at which the counterparty's performance is complete. We recognize stock-based compensation expense for the fair value of the vested portion of non-employee awards in our consolidated statements of operations.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) includes certain changes in stockholders' equity which are excluded from net loss. The components of accumulated other comprehensive income (loss) were as follows:

	December 31,	
	2013	2012
	(In thousands)	
Unrealized (loss) gain on available-for-sale securities	$ (14)	$ 40

Income Taxes

We maintain deferred tax assets and liabilities that reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and are subject to tests of recoverability. Our deferred tax assets include net operating loss carryforwards, research credits and capitalized research and development. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Our net deferred tax asset has been fully offset by a valuation allowance because of our history of losses. Any potential accrued interest and penalties related to unrecognized tax benefits within operations would be recorded as income tax expense.

Concentrations of Customers and Suppliers

The majority of our revenues was earned in the United States. Two customers accounted for approximately 42%, 59% and 51% of our 2013, 2012 and 2011 revenues, respectively.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

We contract third-party manufacturers to produce GMP-grade drugs for preclinical and clinical studies. We also contract for starting materials to supply those manufacturers and us. Certain development and clinical activities may be delayed if we are unable to obtain sufficient quantities of starting materials or GMP-grade drugs from our third-party suppliers or other third-party sources.

2. FAIR VALUE MEASUREMENTS

We categorize financial instruments recorded at fair value on our consolidated balance sheets based upon the level of judgment associated with inputs used to measure their fair value. The categories are as follows:

Level 1	Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
Level 2	Inputs (other than quoted market prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.
Level 3	Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Below is a description of the valuation methodologies used for financial instruments measured at fair value on our consolidated balance sheets, including the category for such financial instruments.

Cash Equivalents and Marketable Securities Available-for-Sale

Certificates of deposit and money market funds are categorized as Level 1 within the fair value hierarchy as their fair values are based on quoted prices available in active markets. U.S. Treasury securities, U.S. government-sponsored enterprise securities, municipal securities, corporate notes and commercial paper are categorized as Level 2 within the fair value hierarchy as their fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flows.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. FAIR VALUE MEASUREMENTS (Continued)

Cash equivalents, restricted cash and marketable securities by security type at December 31, 2013 were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
		(In thousands)		
Included in cash and cash equivalents:				
Money market funds	$ 8,079	$	$	$ 8,079
Corporate notes	2,206			2,206
	$ 10,285	$	$	$ 10,285
Restricted cash:				
Certificates of deposit	$ 795	$	$	$ 795
Marketable securities (due in less than 1 year):				
Government-sponsored enterprise securities	$ 7,369	$ 1	$ (1)	$ 7,369
Commercial paper	5,496	3		5,499
Corporate notes	39,383	1	(18)	39,366
	$ 52,248	$ 5	$ (19)	$ 52,234

Cash equivalents, restricted cash and marketable securities by security type at December 31, 2012 were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
		(In thousands)		
Included in cash and cash equivalents:				
Money market funds	$ 15,660	$	$	$ 15,660
Corporate notes	3,136		(1)	3,135
	$ 18,796	$	$ (1)	$ 18,795

Restricted cash:				
Certificates of deposit	$ 794	$	$	$ 794
Marketable securities (due in less than 1 year):				
Government-sponsored enterprise securities	$ 8,618	$ 5	$	$ 8,623
Commercial paper	20,623	21		20,644
Corporate notes	44,190	22	(7)	44,205
	$ 73,431	$ 48	$ (7)	$ 73,472

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. FAIR VALUE MEASUREMENTS (Continued)

Cash equivalents and marketable securities with unrealized losses at December 31, 2013 and 2012 were as follows:

	Less Than 12 Months		12 Months or Greater		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
	(In thousands)					
As of December 31, 2013:						
Government-sponsored enterprise securities (due in less than 1 year)	$ 3,947	$ (1)	$	$	$ 3,947	$ (1)
Corporate notes (due in less than 1 year)	37,060	(18)			37,060	(18)
	$ 41,007	$ (19)	$	$	$ 41,007	$ (19)
As of December 31, 2012:						
Corporate notes (due in less than 1 year)	$ 27,045	$ (8)	$	$	$ 27,045	$ (8)

The gross unrealized losses related to government-sponsored enterprise securities and corporate notes as of December 31, 2013 and 2012 were due to changes in interest rates. We determined that the gross unrealized losses on our marketable securities as of December 31, 2013 and 2012 were temporary in nature. We review our investments quarterly to identify and evaluate whether any investments have indications of possible impairment. Factors considered in determining whether a loss is temporary include the length of time and extent to which the fair value has been less than the cost basis and whether we intend to sell the security or whether it is more likely than not that we would be required to sell the security. We currently do not intend to sell these securities before recovery of their amortized cost basis.

Derivatives

Non-employee options are normally traded less actively, have trade activity that is one way, and/or traded in less-developed markets and are therefore valued based upon models with significant unobservable market parameters, resulting in Level 3 categorization.

Options held by non-employees whose performance obligations are complete are classified as derivative liabilities on our consolidated balance sheets. These options are marked to fair value at each reporting period, and upon the exercise of these options, the instruments are marked to fair value and reclassified from derivative liabilities to stockholders' equity. There were no reclassifications from current liabilities to stockholders' equity for non-employee option exercises in 2013 and 2012.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. FAIR VALUE MEASUREMENTS (Continued)

As of December 31, 2013 and 2012, the following non-employee options to purchase common stock were considered derivatives and classified as current liabilities:

Issuance Date	Exercise Price	Number of Shares at December 31, 2013	Number of Shares at December 31, 2012	Exercisable Date	Expiration Date	Fair Value at December 31, 2013	Fair Value at December 31, 2012
						(In thousands)	
March 2005	$ 6.39	284,600	284,600	January 2007	March 2015	$ 367	$ 51

The fair value of derivatives has been calculated at each reporting date using the Black Scholes option-pricing model with the following assumptions:

	December 31, 2013	December 31, 2012
Dividend yield	None	None
Expected volatility	0.844	0.828
Risk-free interest rate	0.13%	0.25%
Expected term	1 yr	2 yrs

Dividend yield is based on historical cash dividend payments. The expected volatility is based on historical volatilities of our stock since traded options on Geron stock do not correspond to derivatives' terms and trading volume of Geron options is limited. The risk-free interest rate is based on the U.S. Zero Coupon Treasury Strip Yields for the expected term in effect on the reporting date. The expected term of derivatives is equal to the remaining contractual term of the instruments.

Fair Value on a Recurring Basis

The following table presents information about our financial instruments that are measured at fair value on a recurring basis as of December 31, 2013 and indicates the fair value category assigned.

	Fair Value Measurements at Reporting Date Using			
(In thousands)	Quoted Prices in Active Markets for Identical Assets/ Liabilities Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	Total
Assets				
Money market funds[1]	$ 8,079	$	$	$ 8,079
Government-sponsored enterprise securities[2]		7,369		7,369
Commercial paper[2]		5,499		5,499
Corporate notes[1][2]		41,572		41,572
Total	$ 8,079	$ 54,440	$	$ 62,519

Liabilities				
Derivatives[3]	$	$	$ 367	$ 367

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. FAIR VALUE MEASUREMENTS (Continued)

The following table presents information about our financial instruments that are measured at fair value on a recurring basis as of December 31, 2012 and indicates the fair value category assigned.

	Fair Value Measurements at Reporting Date Using			
(In thousands)	Quoted Prices in Active Markets for Identical Assets/ Liabilities Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	Total
Assets				
Money market funds[1]	$ 15,660	$	$	$ 15,660
Government-sponsored enterprise securities[2]		8,623		8,623
Commercial paper[2]		20,644		20,644
Corporate notes[1][2]		47,340		47,340
Total	$ 15,660	$ 76,607	$	$ 92,267
Liabilities				
Derivatives[3]	$	$	$ 51	$ 51

(1) Included in cash and cash equivalents on our consolidated balance sheets.

(2) Included in current marketable securities on our consolidated balance sheets.

(3) Included in fair value of derivatives on our consolidated balance sheets.

Changes in Level 3 Recurring Fair Value Measurements

The table below includes a rollforward of the balance sheet amounts for the year ended December 31, 2013, including the change in fair value, for financial instruments in the Level 3 category. When a determination is made to classify a financial instrument within Level 3, the determination is based upon the significance of the unobservable parameters to the overall fair value measurement. However, Level 3 financial instruments typically include, in addition to the unobservable components, observable components (that is, components that are actively quoted and can be validated to external sources). Accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the methodology.

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)

	Year Ended December 31, 2013					
(In thousands)	Fair Value at December 31, 2012	Total Unrealized Loss Included in Earnings[1]	Purchases, Sales, Issuances, Settlements	Transfers In and/or Out of Level 3	Fair Value at December 31, 2013	Change in Unrealized Loss Related to Financial Instruments Held at December 31, 2013[1]
Derivative liabilities	$ 51	$ 316	$	$	$ 367	$ 316

(1) Reported as unrealized loss on derivatives in our consolidated statements of operations.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. FAIR VALUE MEASUREMENTS (Continued)

Credit Risk

We currently place our cash, restricted cash, cash equivalents and marketable securities with five financial institutions in the United States. Generally, these deposits may be redeemed upon demand and therefore, bear minimal risk. Deposits with banks may exceed the amount of insurance provided on such deposits. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash equivalents and marketable securities. Cash equivalents and marketable securities currently consist of money market funds, U.S. government-sponsored enterprise securities, commercial paper and corporate notes. Our investment policy, approved by the audit committee of our board of directors, limits the amount we may invest in any one type of investment issuer, thereby reducing credit risk concentrations.

3. EQUITY METHOD INVESTMENT

We owned 40% of ViaGen, Inc., or ViaGen, a licensee with in-house breeding services and expertise in advanced reproductive technologies for animal cloning. In accordance with the equity method of accounting, we recognized losses of $503,000 for our proportionate share of ViaGen's operating losses for the year ended December 31, 2011, which has been included in losses recognized under equity method investment in our consolidated statements of operations. No comparable amounts were recognized for the years ended December 31, 2013 and 2012 because we suspended the equity method of accounting in June 2011 since our proportionate share of net losses exceeded the value of our investment and we had no commitments to provide financial support or obligations to perform services or other activities for ViaGen. Since we did not hold the majority of the equity and debt of ViaGen and did not maintain controlling financial interest over the company, including the power to direct the activities that most significantly impacted ViaGen's economic performance, we concluded that we were not the primary beneficiary of ViaGen and did not include ViaGen's financial information with our consolidated results.

In September 2012, we cancelled our outstanding $1,500,000 loan to ViaGen and sold our entire equity interest in ViaGen to Trans Ova Genetics, L.C., or Trans Ova, in exchange for potential payments aggregating up to $2,400,000 upon reaching certain commercial milestones. We are also eligible to receive 40% of potential proceeds upon the sale by Trans Ova of a non-marketable equity investment held by ViaGen. These potential payments are subject to substantive contingencies and as such, we will recognize a gain only upon achievement of the milestones or sale, as applicable. Since we had no carrying value for our investment in ViaGen at the time of sale to Trans Ova and future payments from Trans Ova are subject to substantive contingencies, we did not recognize any loss or gain in connection with the sale of our equity interest in ViaGen.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. PROPERTY AND EQUIPMENT

Property and equipment, stated at cost, is comprised of the following:

	December 31,	
	2013	2012
	(In thousands)	
Furniture and computer equipment	$ 1,092	$ 2,816
Lab equipment	118	7,731
Leasehold improvements	74	2,904
	1,284	13,451
Less accumulated depreciation and amortization	(1,192)	(12,477)
	$ 92	$ 974

5. EQUIPMENT LINE

In 2009, we renewed our equipment financing facility and had approximately $500,000 available for borrowing as of December 31, 2013 and 2012. This facility is secured by a certificate of deposit. Any outstanding principal balance bears a fixed interest rate equal to one and one-half percentage points above the Prime Rate. No amounts were due under this facility as of December 31, 2013 and 2012.

6. ACCRUED LIABILITIES

Accrued liabilities consisted of the following:

	December 31,	
	2013	2012
	(In thousands)	
Costs for sponsored research and license agreements	$	$ 266
Service provider obligations	840	290
Clinical trial costs	326	1,687
Other	617	1,237
	$ 1,783	$ 3,480

7. RESTRUCTURINGS

April 2013 Restructuring

On April 25, 2013, we announced the decision to discontinue our discovery research programs and companion diagnostics program based on telomere length and close our research laboratory facility located at 200 Constitution Drive, Menlo Park, California. With this decision, a total of 20 positions were eliminated. In connection with this restructuring, we incurred aggregate restructuring charges of $1,370,000 for the year ended December 31, 2013, of which $624,000 related to one-time termination benefits, including $28,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of December 2013 for certain stock options previously granted to terminated employees, $200,000 related to write-downs of excess equipment and leasehold improvements and $546,000 related to costs associated with the closure of our research laboratory facility. In connection with the decision to close our research laboratory facility, we entered

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. RESTRUCTURINGS (Continued)

into an amendment to the lease agreement for the 200 Constitution Drive facility under which the lease terminated effective December 31, 2013. As consideration for the early termination of the lease, we paid the landlord the remaining rents due under the original term of the lease as well as certain facility maintenance costs, all of which have been included in restructuring charges. We expect the restructuring will result in aggregate cash expenditures of approximately $1,087,000 after adjustments and non-cash credits, of which $993,000 has been paid as of December 31, 2013 and related to one-time termination benefits and facility-related charges. As of December 31, 2013, we have received proceeds of $1,080,000 from the sale of excess laboratory equipment in connection with the closure of our research laboratory facility. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

December 2012 Restructuring

On December 3, 2012, we announced the decision to discontinue development of GRN1005. With this decision, a total of 43 positions were eliminated. Of those, ten employees continued to provide services through various dates in the first half of 2013. In connection with this restructuring, we incurred aggregate restructuring charges of $2,794,000, of which $2,702,000 was recognized for the year ended December 31, 2012 and $92,000 was recognized for the year ended December 31, 2013. The aggregate restructuring charges consisted of $2,523,000 related to one-time termination benefits, including $107,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of December 2013 for certain stock options previously granted to terminated employees, and $271,000 related to write-downs of GRN1005 manufacturing equipment. The restructuring resulted in aggregate cash expenditures of $2,271,000 after adjustments and non-cash credits. All actions associated with this restructuring were completed in 2013, and we do not anticipate incurring any further charges in connection with this restructuring.

November 2011 Restructuring

On November 14, 2011, we announced the decision to discontinue further development of our stem cell programs. With this decision, a total of 66 positions were eliminated. Of those, 14 employees continued to provide services through various dates in the first half of 2012. In connection with this restructuring, we incurred aggregate restructuring charges of approximately $5,449,000 for the year ended December 31, 2011, of which $4,575,000 related to one-time termination benefits, including $174,000 of non-cash stock-based compensation expense relating to the extension of the post-termination exercise period through the end of June 2013 and December 2013 for certain stock options previously granted to terminated employees, and $874,000 related to write-downs of excess lab equipment and leasehold improvements and other charges. The restructuring resulted in aggregate cash expenditures of $4,165,000 after adjustments and non-cash credits. All actions associated with this restructuring were completed in 2012, and we do not anticipate incurring any further charges in connection with this restructuring.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. RESTRUCTURINGS (Continued)

The components relating to the April 2013, December 2012 and November 2011 restructurings, including the outstanding restructuring liability which is included in accrued restructuring charges on our consolidated balance sheet as of December 31, 2013, are summarized in the following table:

(In thousands)	Employee Severance and Other Benefits	Asset Write Downs	Facility Related Charges	Total
Beginning accrual balance as of December 31, 2012	$ 1,972	$	$	$ 1,972
Restructuring charges	716	200	546	1,462
Cash payments	(2,438)		(473)	(2,911)
Adjustments or non-cash credits, including stock-based compensation expense	(229)	(200)		(429)
Ending accrual balance as of December 31, 2013	$ 21	$	$ 73	$ 94

8. DIVESTITURE OF STEM CELL ASSETS

On October 1, 2013, we closed the transaction to divest our human embryonic stem cell assets and our autologous cellular immunotherapy program pursuant to the terms of the previously disclosed asset contribution agreement, or the Contribution Agreement, that we entered into in January 2013 with BioTime, Inc., or BioTime, and BioTime's wholly owned subsidiary, Asterias Biotherapeutics, Inc., or Asterias (formerly known as BioTime Acquisition Corporation).

Under the terms of the Contribution Agreement, on October 1, 2013, we contributed to Asterias our human embryonic stem cell assets, including intellectual property and certain licenses, human embryonic stem cell lines and other assets related to our discontinued human embryonic stem cell programs, including our Phase I clinical trial of oligodendrocyte progenitor cells, or GRNOPC1, in patients with acute spinal cord injury, as well as our autologous cellular immunotherapy program, including data from the Phase I/II clinical trial of the autologous cellular immunotherapy in patients with acute myelogenous leukemia. On October 1, 2013, Asterias assumed all post-closing liabilities with respect to all of the assets contributed by us, including any liabilities related to the GRNOPC1 and autologous cellular immunotherapy clinical trials. Additionally, Asterias was substituted for us as a party in an appeal by us of two rulings in favor of ViaCyte, Inc. by the United States Patent and Trademark Office's Board of Patent Appeals and Interferences, filed by us in the United States District Court for the Northern District of California in September 2012, or the ViaCyte Appeal, and Asterias assumed all liabilities arising after October 1, 2013 with respect to the ViaCyte Appeal.

In accordance with the terms of the Contribution Agreement, on October 1, 2013 we received 6,537,779 shares of Asterias Series A common stock representing 21.4% of Asterias' outstanding common stock as a class as of that date. We are also entitled to receive royalties from Asterias on the sale of products that are commercialized, if any, in reliance upon the patents we contributed to Asterias. Under the terms of the Contribution Agreement and subject to applicable law, following a record date to be declared by our board of directors, we are contractually obligated to distribute all of the shares of Asterias Series A common stock to our stockholders on a pro rata basis, other than with respect to fractional shares and shares that would otherwise be distributed to Geron stockholders residing in certain excluded jurisdictions, which shares, as required by the Contribution Agreement, will be sold with the net cash proceeds therefrom distributed ratably to the stockholders who would

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. DIVESTITURE OF STEM CELL ASSETS (Continued)

otherwise be entitled to receive such shares. We refer to the anticipated distribution by us of the Asterias Series A common stock as the Series A Distribution.

On October 1, 2013, BioTime contributed to Asterias 8,902,077 shares of BioTime common stock, five-year warrants to purchase 8,000,000 additional shares of BioTime common stock at an exercise price of $5.00 per share, or the BioTime Warrants, minority stakes in two of BioTime's subsidiaries and rights to use certain human embryonic stem cell lines. In addition, BioTime had previously loaned Asterias $5,000,000 in cash and the principal amount of this debt was cancelled as part of the closing of the Contribution Agreement. In consideration of BioTime's contributions, on October 1, 2013 Asterias issued to BioTime 21,773,340 shares of Asterias Series B common stock representing 71.6% of Asterias' outstanding common stock as a class as of that date, and three-year warrants to purchase 3,150,000 additional shares of Asterias Series B common stock at an exercise price of $5.00 per share. Upon completion of the Series A Distribution, Asterias is contractually obligated under the Contribution Agreement to distribute the BioTime Warrants on a pro rata basis to the holders of Asterias Series A common stock.

We accounted for the divestiture of the stem cell assets as a nonmonetary transaction since we transferred intangible assets in exchange for a non-controlling interest in Asterias. The stem cell assets we contributed consisted primarily of intellectual property and know-how and did not meet the definition of a business for accounting purposes. A business consists of three elements: inputs, processes and outputs. To be considered a business, only inputs and processes are required, which together form an integrated set of activities used to create outputs. Since we did not contribute any processes, such as operational processes or an organized workforce with the skills and experience to provide the necessary processes capable of being applied to inputs to create outputs, we determined the stem cell assets only represent inputs and are not considered an integrated set of activities. Due to the significant research and development necessary to realize the commercial potential of the stem cell assets, we expensed all research and development costs associated with the stem cell assets as incurred and therefore, there was no recorded amount, or carrying value, for the stem cell assets on our consolidated balance sheets. Since the divestiture of the stem cell assets represented the transfer of nonfinancial assets that do not meet the definition of a business in exchange for a non-controlling equity interest in Asterias, consistent with our accounting policy for such transactions, we have accounted for the transaction using the carrying amount, or book value, of the assets surrendered with no gain or loss recognized. Because the stem cell assets had a carrying amount of zero, we applied a carrying amount of zero to the Asterias Series A common stock received in the divestiture.

We account for the Asterias Series A common stock using the equity method. Under this method, we increase (decrease) the carrying value of the investment by our proportionate share of Asterias' earnings (losses). If our proportionate share of losses exceeds the carrying value of the investment, losses are then applied against any advances, including any commitment to provide financial support, until those amounts are reduced to zero. Asterias incurred net losses from October 1, 2013 through December 31, 2013. Since our investment in Asterias had an initial carrying amount of zero upon the closing of the Contribution Agreement and we have no commitments to provide financial support or obligations to perform services or other activities for Asterias, we suspended the equity method of accounting on October 1, 2013.

As of December 31, 2013, our board of directors had not set a record date for the Series A Distribution because we had not received any notification from BioTime and Asterias that they had

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. DIVESTITURE OF STEM CELL ASSETS (Continued)

met certain securities registration or qualification requirements as required under the Contribution Agreement, including notice that the registration statement that Asterias filed with the Securities and Exchange Commission, or SEC, covering the Series A Distribution was effective and otherwise available to effect the Series A Distribution. Therefore, as of December 31, 2013, we continued to hold the Asterias Series A common stock received in the divestiture. The anticipated Series A Distribution represents a pro-rata distribution of shares of an equity method investment that is a business, which will be accounted for at its carrying amount. Because the carrying amount of the Asterias Series A common stock was zero as of December 31, 2013, the liability relating to our contractual obligation to distribute the Series A common stock was zero as of December 31, 2013.

9. LONG-TERM DEBT

Effective August 1, 2011, we entered into a loan agreement with the California Institute for Regenerative Medicine, or CIRM, solely to support development of GRNOPC1 for the treatment of acute spinal cord injury. In 2011 we received an aggregate total of $6,422,000 in disbursements under the loan agreement with CIRM. In connection with each disbursement, we issued warrants to CIRM to purchase shares of our common stock as specified in the loan agreement. On November 14, 2011, in connection with our decision to discontinue further development of our stem cell programs, we repaid $6,459,000 to CIRM, representing the entire amount of the outstanding principal balance under the loan agreement with CIRM, including accrued interest of $37,000. With the repayment of the entire outstanding balance to CIRM, we have no further amounts owed to CIRM.

The carrying value of the loan from CIRM was determined by allocating the proceeds between the fair value of the debt and the warrants issued to CIRM using the relative fair value method. The discount resulting from the allocation of proceeds between the fair values of the debt and warrants was being amortized to interest expense and accreted to the principal face value of the debt using the effective interest rate method. In 2011, we recognized $88,000 of interest expense related to the CIRM loan, which reflected amortized debt discount of $51,000 and accrued interest of $37,000. With full repayment of the CIRM loan in November 2011, we recognized $1,664,000 as a loss from debt extinguishment in our consolidated statements of operations for the remaining unamortized debt discount on the loan.

10. COMMITMENTS AND CONTINGENCIES

Operating Lease Commitment

In February 2012, we entered into a lease agreement for our premises at 149 Commonwealth Drive under which the term of the lease was set to expire in July 2014. As of December 31, 2013, future minimum payments under our operating lease for our premises at 149 Commonwealth Drive were approximately $529,000. In February 2014, we amended the lease agreement for our premises at 149 Commonwealth Drive to extend the lease term through January 2016. See Note 17 on Subsequent Events for further information on the amended lease agreement.

In June 2012, we amended the lease agreement for the premises at 200 Constitution Drive to extend the term of the lease through July 2014. In connection with the decision in April 2013 to close our research laboratory facility, we entered into an amendment to the lease agreement for the 200 Constitution Drive facility under which the lease terminated effective December 31, 2013.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. COMMITMENTS AND CONTINGENCIES (Continued)

Rent expense under our operating leases was approximately $1,422,000, $1,474,000 and $1,311,000 for the years ended December 31, 2013, 2012 and 2011, respectively.

Severance Plan

We have an Amended and Restated Severance Plan, or Severance Plan, that applies to all employees that are not subject to performance improvement plans, and most significantly provides for, among other benefits: (i) a severance payment upon a Change of Control Triggering Event and Separation from Service (as defined in the Severance Plan) and (ii) each non-executive employee to receive a severance payment upon a Non-Change of Control Triggering Event and Separation from Service (as defined in the Severance Plan). A Change of Control Triggering Event is defined as an event where: (i) an employee is terminated by us without cause in connection with a change of control or within 12 months following a change of control provided, however, that if an employee is terminated by us in connection with a change of control but immediately accepts employment with our successor or acquirer, the employee will not be eligible for the benefits outlined in the Severance Plan; (ii) an employee resigns because in connection with a change of control, the offered terms of employment (new or continuing) by us or our successor or acquirer within 30 days after the change of control results in a material change in the terms of employment; or (iii) after accepting (or continuing) employment with us after a change of control, an employee resigns within 12 months following a change of control due to a material change in the terms of employment. A Non-Change of Control Triggering Event is defined as an event where a non-executive employee is terminated by us without cause. Severance payments range from two to 18 months of base salary, depending on the employee's position with us, payable in a lump sum payment. The Severance Plan also provides that the provisions of employment agreements entered into between us and executive or non-executive employees supersede the provisions of the Severance Plan. As of December 31, 2013, all our executive officers have employment agreements with provisions that may provide greater severance benefits than those in the Severance Plan.

Indemnifications to Officers and Directors

Our corporate bylaws require that we indemnify our officers and directors, as well as those who act as directors and officers of other entities at our request, against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceedings arising out of their services to Geron. In addition, we have entered into separate indemnification agreements with each of our directors which provide for indemnification of these directors under similar circumstances and under additional circumstances. The indemnification obligations are more fully described in our bylaws and the indemnification agreements. We purchase standard insurance to cover claims or a portion of the claims made against our directors and officers. Since a maximum obligation is not explicitly stated in our bylaws or in our indemnification agreements and will depend on the facts and circumstances that arise out of any future claims, the overall maximum amount of the obligations cannot be reasonably estimated. There were no such obligations on our consolidated balance sheets as of December 31, 2013 and 2012.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. COMMITMENTS AND CONTINGENCIES (Continued)

Purported Securities Class Action Lawsuit

On March 14, 2014, a purported securities class action lawsuit was commenced in the United States District Court for the Northern District of California, naming as defendants us and certain of our officers. We currently are not able to estimate the possible cost to us from this matter, as this lawsuit is currently at an early stage, and we cannot ascertain how long it may take to resolve this matter or the possible amount of any damages that we may be required to pay. We have not established any reserve for any potential liability relating to this lawsuit. A reserve may be required in the future due to new developments with respect to the pending or additional related lawsuits or changes in approach such as a change in or establishment of a settlement strategy in dealing with these matters. See Note 17 on Subsequent Events for a further discussion of this litigation.

11. STOCKHOLDERS' EQUITY

Warrants

As of December 31, 2013, the following warrants to purchase our common stock were outstanding and classified as equity:

Issuance Date	Exercise Price	Number of Shares	Exercisable Date	Expiration Date
November 2011[(1)]	$ 2.32	461,382	November 2011	November 2021
August 2011[(1)]	$ 3.98	537,893	August 2011	August 2021
September 2009	$ 9.00	150,000	September 2009	September 2014
April 2005	$ 3.75	470,000	April 2005	April 2015
		1,619,275		

(1) In connection with each disbursement under the loan agreement with CIRM, we were obligated to issue to CIRM a warrant to purchase Geron common stock. Each of the warrants and the underlying common stock were unregistered. We have no further obligations to issue any additional warrants to CIRM.

Equity Plans

2002 Equity Incentive Plan

The 2002 Equity Incentive Plan, or 2002 Plan, expired in May 2012. Upon the adoption of the 2011 Incentive Award Plan in May 2011 (see below), no further grants of options or stock purchase rights were made from the 2002 Plan. Options granted under the 2002 Plan expired no later than ten years from the date of grant. Option exercise prices were equal to 100% of the fair market value of the underlying common stock on the date of grant. Service-based stock options under the 2002 Plan generally vested over a period of four years from the date of the option grant, with a portion vesting after six months and the remainder vesting ratably over the remaining period. Other stock awards (restricted stock awards and restricted stock units) had variable vesting schedules which were determined by our board of directors on the date of grant.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

2011 Incentive Award Plan

In May 2011, our stockholders approved the adoption of the 2011 Incentive Award Plan, or 2011 Plan. Our board of directors administers the 2011 Plan. The 2011 Plan provides for grants to employees (including officers and employee directors) of either incentive stock or nonstatutory stock options and stock purchase rights to employees (including officers and employee directors) and consultants (including non-employee directors). As of December 31, 2013, we had reserved an aggregate of 15,655,348 shares of our common stock for future grants of equity awards under the 2011 Plan. Pursuant to the terms of the 2011 Plan, any shares subject to outstanding stock options originally granted under the 2002 Plan or 1996 Directors' Stock Option Plan, or outstanding unvested restricted stock awards originally granted under the 2002 Plan, that expire or terminate for any reason prior to exercise or settlement or are forfeited because of the failure to meet a contingency or condition required to vest such shares shall become available for issuance under the 2011 Plan. Options granted under the 2011 Plan expire no later than ten years from the date of grant. Option exercise prices shall be equal to 100% of the fair market value of the underlying common stock on the date of grant. If, at the time we grant an option, the optionee directly or by attribution owns stock possessing more than 10% of the total combined voting power of all classes of our stock, the option price shall be at least 110% of the fair market value of the underlying common stock and shall not be exercisable more than five years after the date of grant.

We grant service-based stock options under our 2011 Plan that generally vest over a period of four years from the date of the option grant, with a portion vesting after six months and the remainder vesting ratably over the remaining period. Other stock awards (restricted stock awards and restricted stock units) have variable vesting schedules as determined by our board of directors on the date of grant.

Under certain circumstances, options may be exercised prior to vesting, subject to our right to repurchase shares subject to such option at the exercise price paid per share. Our repurchase rights would generally terminate on a vesting schedule identical to the vesting schedule of the exercised option. During 2013, we did not repurchase any shares under the 2011 Plan. As of December 31, 2013, no shares outstanding were subject to repurchase.

1996 Directors' Stock Option Plan

The 1996 Directors' Stock Option Plan, or 1996 Directors Plan, expired in July 2006 upon which no further option grants were made from the 1996 Directors Plan. The options granted under the 1996 Directors Plan were nonstatutory stock options and expire no later than ten years from the date of grant. The option exercise price was equal to the fair market value of the underlying common stock on the date of grant. Options to purchase shares of common stock generally were 100% vested upon grant, except for options granted upon first appointment to the board of directors, or First Option. The First Option vested annually over three years upon each anniversary date of appointment to the board of directors.

2006 Directors' Stock Option Plan

In May 2006, our stockholders approved the adoption of the 2006 Directors' Stock Option Plan, or 2006 Directors Plan, to replace the 1996 Directors Plan. As of December 31, 2013, we had reserved an aggregate of 551,902 shares of our common stock for future grants of equity awards under the 2006

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

Directors Plan. The 2006 Directors Plan provides for the automatic grant of the following types of equity awards.

First Director Option. Each person who becomes a non-employee director, whether by election by our stockholders or by appointment by our board of directors to fill a vacancy, will automatically be granted an option to purchase 70,000 shares of common stock on the date such person first becomes a non-employee director, or First Director Option. The First Director Option shall vest annually over three years upon each anniversary date of appointment to our board of directors.

Subsequent Director Option. Each non-employee director (other than any director receiving a First Director Option on the date of the annual meeting) will automatically be granted a subsequent option to purchase 35,000 shares of common stock, a Subsequent Director Option, on the date of the Annual Meeting of Stockholders in each year during such director's service on our board of directors. The Subsequent Director Option vests one year from the date of grant.

The exercise price of all options granted under the 2006 Directors Plan is equal to 100% of the fair market value of the underlying common stock on the date of grant. Options granted under the 2006 Directors Plan have a term of ten years from the date of grant.

Aggregate option and award activity for the 2002 Plan, 2011 Plan, 1996 Directors Plan and 2006 Directors Plan is as follows:

		Outstanding Options			
	Shares Available For Grant	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life (In years)	Aggregate Intrinsic Value (In thousands)
Balance at December 31, 2012	13,557,771	17,811,506	$ 4.05		$ 2
Options granted	(6,366,000)	6,366,000	$ 1.57		
Awards granted	(66,853)		$		
Options exercised		(1,960,245)	$ 3.35		
Options canceled/forfeited	6,641,045	(6,641,045)	$ 4.25		
Awards canceled/forfeited	2,441,287		$		
Balance at December 31, 2013	16,207,250	15,576,216	$ 3.04	6.83	$ 33,798
Options exercisable at December 31, 2013		8,144,040	$ 4.26	5.05	$ 11,194
Options fully vested and expected to vest at December 31, 2013		15,122,068	$ 3.08	6.77	$ 32,402

The aggregate intrinsic value in the preceding table represents the total intrinsic value, based on Geron's closing stock price of $4.74 per share as of December 31, 2013, which would have been received by the option holders had all the option holders exercised their options as of that date.

There were no options granted with an exercise price below or greater than fair market value of our common stock on the date of grant in 2013, 2012 or 2011. As of December 31, 2013, 2012 and 2011, there were 8,144,040, 10,410,194 and 10,109,076 exercisable options outstanding at weighted average exercise prices per share of $4.26, $5.49 and $6.02, respectively.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

The total pretax intrinsic value of stock options exercised during 2013, 2012 and 2011 was $2,787,000, $100 and $56,000, respectively. Cash received from the exercise of options in 2013, 2012 and 2011 totaled approximately $6,567,000, $1,000 and $184,000, respectively. No income tax benefit was realized from stock options exercised in 2013 since we reported an operating loss.

Information about stock options outstanding as of December 31, 2013 is as follows:

	Options Outstanding		
Exercise Price Range	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life (In years)
$1.10 - $1.50	4,627,834	$ 1.42	8.57
$1.51 - $1.70	4,217,041	$ 1.54	9.04
$1.71 - $6.39	4,067,162	$ 3.78	6.16
$6.40 - $9.32	2,664,179	$ 7.08	1.35
$1.10 - $9.32	15,576,216	$ 3.04	6.83

Aggregate restricted stock activity for the 2002 Plan, 2011 Plan and 2006 Directors Plan is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value Per Share	Weighted Average Remaining Contractual Term (In years)
Non-vested restricted stock at December 31, 2012	2,917,962	$ 4.08	0.90
Granted	66,853	$ 2.41	
Vested	(134,091)	$ 3.77	
Canceled/forfeited	(2,441,287)	$ 3.92	
Non-vested restricted stock at December 31, 2013[(1)]	409,437	$ 4.84	0.82

(1) Includes 139,000 performance-based restricted stock awards that have not achieved certain strategic goals.

The total fair value of restricted stock that vested during 2013, 2012 and 2011 was $252,000, $936,000 and $7,402,000, respectively.

Employee Stock Purchase Plan

In July 1996, we adopted the 1996 Employee Stock Purchase Plan, or Purchase Plan, and as of December 31, 2013, we had reserved an aggregate of 1,200,000 shares of common stock for issuance under the Purchase Plan. As of December 31, 2013 and 2012, 936,596 and 843,610 shares have been issued under the Purchase Plan, respectively, since its adoption. As of December 31, 2013, 263,404 shares were available for issuance under the Purchase Plan.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

Under the terms of the Purchase Plan, employees can choose to have up to 10% of their annual salary withheld to purchase our common stock. An employee may not make additional payments into such account or increase the withholding percentage during the offering period.

The Purchase Plan is comprised of a series of offering periods, each with a maximum duration (not to exceed 12 months) with new offering periods commencing on January 1st and July 1st of each year. The date an employee enters the offering period will be designated as the entry date for purposes of that offering period. An employee may only participate in one offering period at a time. Each offering period consists of two consecutive purchase periods of six months' duration, with the last day of such period designated a purchase date.

The purchase price per share at which common stock is purchased by the employee on each purchase date within the offering period is equal to 85% of the lower of (i) the fair market value per share of Geron's common stock on the employee's entry date into that offering period or (ii) the fair market value per share of Geron's common stock on the purchase date. If the fair market value of Geron's common stock on the purchase date is less than the fair market value at the beginning of the offering period, a new 12 month offering period will automatically begin on the first business day following the purchase date with a new fair market value.

Effective for offering periods beginning July 1, 2009 and thereafter, shares purchased under the Purchase Plan shall be registered and available for trading in an open market transaction one year from the date of purchase, and certificates evidencing such shares shall bear a restrictive legend.

Stock-Based Compensation for Employees and Directors

We measure and recognize compensation expense for all share-based payment awards made to employees and directors, including employee stock options, restricted stock awards and employee stock purchases related to the Purchase Plan, based on grant-date fair values for these instruments. We grant service-based stock options and restricted stock awards under our equity plans to employees, directors and consultants. The vesting period for employee options is generally four years. We use the Black Scholes option-pricing model to estimate the grant-date fair value of our stock options and employee stock purchases. The fair value for service-based restricted stock awards is determined using the fair value of our common stock on the date of grant.

Our board of directors has awarded to our employees and directors performance-based restricted stock awards and market-based restricted stock awards. These restricted stock awards are included in the restricted stock activity table above. We have not recognized any stock-based compensation expense for performance-based restricted stock awards in our consolidated statements of operations for the years ended December 31, 2013, 2012 and 2011 as the achievement of the specified performance criteria was not considered probable during that time. The fair value for market-based restricted stock awards is determined using a lattice valuation model with a Monte Carlo simulation. All market-based restricted stock awards have been canceled as of December 31, 2013 as the market conditions were not achieved within the specified performance period.

As stock-based compensation expense recognized in the consolidated statements of operations for the years ended December 31, 2013, 2012 and 2011 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures but at a minimum, reflects the grant-date fair value of those awards that actually vested in the period. Forfeitures have been estimated at the time of grant based on

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

historical data and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

We recognize stock-based compensation expense on a straight-line basis over the requisite service period, which is generally the vesting period. The following table summarizes the stock-based compensation expense related to stock options, restricted stock awards and employee stock purchases for the years ended December 31, 2013, 2012 and 2011 which was allocated as follows:

	Year Ended December 31,		
	2013	2012	2011
	(In thousands)		
Research and development	$ 1,741	$ 2,336	$ 5,799
Restructuring charges	28	107	174
General and administrative	2,666	2,868	9,276
Stock-based compensation expense included in operating expenses	$ 4,435	$ 5,311	$ 15,249

Modifications to the post-termination exercise period of outstanding options held by certain members of our executive management team resulted in additional stock-based compensation expense of $205,000 for the year ended December 31, 2013 and have been reflected in the above table. Modifications to outstanding options held by our former Chief Executive Officer and Chief Financial Officer and certain members of our board of directors resulted in additional stock-based compensation expense in 2011 which have been reflected in the above table. In addition, stock-based compensation expense has been recognized for the modification of the post-termination exercise period for certain stock options previously granted to employees affected by the April 2013, December 2012 and November 2011 restructurings, which has been included in restructuring charges in our consolidated statements of operations. See Note 7 on Restructurings for further discussion of the restructurings.

The fair value of stock options granted in 2013, 2012 and 2011 has been estimated at the date of grant using the Black Scholes option-pricing model with the following assumptions:

	2013	2012	2011
Dividend yield	0%	0%	0%
Expected volatility range	0.742 to 0.792	0.631 to 0.740	0.629 to 0.660
Risk-free interest rate range	0.80% to 1.97%	0.81% to 1.25%	0.88% to 2.37%
Expected term	6 yrs	6 yrs	5 yrs

The fair value of employee stock purchases in 2013, 2012 and 2011 under the Purchase Plan has been estimated using the Black Scholes option-pricing model with the following assumptions:

	2013	2012	2011
Dividend yield	0%	0%	0%
Expected volatility range	0.506 to 1.391	0.458 to 0.774	0.278 to 0.584
Risk-free interest rate range	0.09% to 0.21%	0.06% to 0.21%	0.10% to 0.32%
Expected term range	6 mos to 12 mos	6 mos to 12 mos	6 mos to 12 mos

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

Dividend yield is based on historical cash dividend payments and Geron has paid no dividends to date. The expected volatility range is based on historical volatilities of our stock since traded options on Geron stock do not correspond to option terms and the trading volume of options is limited. The risk-free interest rate range is based on the U.S. Zero Coupon Treasury Strip Yields for the expected term in effect on the date of grant for an award. The expected term of options is derived from actual historical exercise and post-vesting cancellation data and represents the period of time that options granted are expected to be outstanding. The expected term of employees' purchase rights under the Purchase Plan is equal to the purchase period.

Based on the Black Scholes option-pricing model, the weighted average estimated fair value of employee stock options granted during the years ended December 31, 2013, 2012 and 2011 was $1.03, $0.89 and $2.06 per share, respectively. The weighted average estimated fair value of purchase rights under our Purchase Plan for the years ended December 31, 2013, 2012 and 2011 was $0.75, $0.59 and $1.20 per share, respectively. As of December 31, 2013, total compensation cost related to unvested share-based payment awards not yet recognized, net of estimated forfeitures and assuming no probability of achievement for outstanding performance-based restricted stock awards, was $6,921,000, which is expected to be recognized over the next 31 months on a weighted-average basis.

Stock-Based Compensation to Service Providers

We grant stock options and restricted stock awards to consultants from time to time in exchange for services performed for us. In general, the stock options and restricted stock awards vest over the contractual period of the consulting arrangement. We granted stock options to purchase 80,000, 50,000 and 46,000 shares of our common stock to consultants in 2013, 2012 and 2011, respectively. The fair value of stock options and restricted stock awards held by consultants is recorded as operating expenses over the vesting term of the respective equity awards. In addition, we will record any increase in the fair value of the stock options and restricted stock awards as the respective equity award vests. We recorded stock-based compensation expense of $92,000, $135,000 and $114,000 for the vested portion of the fair value of stock options and restricted stock awards held by consultants in 2013, 2012 and 2011, respectively. In 2012, to facilitate the divestiture of our stem cell programs, we entered into consulting agreements with several former employees whose positions were eliminated in connection with the restructuring in November 2011. Under the consulting agreements, the stock options and restricted stock awards previously granted to these individuals as employees continued to vest under the respective equity awards' original vesting schedules during the period the consulting services were provided to us. Accordingly, the stock options and restricted stock awards and related compensation expense were accounted for as consultant share-based payment awards during the respective consulting terms.

We have also issued common stock to consultants and vendors in exchange for services either performed or to be performed for us. For these stock issuances, we record a prepaid asset equal to the fair market value of the shares on the date of issuance and amortize the fair value of the shares to our operating expenses on a pro-rata basis as services are performed or goods are received. In 2013, 2012 and 2011, we issued 66,853, 170,298 and 180,954 shares of common stock, respectively, in exchange for goods or services. In 2013, 2012 and 2011, we recognized approximately $202,000, $1,010,000 and $4,736,000, respectively, of expense in connection with previous stock grants to consultants and vendors. As of December 31, 2013, $7,000 related to consultant and vendor stock issuances remained as a

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

prepaid asset which is being amortized to our operating expenses on a pro-rata basis as services are incurred or goods are received.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance as of December 31, 2013 is as follows:

Outstanding stock options	15,576,216
Options and awards available for grant	16,207,250
Employee stock purchase plan	263,404
Warrants outstanding	1,619,275
Total	33,666,145

401(k) Plan

We sponsor a defined-contribution savings plan under Section 401(k) of the Internal Revenue Code covering all full-time U.S. employees, or the Geron 401K Plan. Participating employees may contribute up to the annual Internal Revenue Service contribution limit. The Geron 401K Plan also permits us to provide discretionary matching and profit sharing contributions. The Geron 401K Plan is intended to qualify under Section 401 of the Internal Revenue Code so that contributions by employees or by us, and income earned on the contributions, are not taxable to employees until withdrawn from the Geron 401K Plan. Our contributions, if any, will be deductible by us when made.

In 2013, our board of directors approved a matching contribution equal to 75% of each employee's 2013 contributions. In 2012 and 2011, our board of directors approved a matching contribution equal to 100% of each employee's contributions, respectively. The matching contributions are made in our common stock and vest ratably over four years for each year of service completed by the employee, commencing from the date of hire, until it is fully vested when the employee has completed four years of service. We provided the 2013 matching contribution in early 2014, following approval by our board of directors.

For the vested portion of the 2013 match, we recorded $156,000 as research and development expense and $157,000 as general and administrative expense. For the vested portion of the 2012 match, we recorded $616,000 as research and development expense and $259,000 as general and administrative expense. For the vested portion of the 2011 match, we recorded $1,179,000 as research and development expense and $288,000 as general and administrative expense. Due to the number of positions eliminated in the recent restructurings, a partial plan termination was triggered in both 2013 and 2012. We accelerated the vesting of unvested prior employer matches for employees affected by the recent restructurings, which resulted in $266,000 and $370,000 of operating expenses in 2013 and 2012, respectively. As of December 31, 2013, approximately $369,000 remained unvested for the 2012, 2011 and 2010 matches which will be amortized to operating expenses as the corresponding years of service are completed by the employees.

Sales Agreement

On October 8, 2012, we entered into an At-the-Market Issuance Sales Agreement, or sales agreement, with MLV & Co. LLC, or MLV, pursuant to which we may elect to issue and sell shares of

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. STOCKHOLDERS' EQUITY (Continued)

our common stock having an aggregate offering price of up to $50,000,000 from time to time into the open market at prevailing prices through MLV as our sales agent. We will pay MLV an aggregate commission rate equal to up to 3.0% of the gross proceeds of the sales price per share for common stock sold through MLV under the sales agreement. Pursuant to the sales agreement, sales of common stock will be made in such quantities and on such minimum price terms as we may set from time to time. We are not obligated to make any sales of common stock under the sales agreement. As of December 31, 2013, we had not sold any common stock pursuant to the sales agreement and no sales under the sales agreement can be made during the 60-day lock-up period following the underwritten public offering of our common stock completed in February 2014. See Note 17 on Subsequent Events for information on our February 2014 public offering.

12. LICENSE AGREEMENTS

GE Healthcare UK Limited

In June 2009, we entered into a worldwide exclusive license and alliance agreement with GE Healthcare UK, Limited, or GEHC, to develop and commercialize cellular assay products derived from human embryonic stem cells, or hESCs, for use in drug discovery, development and toxicity screening. We established a multi-year alliance program with GEHC under which scientists from both companies worked to develop hESC-based products for drug discovery. In connection with the agreement, we received upfront non -refundable license payments from GEHC. Under the alliance program, GEHC was responsible for all costs incurred by GEHC and all costs incurred by us for activities undertaken at Geron, including the funding of our scientists who worked on the alliance program.

The upfront non-refundable license payments under the GEHC agreement were recorded as deferred revenue upon receipt and were recognized ratably as revenue over the alliance program period as a result of our continuing involvement with the collaboration. Funding received for our efforts under the alliance program was recognized as revenue as costs were incurred, which reflected our level of effort over the period of the alliance program.

In connection with the GEHC agreement, we recognized $300,000 for the year ended December 31, 2011 as revenues from collaborative agreements related to funding under the alliance program. No comparable amounts were recognized in 2013 and 2012 because the collaboration with GEHC concluded in June 2011. We also recognized $825,000 and $350,000 as license fee revenue in our consolidated statements of operations for the years ended December 31, 2012 and 2011, respectively, under the GEHC agreement. License fee revenue in 2012 reflects the full recognition of a license payment from GEHC related to the exercise of an option to expand the scope of their original 2009 license agreement to include exclusive global rights to our intellectual property and know-how for the development and sale of cellular assays derived from induced pluripotent stem cells. No license fee revenue was recognized under the GEHC agreement in 2013.

Upon the closing of the divestiture of our stem cell assets on October 1, 2013, the GEHC agreement, including any future revenue payments thereunder, was transferred to Asterias. For a further discussion of the divestiture of our stem cell assets, see Note 8 on Divestiture of Stem Cell Assets.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

12. LICENSE AGREEMENTS (Continued)

Angiochem, Inc.

On December 6, 2010, we entered into an exclusive license agreement with Angiochem, Inc., or Angiochem, that provided us with a worldwide exclusive license, with the right to grant sublicenses, to Angiochem's proprietary peptide technology that facilitates the transfer of anti-cancer compounds across the blood-brain barrier to enable the treatment of primary brain cancers and cancers that have metastasized to the brain. As consideration for the license rights, we paid Angiochem an upfront payment of $7,500,000 in cash and agreed to issue to Angiochem $27,500,000 of shares of Geron common stock on or about January 5, 2011. Because further clinical and process development of GRN1005 was required before any viable commercial application could be identified or utilized, we concluded that the technology had no alternative future use, and accordingly, expensed the total upfront payment of $35,000,000 as acquired in-process research and development at the time of acquisition in 2010.

On January 5, 2011, we issued 5,261,144 shares of common stock to Angiochem as payment of our obligation to issue $27,500,000 of shares of our common stock. In accordance with the exclusive license agreement, the number of shares issued to Angiochem was determined using the five-day volume weighted average closing price of our common stock immediately preceding the issuance date. Consistent with our practice for common stock issuances to consultants and vendors in exchange for services either performed or to be performed, we recorded $28,094,000 for the fair market value of the common stock issued to Angiochem, based on the closing price of our common stock on the issuance date. As a result, in 2011 we recognized additional acquired in-process research and development expense of approximately $594,000 for the excess fair market value resulting from the difference between the five-day volume weighted average closing price of our common stock immediately preceding the issuance date and the closing price of our common stock on January 5, 2011, which has been included in the consolidated statements of operations under research and development expense.

On December 3, 2012, we announced the decision to discontinue development of GRN1005 and provided Angiochem notice of termination of both the exclusive license agreement under which we received rights to GRN1005 and an associated research collaboration and option agreement. We returned the asset to Angiochem in May 2013 and the license agreement terminated effective June 1, 2013.

Telomerase Activation Sciences, Inc.

On December 5, 2012, we entered into a Termination and Assignment Agreement, or the Assignment Agreement, with Asia Biotech Corporation, or Asia Biotech, and Telomerase Activation Sciences, Inc., or TA Sciences, pursuant to which we agreed to assign to TA Sciences the intellectual property, including patents previously licensed to Asia Biotech, related to our telomerase activation technology. As consideration for the assignment and fulfillment of the obligations set forth in the Assignment Agreement, we received a non-refundable, upfront payment of $2,500,000 from TA Sciences, which we recognized in full as other income in our consolidated statements of operations for the year ended December 31, 2012, and TA Sciences does not have further payment obligations to us. In addition, Asia Biotech's future royalty obligations under the original license agreement have been terminated.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

13. INCOME TAXES

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets are as follows:

	December 31,	
	2013	2012
	(In thousands)	
Net operating loss carryforwards	$ 271,800	$ 248,700
Purchased technology	6,300	20,000
Research credits	22,700	20,500
Capitalized research and development	6,600	19,400
License fees	700	1,100
Other net	10,100	14,000
Total deferred tax assets	318,200	323,700
Valuation allowance for deferred tax assets	(318,200)	(323,700)
Net deferred tax assets	$	$

We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. In making such determination, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent financial performance. Forming a conclusion that a valuation allowance is not required is difficult when there is negative evidence such as cumulative losses in recent years. Because of our history of losses, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance decreased by $5,500,000 during the year ended December 31, 2013 and increased by $14,200,000 and $27,300,000 during the years ended December 31, 2012 and 2011, respectively. Approximately $5,550,000 of the valuation allowance for deferred tax assets relates to benefits of stock option deductions which, when recognized, will be allocated directly to contributed capital.

As of December 31, 2013, we had domestic federal net operating loss carryforwards of approximately $744,000,000 expiring at various dates beginning in 2018 through 2033, and state net operating loss carryforwards of approximately $330,000,000 expiring at various dates beginning in 2014 through 2033, if not utilized. We also had federal research and development tax credit carryforwards of approximately $14,400,000 expiring at various dates beginning in 2018 through 2033, if not utilized. Our state research and development tax credit carryforwards of approximately $12,600,000 carry forward indefinitely.

Due to the change of ownership provisions of the Tax Reform Act of 1986, utilization of a portion of our domestic net operating loss and tax credit carryforwards may be limited in future periods. Further, a portion of the carryforwards may expire before being applied to reduce future income tax liabilities.

We adopted the provision of the standard for accounting for uncertainties in income taxes on January 1, 2007. Upon adoption, we recognized no material adjustment in the liability for unrecognized tax benefits. At December 31, 2013, we had approximately $11,600,000 of unrecognized tax benefits, none of which would currently affect our effective tax rate if recognized due to our deferred tax assets being fully offset by a valuation allowance.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

13. INCOME TAXES (Continued)

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows (in thousands):

Balance as of December 31, 2012	$ 10,500
Increase related to prior year tax positions	600
Increase related to current year tax positions	500
Settlements	
Reductions due to lapse of applicable statute of limitations	
Balance as of December 31, 2013	$ 11,600

If applicable, we would classify interest and penalties related to uncertain tax positions in income tax expense. Through December 31, 2013, there has been no interest expense or penalties related to unrecognized tax benefits.

We do not currently expect any significant changes to unrecognized tax benefits during the fiscal year ended December 31, 2014. In certain cases, our uncertain tax positions are related to tax years that remain subject to examination by the relevant tax authorities. Tax years for which we have carryforward net operating loss and credit attributes remain subject to examination by federal and most state tax authorities.

14. SEGMENT INFORMATION

Our executive management team represents our chief decision maker. We view our operations as one segment, the discovery and development of therapeutic products for oncology. As a result, the financial information disclosed herein materially represents all of the financial information related to our principal operating segment.

15. CONSOLIDATED STATEMENTS OF CASH FLOWS DATA

	Year Ended December 31,		
	2013	2012	2011
	(In thousands)		
Supplemental operating activities:			
Issuance of common stock for services rendered to date or to be received in future periods	$	$ 69	$ 41
Issuance of common stock for acquired in-process research technology	$	$	$ 27,500
Issuance of common stock for 401(k) matching contributions and year-end bonuses	$ 839	$ 1,361	$ 3,778
Reclassification between deposits and other current assets	$ 219	$ 526	$ (180)
Supplemental investing activities:			
Net unrealized (loss) gain on available-for-sale securities	$ (54)	$ (38)	$ 6

There were no cash payments for taxes for the years ended December 31, 2013, 2012 and 2011.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. SELECTED QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(In thousands, except per share amounts)			
Year Ended December 31, 2013				
Revenues	$ 765	$ 112	$ 181	$ 225
Operating expenses[1]	12,750	9,077	8,914	9,500
Net loss	(11,897)	(8,947)	(8,254)	(9,281)
Basic and diluted net loss per share	$ (0.09)	$ (0.07)	$ (0.06)	$ (0.07)
Year Ended December 31, 2012				
Revenues	$ 1,254	$ 130	$ 636	$ 689
Operating expenses[2]	20,172	18,609	16,513	19,173
Net loss	(18,739)	(18,326)	(15,953)	(15,863)
Basic and diluted net loss per share	$ (0.15)	$ (0.14)	$ (0.13)	$ (0.12)

(1) The fourth quarter of 2013 includes approximately $430,000 in restructuring charges in connection with the closure our research laboratory facility located at 200 Constitution Drive, Menlo Park, California. See Note 7 on Restructurings.

(2) The fourth quarter of 2012 includes approximately $2,702,000 in restructuring charges in connection with the decision to discontinue development of GRN1005 and focus on the development of imetelstat. See Note 7 on Restructurings.

Basic and diluted net losses per share are computed independently for each of the quarters presented. Therefore, the sum of the quarters may not be equal to the full year net loss per share amounts.

17. SUBSEQUENT EVENTS

On February 4, 2014, we completed an underwritten public offering of 25,875,000 shares of our common stock at a public offering price of $4.00 per share, resulting in net cash proceeds of approximately $96,700,000 after deducting the underwriting discount and estimated offering expenses payable by us.

On February 27, 2014, we amended the lease agreement for our premises at 149 Commonwealth Drive to extend the lease term from July 2014 through January 2016. Operating lease obligations under the amended lease agreement for the extended lease term include aggregate future minimum payments of $1,382,000.

On March 12, 2014, we announced that we received notice from the FDA that our IND for imetelstat has been placed on full clinical hold following their review of data related to hepatotoxicity in our then-ongoing clinical studies. A full clinical hold is an order that the FDA issues to a trial sponsor to suspend all ongoing clinical trials and delay all proposed trials. With this clinical hold, any patients in an ongoing Geron-sponsored clinical trial cannot receive any further treatment with imetelstat. Therefore, we have stopped imetelstat treatment in our Phase 2 Geron-sponsored clinical trials in ET and MM. Until the FDA lifts the clinical hold, we are unable to submit any new clinical trial protocols to the FDA under our IND for imetelstat and are unable to initiate any new clinical trials for imetelstat in the United States. This subsequent event does not impact these financial statements. We intend to monitor the impact of this matter on our business and future financial results.

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GERON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. SUBSEQUENT EVENTS (Continued)

On March 14, 2014, a purported securities class action lawsuit was commenced in the United States District Court for the Northern District of California, naming as defendants us and certain of our officers. The lawsuit alleges violations of the Securities Exchange Act of 1934 in connection with allegedly false and misleading statements made by us related to our Phase 2 trial of imetelstat in patients with ET or PV. The plaintiff alleges, among other things, that we failed to disclose facts related to the occurrence of persistent low-grade LFT abnormalities observed in our Phase 2 trial of imetelstat in ET/PV patients and the potential risk of chronic liver injury following long-term exposure to imetelstat. The plaintiff seeks damages and an award of reasonable costs and expenses, including attorney's fees.

It is possible that additional suits will be filed, or allegations received from stockholders, with respect to these same matters and also naming us and/or our officers and directors as defendants. We believe that we have meritorious defenses and intend to defend this lawsuit vigorously. This lawsuit and any other related lawsuits are subject to inherent uncertainties, and the actual defense and disposition costs will depend upon many unknown factors. The outcome of the litigation is necessarily uncertain. We could be forced to expend significant resources in the defense of this and any other related lawsuits and we may not prevail. In addition, we may incur substantial legal fees and costs in connection with the litigation. We currently are not able to estimate the possible cost to us from these matters, as this lawsuit is currently at an early stage, and we cannot be certain how long it may take to resolve these matters or the possible amount of any damages that we may be required to pay. We have not established any reserves for any potential liability relating to this lawsuit. It is possible that we could, in the future, incur judgments or enter into settlements of claims for monetary damages.

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

(I) Evaluation of Disclosure Controls and Procedures

We have carried out an evaluation under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this annual report on Form 10-K. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2013.

It should be noted that any system of controls, however well designed and operated, can provide only reasonable assurance, and not absolute assurance, that the objectives of the system are met. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events. Because of these and other inherent limitations of control systems, there can be no assurance that any design will succeed in achieving its stated goals in all future circumstances. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our principal executive officer and principal financial officer have concluded, based on their evaluation as of the end of the period covered by this report, that our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of our disclosure control system were met.

(II) Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during the quarter ended December 31, 2013 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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(III) Management's Report on Internal Control over Financial Reporting

Internal control over financial reporting refers to the process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

(1) Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;

(2) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

(3) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Management is responsible for establishing and maintaining an adequate internal control over financial reporting for us. Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework set forth in "Internal Control Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework set forth in "Internal Control Integrated Framework," our management concluded that our internal control over financial reporting was effective as of December 31, 2013. The effectiveness of our internal control over financial reporting as of December 31, 2013 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included herein.

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(IV) Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Geron Corporation

We have audited Geron Corporation's internal control over financial reporting as of December 31, 2013, based on criteria established in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (1992 framework) (the COSO criteria). Geron Corporation's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Geron Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Geron Corporation as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2013 of Geron Corporation and our report dated March 17, 2014 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Redwood City, California
March 17, 2014

ITEM 9B. OTHER INFORMATION

None.

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PART III

Certain information required by Part III is omitted from this annual report on Form 10-K because we will file with the U.S. Securities and Exchange Commission a definitive proxy statement pursuant to Regulation 14A in connection with the solicitation of proxies for Geron's Annual Meeting of Stockholders expected to be held in May 2014, or the Proxy Statement, not later than 120 days after the end of the fiscal year covered by this annual report on Form 10-K, and certain information included therein is incorporated herein by reference.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Identification of Directors and Nominees for Director

The information required by this item concerning our directors and nominees for director is incorporated by reference from the section captioned "Proposal 1: Election of Directors" contained in our Proxy Statement.

Identification of Executive Officers

The information required by this item concerning our executive officers is set forth in Part I, Item 1 of this annual report on Form 10-K.

Code of Ethics

We have adopted a Code of Conduct with which every person who works for Geron is expected to comply. The Code of Conduct is publicly available on our website under the Investor Relations section at www.geron.com. This website address is intended to be an inactive, textual reference only; none of the material on this website is part of this Report. If any substantive amendments are made to the Code of Conduct or any waiver granted, including any implicit waiver, from a provision of the Code to our Chief Executive Officer, Chief Financial Officer or Corporate Controller, we will disclose the nature of such amendment or waiver on that website or in a report on Form 8-K.

Copies of the Code of Conduct will be furnished without charge to any person who submits a written request directed to the attention of our Corporate Secretary, at our offices located at 149 Commonwealth Drive, Suite 2070, Menlo Park, California, 94025.

Section 16(a) Compliance

Information concerning Section 16(a) beneficial ownership reporting compliance is incorporated by reference from the section captioned "Section 16(a) Beneficial Ownership Reporting Compliance" contained in the Proxy Statement.

Certain Corporate Governance Matters

The information required by this item concerning our audit committee, audit committee financial expert and procedures by which stockholders may recommend nominees to our board of directors, may be found under the section captioned "Corporate Governance Matters" contained in the Proxy Statement.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference from the sections captioned "Compensation Discussion and Analysis," "Compensation Committee Report," "Executive Compensation Tables," "Compensation of Directors" and "Compensation Committee Interlocks and Insider Participation" contained in the Proxy Statement.

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ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated by reference from the sections captioned "Equity Compensation Plans" and "Security Ownership of Certain Beneficial Owners and Management" contained in the Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference from the sections captioned "Proposal 1: Election of Directors" and "Certain Transactions" contained in the Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference from the section captioned "Principal Accountant Fees and Services" contained in the Proxy Statement.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)

(1) Consolidated Financial Statements

Included in Part II, Item 8 of this Report:

(2)

Financial Statement Schedules

Financial statement schedules are omitted because they are not required or the information is disclosed in the financial statements listed in Item 15(a)(1) above.

(3)

Exhibits

See Exhibit Index.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GERON CORPORATION

Date: March 17, 2014 By: /s/ OLIVIA K. BLOOM

OLIVIA K. BLOOM
Executive Vice President, Finance, Chief Financial Officer and Treasurer

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POWER OF ATTORNEY

KNOW BY ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints, jointly and severally, John A. Scarlett, M.D., and Olivia K. Bloom, and each one of them, attorneys-in-fact for the undersigned, each with the power of substitution, for the undersigned in any and all capacities, to sign any and all amendments to this annual report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitutes, may do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated opposite his/her name.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JOHN A. SCARLETT JOHN A. SCARLETT	President, Chief Executive Officer and Director (Principal Executive Officer)	March 17, 2014
/s/ OLIVIA K. BLOOM OLIVIA K. BLOOM	Executive Vice President, Finance, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	March 17, 2014
/s/ DANIEL M. BRADBURY DANIEL M. BRADBURY	Director	March 17, 2014
/s/ KARIN EASTHAM KARIN EASTHAM	Director	March 17, 2014
/s/ THOMAS HOFSTAETTER THOMAS HOFSTAETTER	Director	March 17, 2014
/s/ HOYOUNG HUH HOYOUNG HUH	Director	March 17, 2014
/s/ V. BRYAN LAWLIS V. BRYAN LAWLIS	Director	March 17, 2014
/s/ SUSAN M. MOLINEAUX	Director	March 17, 2014

SUSAN M. MOLINEAUX		
/s/ ROBERT J. SPIEGEL		
ROBERT J. SPIEGEL	Director	March 17, 2014

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EXHIBIT INDEX

Exhibit Number	Description	Incorporation by Reference			
		Exhibit Number	Filing	Filing Date	File No.
2.1	Asset Contribution Agreement by and among Geron Corporation, BioTime, Inc. and Asterias Biotherapeutics, Inc. (formerly known as BioTime Acquisition Corporation)	2.1	8-K	January 8, 2013	000-20859
3.1	Restated Certificate of Incorporation	3.3	8-K	May 18, 2012	000-20859
3.2	Certificate of Amendment of the Restated Certificate of Incorporation	3.1	8-K	May 18, 2012	000-20859
3.3	Amended and Restated Bylaws of Registrant	3.1	8-K	March 19, 2010	000-20859
4.1	Form of Common Stock Certificate	4.1	10-K	March 15, 2013	000-20859
4.2	Form of Common Stock Purchase Warrant issued by the Registrant to certain Purchasers, dated September 9, 2009	4.2	8-K	September 10, 2009	000-20859
10.1	Form of Indemnification Agreement	10.1	10-K	March 7, 2012	000-20859
10.2	Amended and Restated 1996 Employee Stock Purchase Plan*	10.2	10-Q	July 31, 2009	000-20859
10.3	1996 Directors' Stock Option Plan, as amended*	Appendix B	Def 14A	April 15, 2003	000-20859
10.4	Amended and Restated 2002 Equity Incentive Plan*	4.1	S-8	June 4, 2010	333-167349
10.5	Form of Stock Option Agreement under 2002 Equity Incentive Plan	10.6	10-K	March 15, 2013	000-20859
10.6	Form of Restricted Stock Award Agreement under 2002 Equity Incentive Plan	10.7	10-K	March 15, 2013	000-20859
10.7	Form of Performance-Based Restricted Stock Award Agreement under 2002 Equity Incentive Plan	10.8	10-K	March 15, 2013	000-20859
10.8	Amended and Restated 2006 Directors' Stock Option Plan*	10.5	10-Q	November 7, 2013	000-20859
10.9	2011 Incentive Award Plan*	10.1	8-K	May 16, 2011	000-20859
10.10	Form of Stock Option Agreement under 2011 Incentive Award Plan	10.11	10-K	March 15, 2013	000-20859
10.11	Form of Restricted Stock Award Agreement under 2011 Incentive Award Plan	10.12	10-K	March 15, 2013	000-20859

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Exhibit Number	Description	Incorporation by Reference			
		Exhibit Number	Filing	Filing Date	File No.
10.12	Form of Performance-Based Restricted Stock Award Agreement under 2011 Incentive Award Plan	10.13	10-K	March 15, 2013	000-20859
10.13	Stock Purchase Agreement between the Registrant and Angiochem, Inc., effective as of January 5, 2011	10.1	8-K	January 7, 2011	000-20859
10.14	California Institute for Regenerative Medicine Notice of Loan Award	10.1	10-Q	November 3, 2011	000-20859
10.15	Amended and Restated Severance Plan, effective as of May 23, 2013*	10.1	8-K	May 24, 2013	000-20859
10.16	Employment agreement between the Registrant and John A. Scarlett, M.D., effective as of September 29, 2011*	10.2	10-Q	November 3, 2011	000-20859
10.17	First Amendment to Employment Agreement between the Registrant and John A. Scarlett, M.D., effective as of February 11, 2014*	10.5	8-K	February 14, 2014	000-20859
10.18	Employment agreement between the Registrant and Stephen N. Rosenfield, effective as of February 16, 2012*	10.32	10-K	March 7, 2012	000-20859
10.19	First Amendment to Employment Agreement between the Registrant and Stephen N. Rosenfield, effective as of September 24, 2013*	10.4	8-K	September 27, 2013	000-20859
10.20	Employment agreement between the Registrant and Andrew J. Grethlein, effective as of September 17, 2012*	10.2	10-Q	November 2, 2012	000-20859
10.21	First Amendment to Employment Agreement between the Registrant and Andrew J. Grethlein, effective as of February 11, 2014*	10.4	8-K	February 14, 2014	000-20859
10.22	Employment agreement between the Registrant and Craig C. Parker, effective as of December 3, 2012*	10.25	10-K	March 15, 2013	000-20859
10.23	First Amendment to Employment Agreement between the Registrant and Craig C. Parker, effective as of September 24, 2013*	10.3	8-K	September 27, 2013	000-20859
10.24	Second Amendment to Employment Agreement between the Registrant and Craig C. Parker, effective as of February 11, 2014*	10.3	8-K	February 14, 2014	000-20859

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Exhibit Number	Description	Incorporation by Reference			
		Exhibit Number	Filing	Filing Date	File No.
10.25	Employment agreement between the Registrant and Olivia K. Bloom, effective as of December 7, 2012*	10.26	10-K	March 15, 2013	000-20859
10.26	First Amendment to Employment Agreement between the Registrant and Olivia K. Bloom, effective as of September 24, 2013*	10.2	8-K	September 27, 2013	000-20859
10.27	Second Amendment to Employment Agreement between the Registrant and Olivia K. Bloom, effective as of February 11, 2014*	10.1	8-K	February 14, 2014	000-20859
10.28	Employment agreement between the Registrant and Melissa A. Kelly Behrs, effective as of January 31, 2013*	10.28	10-K	March 15, 2013	000-20859
10.29	First Amendment to Employment Agreement between the Registrant and Melissa A. Kelly Behrs, effective as of September 24, 2013*	10.1	8-K	September 27, 2013	000-20859
10.30	Second Amendment to Employment Agreement between the Registrant and Melissa A. Kelly Behrs, effective as of February 11, 2014*	10.2	8-K	February 14, 2014	000-20859
10.31	Employment agreement between the Registrant and Stephen M. Kelsey, effective as of January 31, 2013*	10.29	10-K	March 15, 2013	000-20859
10.32	Termination Agreement between the Registrant and Stephen M. Kelsey, effective as of April 25, 2013*	10.1	10-Q	August 8, 2013	000-20859
10.33	Office Lease Agreement by and between the Registrant and Exponent Realty, LLC, effective as of February 29, 2012	10.36	10-K/A	March 27, 2012	000-20859
10.34	Third Amendment to Office Lease Agreement by and between the Registrant and Exponent Realty, LLC, effective as of February 27, 2014	10.1	8-K	March 4, 2014	000-20859
10.35	At-the-Market Issuance Sales Agreement, dated October 8, 2012, by and between the Registrant and MLV & Co. LLC	10.1	8-K	October 9, 2012	000-20859
10.36	Non-Employee Director Compensation Policy*				

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Exhibit Number	Description	Incorporation by Reference			
		Exhibit Number	Filing	Filing Date	File No.
10.37	Form of Non-Employee Director Stock Option Agreement under 2011 Incentive Award Plan				
12.1	Computation of Ratio of Earnings to Fixed Charges				
23.1	Consent of Independent Registered Public Accounting Firm				
24.1	Power of Attorney (see signature page)				
31.1	Certification of Chief Executive Officer pursuant to Form of Rule 13a-14(a), as Adopted Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002, dated March 17, 2014				
31.2	Certification of Chief Financial Officer pursuant to Form of Rule 13a-14(a), as Adopted Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002, dated March 17, 2014				
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated March 17, 2014**				
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, dated March 17, 2014**				
101	The following materials from the Registrant's annual report on Form 10-K for the year ended December 31, 2013, formatted in Extensible Business Reporting Language (XBRL) include: (i) Consolidated Balance Sheets as of December 31, 2013 and 2012, (ii) Consolidated Statements of Operations, Comprehensive Loss, Stockholders' Equity and Cash Flows for each of the three years in the period ended December 31, 2013, and (iii) Notes to Consolidated Financial Statements.				

Confidential treatment has been granted for certain portions of this exhibit. Omitted information has been filed separately with the Securities and Exchange Commission.

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Management contract or compensation plan or arrangement.

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The certifications attached as Exhibits 32.1 and 32.2 that accompany this annual report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of this Form 10-K), irrespective of any general incorporation language contained in such filing.