GERON CORP
Form 424B2
September 16, 2005

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PROSPECTUS SUPPLEMENT

(To Prospectuses dated February 14, 2002 and June 30, 2004)

Filed Pursuant to Rule 424(b)(2)
File Nos. 333-81596 and 333-115195

8,000,000 Shares

Geron Corporation
Common Stock

We are offering all of the 8,000,000 shares of our common stock offered by this prospectus supplement. Of these shares, we are offering 6,000,000 shares through the underwriters named herein. The remaining shares are being sold directly by us to Merck & Co., Inc., pursuant to the exercise, concurrent with the offering, of an outstanding warrant issued to Merck on July 15, 2005, in connection with the execution of the Research, Development and Commercialization License Agreement by us and Merck on July 15, 2005. The warrant provides for the purchase by Merck of $18.0 million of our common stock at a per share exercise price equal to the price to the public in this offering.

Our common stock is traded on the Nasdaq National Market under the symbol GERN. On September 15, 2005, the last reported sale price of our common stock on the Nasdaq National Market was $9.99 per share. Of the 8,000,000 shares of our common stock offered by this prospectus supplement, we are offering 4,522,277 shares pursuant to registration statement file number 333-81596 and 3,477,723 shares pursuant to registration statement file number 333-115195.

Investing in our common stock involves a high degree of risk. Before buying any shares, you should carefully read the discussion of material risks of investing in our common stock in Risk factors beginning on page S-10 of this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectuses are truthful or complete. Any representation to the contrary is a criminal offense.

	Per share	Total
Public offering price	$ 9.00	$ 72,000,000
Underwriting discounts and commissions on underwritten shares	$ 0.54	$ 3,240,000
Proceeds, before expenses, to us from underwritten shares	$ 8.46	$ 50,760,000
Proceeds, before expenses, to us from Merck Warrant exercise	$ 9.00	$ 18,000,000
Proceeds, before expenses, to us from all 8,000,000 shares		$ 68,760,000

The underwriters may also purchase from us up to 900,000 additional shares of our common stock at the public offering price, less the underwriting discounts and commissions, to cover over-allotments, if any, within 30 days from the date of this prospectus supplement.

The underwriters are offering the shares of our common stock as described in Plan of Distribution. Delivery of the shares will be made on or about September 21, 2005.

Sole Book-Running Manager

UBS Investment Bank

Co-Managers

SG Cowen & Co.

Needham & Company, LLC

Lazard Capital Markets

Rodman & Renshaw **WBB Securities, LLC**

The date of this prospectus supplement is September 16, 2005.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectuses. We have not authorized anyone to provide information different from that contained or incorporated by reference in this prospectus supplement or the accompanying prospectuses. Neither the delivery of this prospectus supplement nor the sale of shares of common stock means that information contained or incorporated by reference in this prospectus supplement or the accompanying prospectuses is correct after the date of this prospectus supplement. These documents do not constitute an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstance under which the offer or solicitation is unlawful.

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Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus supplement and the accompanying prospectuses to the company, Geron, we, us, our, or similar references mean Geron Corporati and its subsidiary.

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Prospectus supplement summary

This summary highlights information contained in this prospectus supplement and the accompanying prospectuses. Because it is a summary, it does not contain all the information you should consider before investing in our common stock. You should carefully read this entire prospectus supplement and the accompanying prospectuses, including the Risk factors section and the documents incorporated by reference, before making an investment decision.

BUSINESS OVERVIEW

Geron is a biopharmaceutical company focused on developing and commercializing three groups of products: i) therapeutic products for oncology that target telomerase; ii) pharmaceuticals that activate telomerase in tissues impacted by senescence, injury or degenerative disease; and iii) cell-based therapies derived from its human embryonic stem cell platform for applications in multiple chronic diseases. We believe we are the leading company in the development of telomerase and human embryonic stem cell-based therapeutics.

Cancer therapeutics and diagnostics

We are developing anti-cancer therapies that target the enzyme telomerase. We believe telomerase is an ideal target for cancer therapeutics and diagnostics because it appears to be both universal it is expressed in all major types of cancers studied to date and specific it is not expressed in most normal cells. We believe that we have the dominant patent position in the field of telomerase.

Our most advanced therapeutic program is a cancer vaccine that has completed an investigator-sponsored Phase 1-2 clinical study in patients with metastatic prostate cancer at Duke University Medical Center. We are continuing to treat patients in a second study with a boosting regimen designed to extend the duration of the immune response to the vaccine. In March 2005, we announced the publication of results of the initial Phase 1-2 clinical trial at Duke. The results showed that the vaccination protocol generated telomerase-specific T-cell response in 19 of 20 subjects. The vaccine was well tolerated with no major treatment-related toxicities to date. Patients showed substantially higher levels of T-cell reactivity than typically seen in cancer vaccines: 1% to 2% of circulating CD8+ T-cells demonstrated anti-telomerase specificity. Vaccination was also associated with a significant reduction in prostate-specific antigen (PSA) doubling time (the rate of PSA rise, a surrogate indicator of increasing tumor burden) and clearance of circulating tumor cells.

In July 2005, we entered into a collaboration and license agreement with Merck & Co., Inc. to develop a cancer vaccine targeting telomerase using Merck s vaccine platform. Under the terms of the agreement, Geron and Merck will jointly develop a plan to optimize the demonstration of efficacy and tolerability of a potential cancer vaccine targeting telomerase using Merck s platform. This collaboration with Merck does not include commercial rights to our dendritic cell-based vaccine program undergoing trials at Duke. However, Merck has an exclusive option to negotiate a separate arrangement for partnering this asset with us. We will continue to develop our dendritic cell-based vaccine product.

We have also begun clinical testing of a novel compound, GRN163L, to treat cancer by directly inhibiting telomerase at its active site. We are beginning to identify patients with chronic lymphocytic leukemia for enrollment in a Phase 1-2 clinical trial at two sites in the New York metropolitan area.

GRN163L represents a proprietary class of short-chain oligonucleotides that has demonstrated significant telomerase inhibitory activity at very low concentrations in biochemical assays and various cellular systems. GRN163L has been shown to inhibit telomerase in human tumor cells of many cancer types (including lung, breast, prostate, and liver cancer), in both cell culture systems and animal models. We have performed preclinical studies which have demonstrated favorable pharmacodynamic and pharmacokinetic characteristics of the compound. We believe preclinical studies of this compound alone, and in combination with chemotherapeutic agents, indicate the importance of telomerase as a

target for the treatment of cancer, and the potential utility of GRN163L in the treatment of patients with hematologic and solid tumor malignancies.

In addition, through our licensee, Cell Genesys, Inc., we are participating in the development of genetically engineered viruses designed to infect and kill cancer cells, which express telomerase, and not kill normal cells, which do not express telomerase.

Our collaborator, Roche Diagnostics, is developing product candidates using telomerase as a cancer marker for applications in early diagnosis, patient monitoring and screening. Data generated to date in a bladder cancer study conducted by Roche suggest that such a product may be a sensitive and specific method for detecting recurrence in bladder cancer patients.

Human embryonic stem cell therapeutics

We are developing cell-based therapeutics for several diseases based on differentiated cells derived from human embryonic stem cells (hESCs), including neural cells for spinal cord injury, cardiomyocytes for heart disease, pancreatic ß islet cells for diabetes, osteoblasts for osteoporosis, chondrocytes for osteoarthritis, and hematopoietic cells for blood diseases and to prevent immune rejection of the other cell types. We are now testing these six different therapeutic cell types derived from hESCs in animal models. In four of these cell types, we have preliminary results indicating efficacy as evidenced by functional improvements, or engraftments of the cells in the treated animals. After completion of additional preclinical studies, we expect to begin one or more Phase 1 clinical trials, most likely including treatment for spinal cord injury.

We have developed proprietary methods to grow, maintain and scale up undifferentiated hESCs and differentiate them into therapeutically relevant cells. We own or have licenses to core intellectual property and critical enabling technology in this field.

TECHNOLOGY OVERVIEW

Telomeres and telomerase background

Telomeres, located at the ends of chromosomes, are key genetic elements involved in the regulation of the cellular aging process. Each time a normal cell divides, telomeres shorten. Once telomeres reach a certain short length, cell division halts and the cell enters a state known as senescence or aging. Telomeres thus serve as a molecular clock for cellular aging. Telomerase is an enzyme that is capable of restoring telomere length, thereby resetting the molecular clock. During tumor progression, telomerase is abnormally activated in all major cancer types. We and others have shown that at least 30 types of cancers express telomerase, and we have not identified any significant cancer type that does not express telomerase. While telomerase does not cause cancer (which is caused by mutations of growth-control genes in cells), the presence of telomerase enables cancer cells to maintain telomere length, providing them with indefinite replicative capacity. We and others have shown in various tumor models that inhibiting telomerase activity results in telomere shortening and therefore causes aging or death of the cancer cell. Although telomerase is expressed in cancer cells, it is not expressed in most normal cells. That gives telomerase the potential of being both a universal as well as a highly specific cancer target. This specificity means that drugs and biologics that attack cancer cells by targeting telomerase may leave other cells unaffected, and thus should have fewer side effects than conventional chemotherapeutic agents that attack many cancer and non-cancer cells at once.

Telomerase therapeutic vaccine program

Our most advanced therapeutic program is a telomerase cancer vaccine. The goal of therapeutic cancer vaccines is to teach the patient s own immune system to attack cancer cells while sparing other cells. This is done by exposing the immune system to a substance (an antigen) that is as specific to cancer cells as possible, thus inducing an immune response to any cells that present that antigen. We believe that telomerase s characteristics make it an ideal antigen for cancer vaccines. The telomerase vaccine

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being tested at Duke University Medical Center generates cytotoxic T-cells specific for telomerase, and those T-cells then attack cancer cells that express telomerase while not affecting most normal cells. The Duke Phase 1-2 clinical trial uses an *ex vivo* process. Dendritic cells (the most efficient antigen-presenting cells) are isolated from the patient s blood, pulsed with telomerase RNA, and then returned to the patient s body where they instruct cytotoxic T-cells to kill tumor cells expressing telomerase.

Pursuant to our agreement with Argos Therapeutics, Inc. (formerly Merix Bioscience, Inc.) we have the exclusive right to use telomerase as an antigen with Argos s platform dendritic cell technology in therapeutic cancer vaccines. Geron owns or holds the exclusive rights to the telomerase antigen and its use in therapeutic vaccines.

Telomerase inhibitors

We have designed and synthesized a special class of short-chain nucleic acid molecules, known as oligonucleotides, to target the template region, or active site, of telomerase. These oligonucleotides have demonstrated highly potent telomerase inhibitory activity at very low concentrations in biochemical assays and various cellular systems. Research by our collaborators has shown that these compounds inhibit the growth of malignant human glioblastoma (brain cancer) cells, prostate cancer cells, lymphoma, myeloma, hepatocellular carcinoma (liver cancer) and cervical cancer cells in animals. Our compounds, GRN163 and GRN163L, are direct enzyme inhibitors, not antisense compounds. They are much smaller (with lower molecular weight) than typical antisense compounds or other oligonucleotide drug candidates, and we expect them to be administered either locally or systemically. They do not inhibit other critical nucleic acid-modifying enzymes and do not appear to be toxic to normal cells at concentrations needed to inhibit telomerase in tumor cells. Both compounds use a special thiophosphoramidate chemical backbone, for which we acquired controlling patents in March 2002. GRN163L is identical in structure to GRN163 except that it has a lipid attached to one end of the molecule, which appears to improve its pharmacokinetics in certain cancer types and should make its manufacture more efficient and less expensive. The improved pharmacokinetic characteristics of GRN163L suggest that it should be effective in inhibiting telomerase in tumor cells when administered systemically. We believe GRN163 may have utility in cancers which require local administration.

Human embryonic stem cells

Stem cells are self-renewing cells that are able to develop into functional, differentiated cells. Among the several kinds of stem cells, hESCs are distinct because they are pluripotent, meaning that they can develop into all cells and tissues in the body. hESCs also express telomerase and can therefore multiply or replicate indefinitely. The ability of hESCs to divide indefinitely in the undifferentiated state without losing pluripotency is a characteristic that distinguishes them from all other stem cells discovered to date in humans. hESCs are derived from *in vitro* fertilized blastocysts or very early-stage embryos donated with informed consent. Other stem cells such as blood or gut stem cells express telomerase at very low levels or only periodically, and therefore age, limiting their use in research and therapeutic applications.

We have proprietary methods of growing and maintaining hESCs that use a serum-free medium containing specific defined growth factors, without the need for either feeder cells or conditioned medium. Previously, hESCs have been grown in direct contact with mouse or human feeder cells, or by using media conditioned through exposure to such cells. Our methods eliminate the need for such feeder cells and conditioned media. One such method maintained stable growth of two hESC cell lines tested for at least 11-15 weeks and the cell lines maintained their potential to differentiate into cells representing all the major cell lineages of the body. This method also eliminates the risk of contamination of the therapeutic cell populations by infectious agents or other components derived from the feeder cells. We are developing hESCs to serve as standardized starting material for the manufacture of cells for the production of therapeutic cell products.

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Therapeutic applications using hESCs

Oligodendrocytes for spinal cord injury

We have derived oligodendrocytes from hESCs in culture and have begun testing them in animal models to determine whether they can restore normal neural function. In our collaboration with researchers at the University of California, Irvine, we have shown proof-of-concept in spinal cord-injured rats which demonstrated significant functional improvement after receiving transplants of hESC-derived oligodendrocyte progenitors.

In May 2005, we announced the publication of studies demonstrating that hESC-derived oligodendroglial progenitor cells delivered to the injured spinal cord in rats resulted in functional improvement in locomotion as well as histological evidence of spinal cord repair.

Cardiomyocytes for heart disease

We have differentiated hESCs into cardiomyocytes that spontaneously contract and respond normally to cardiac drugs. We have transplanted these cells into animal models, and to date the cells appear to be engrafting and integrating with the myocardium in uninjured animals, as well as restoring cardiac function in animals with induced myocardial infarctions.

In November 2004, we announced an improved method to produce cardiomyocytes with higher purity and maturity, with a 20-fold increase in expression of cardiomyocyte markers and greater than 65% purity. The new process significantly improves both the yield, scalability, and control of the production of cardiomyocytes.

Islet cells for diabetes

We have derived insulin-producing ß islet cells from hESCs and are working to improve the yield of islet cells and characterize their secretion of insulin in response to glucose.

In November 2004, we announced the results of studies performed with our collaborators at the University of Alberta in Edmonton, Canada. Pancreatic islet-like cells derived from hESCs were transplanted into streptozotocin-induced diabetic mice, a rodent model for diabetes. Histological examination of the grafts showed the presence of c-peptide-producing cells three months after transplantation. Human c-peptide was also found in the serum of these transplanted animals after challenge with high glucose. C-peptide is a secretory cleavage product of insulin, indicative of production of insulin by hESC-derived cells.

Osteoblasts for osteoporosis and non-union bone fractures

We have made osteoblasts from hESCs and are now conducting preclinical tests in animals. Upon successful preclinical testing, we plan to test the cells in patients with non-union fractures (fractures of the long bones of the leg or arm that do not heal). If these trials are successful, we plan to test these cells in patients with refractory osteoporosis.

Chondrocytes for osteoarthritis

We plan to derive chondrocytes from hESCs and, if *in vitro* studies and animal testing are successful, investigate these chondrocytes in patients with osteoarthritis by injecting these chondrocytes directly into their affected joints.

Hematopoietic cells for hematologic diseases and to prevent immune rejection

We have derived hematopoietic stem cells from hESCs, and tests of these cells in animal models of bone marrow transplantation show engraftment of the cells. In March 2005, our collaborators at the Robarts Research Institute in London, Ontario, Canada, published studies demonstrating that

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hematopoietic stem cells derived from hESCs can establish hematopoiesis in mouse models, leading to production of all major human blood cell types. These results document the potential of differentiated hESCs to survive and establish functional tissue *in vivo* and have positive implications for strategies to promote therapeutic graft acceptance without use of long-term immunosuppression.

Research tool applications using hESCs

We are developing methods to derive standardized functional hepatocytes (liver cells) from hESCs to address the significant unmet need for a reliable predictor of the metabolism, biodistribution and toxicity of drug development candidates. If we are successful, these cells would provide a consistent source of normal human liver cells that can reliably predict how a new drug will affect the livers of the people who take it. We believe that an unlimited supply of human hepatocytes that retain normal drug-metabolizing enzyme activity would address the largest bottleneck in new drug research and accelerate the drug development process. In addition, the availability of hepatocytes from numerous individuals would allow a more thorough understanding of the effects of a drug candidate on a specific individual, allowing full development of the field of pharmacogenomics: the correlation of a compound s activity with an individual s genetic make-up. We have succeeded in demonstrating that hepatocytes derived from hESCs express normal markers of hepatocyte function, including drug-metabolizing enzymes.

In 2004, we entered into a collaboration with the Roslin Institute and CXR Biosciences Ltd. to develop and commercialize hESC-derived hepatocytes for use in *in vitro* assays for drug metabolism and toxicity.

Telomerase activation

We are also working to develop product candidates to treat various degenerative diseases through the controlled activation of telomerase. Eventual loss of telomere function on one or a few chromosomes triggers a complex response associated with damaged DNA, leading to loss of normal cell function, division capacity, and/or cell death. This process of replicative senescence is now believed to play an important role in age-related diseases (e.g. cardiovascular diseases, stroke, macular degeneration, osteoporosis, and joint disease) and in conditions such as viral infections or chronic stress (e.g. AIDS, liver diseases, and skin ulcers). Controlled activation of telomerase in normal cells can restore telomere length and thereby increase the lifespan of cells without altering their normal function or causing them to become cancerous.

A small molecule telomerase activator could find utility in the treatment of essentially all age-related diseases that involve reduced cellular proliferative capacity or sensitivity to stress related to lack of telomerase activity or shortened telomeres. In March 2005, we announced the presentation of studies showing that our small molecule telomerase activators, GRN139951 and GRN140665, enhance the functional activity of immune cells from HIV/AIDS donors.

We announced in March 2005 the formation of a new joint venture, TA Therapeutics Limited, with the Biotechnology Research Corporation (BRC) of Hong Kong. The company, based in Hong Kong, will conduct research and commercially develop products that utilize telomerase activator drugs to restore the regenerative and functional capacity of cells in various organ systems that have been impacted by senescence, injury or chronic disease.

Nuclear transfer

We acquired a significant patent estate in nuclear transfer with our acquisition in 1999 of Roslin Bio-Med Ltd., a commercial subsidiary of the Roslin Institute which pioneered the use of nuclear transfer technology for the creation of cloned animals. In April 2005, we formed a new joint venture, stART Licensing, Inc., that will manage and license a broad portfolio of intellectual property rights related to animal cloning, including the Roslin nuclear transfer cloning technology. stART Licensing is a joint

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venture between Geron and Exeter Life Sciences, Inc. We have retained all rights to the use of this technology in human cells.

The technology that stART offers has the potential to impact many fields of biotechnology product development. For human medicine, animal cloning theoretically may be used to develop animals that secrete therapeutic proteins in their milk, that produce antibodies for use as vaccines or that produce animal tissues modified for xenotransplantation. Theoretically, cloning can be used in agriculture to improve health, quality and consistency of animal herds more quickly than is possible through conventional breeding.

OUR STRATEGY

Our strategy is to exploit the value in our telomerase and hESC technologies by developing and commercializing our own therapeutic and diagnostic products in selected large-market indications as well as by forming selective collaborations and partnerships with other companies to take advantage of their financial, intellectual property, scientific and/or marketing resources. In oncology, we plan to accomplish this by continuing the clinical development of our telomerase inhibitor compounds and our telomerase cancer vaccine, while relying on our partners to advance our oncolytic virus and telomerase diagnostic product candidates through preclinical and clinical development. In human embryonic stem cell therapeutics, we plan to continue to build value by demonstrating proof-of-concept in animals for each cell type, pursuing clinical development of one or more cell types, and entering into license or partnering agreements under our hESC patent estate as appropriate.

CORPORATE INFORMATION

We were incorporated in the state of Delaware on November 28, 1990. Our principal executive offices are located at 230 Constitution Drive, Menlo Park, California 94025. Our telephone number is (650) 473-7700. Our website is *www.geron.com*. Information contained on our website does not constitute a part of this prospectus supplement.

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The offering

Common stock we are offering:

Through underwriters	6,000,000 shares
Upon exercise of Merck Warrant	2,000,000 shares
Total	8,000,000 shares
Common stock to be outstanding after this offering	63,913,730 shares
Merck & Co., Inc. warrant exercise	Concurrent with the underwritten offering, we shall issue to Merck shares of common stock with an aggregate purchase price equal to $18,000,000 in connection with the exercise of a warrant issued to Merck on July 15, 2005 (the Merck Warrant). The Merck Warrant has a per share exercise price equal to the per share price to the public in this offering.
Nasdaq National Market Symbol	GERN
Use of proceeds	We intend to use the net proceeds of this offering to fund research and development, including clinical trials of our product candidates, and for general corporate purposes. See Use of proceeds.

The information above is based on 55,913,730 shares of common stock as of August 31, 2005 and assumes the automatic exercise of the Merck Warrant concurrent with this offering. It does not include outstanding options and warrants as of August 31, 2005 as follows:

- 7,790,593 shares of our common stock issuable upon exercise of outstanding options granted under our stock option plans at a weighted average exercise price of $7.96 per share; and
- 5,335,436 shares of our common stock issuable upon exercise of outstanding warrants at a weighted average price of $11.02 per share.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of the underwriters over-allotment option to purchase up to 900,000 shares of common stock.

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Summary consolidated financial data

The tables below present our summary consolidated statement of operations and balance sheet data. We have derived our consolidated statement of operations data for the years ended December 31, 2002, 2003 and 2004 from our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2004 and incorporated by reference in this prospectus supplement and the accompanying prospectuses. We have derived our condensed consolidated balance sheet data as of June 30, 2005 and consolidated statement of operations data for each of the six months ended June 30, 2004 and 2005 from our unaudited consolidated financial statements included in our quarterly report on Form 10-Q for the quarter ended June 30, 2005 and incorporated by reference in this prospectus supplement and the accompanying prospectuses. The unaudited consolidated financial statements include, in our opinion, all adjustments (consisting only of normal recurring adjustments) that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the six months ended June 30, 2005 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2005, or any other period. You should read the summary consolidated financial data set forth below in conjunction with Management s discussion and analysis of financial condition and results of operations and with our consolidated financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectuses.

	Year ended December 31,			Six months ended June 30,	
Consolidated statement of operations data:	**2002**	**2003**	**2004**	**2004**	**2005**
	(in thousands, except share and per share amounts)				
Revenues from collaborative agreements	$ 566	$ 72	$	$	$ 51
License fees and royalties	682	1,102	1,053	614	4,679
Total revenues	1,248	1,174	1,053	614	4,730
Operating expenses:					
Research and development	29,822	25,551	30,084	13,199	13,297
Acquired in-process research technology(1)			45,150	45,150	
General and administrative	7,126	5,803	7,104	3,444	5,693
Total operating expenses	36,948	31,354	82,338	61,793	18,990
Loss from operations	(35,700)	(30,180)	(81,285)	(61,179)	(14,260)
Interest and other income	2,548	1,810	1,552	883	1,845
Conversion expense(2)		(779)			
Equity in losses of joint venture					(12)

Interest and other expense	(756)	(734)	(672)	(332)	(343)
Net loss	$ (33,908)	$ (29,883)	$ (80,405)	$ (60,628)	$ (12,770)
Basic and diluted net loss per share:					
Net loss per share	$ (1.37)	$ (0.97)	$ (1.79)	$ (1.41)	$ (0.23)
Shares used in computing net loss per share	24,661,733	30,965,330	44,877,627	42,857,203	54,738,464

(1) In March 2004, we issued 5,000,000 shares of Geron common stock to Argos Therapeutics, Inc. (formerly Merix Bioscience, Inc.) in conjunction with the acquisition of a co-exclusive right under patents controlled by

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Argos for the use of defined antigens in therapeutic cancer vaccines. We expensed the value of the common stock of $45,150,000 as acquired in-process research technology expense at the time of the acquisition since the rights acquired were for technology which had not yet reached technological feasibility.

(2) *In May 2003, we modified the terms of the remaining series D convertible debentures and warrants, and as a result, we recognized $779,000 as conversion expense related to this modification.*

	As of June 30, 2005	
Condensed consolidated balance sheet data:	**Actual**	**As adjusted(1)**
	(in thousands)	
Cash, cash equivalents, restricted cash and marketable securities	$ 127,039	$ 195,299
Current assets	132,172	200,432
Working capital	126,559	194,819
Long-term liabilities	458	458
Stockholders equity	131,868	200,128

(1) *As adjusted to reflect the sale of the 6,000,000 shares being offered through the underwriters and the 2,000,000 shares being sold upon exercise of the Merck Warrant, and the receipt of net proceeds of $68.3 million from the sale of the underwritten shares (after deducting underwriting discounts and commissions and our expenses) and the exercise of the Merck Warrant.*

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Risk factors

Our business is subject to various risks, including those described below. You should carefully consider the following risks, together with all of the other information included in this prospectus supplement, the accompanying prospectuses and the documents incorporated by reference before investing in our common stock. Any of these risks could materially adversely affect our business, operating results and financial condition.

RISKS RELATED TO OUR BUSINESS

Our business is at an early stage of development.

Our business is at an early stage of development, in that we do not yet have product candidates in late-stage clinical trials or on the market. One of our product candidates, a telomerase therapeutic cancer vaccine, is being studied in a Phase 1-2 clinical trial being conducted by an academic institution. We are identifying patients for enrollment in a Phase 1-2 clinical trial of our lead anti-cancer compound, GRN163L, in patients with chronic lymphocytic leukemia. We have no other product candidates in clinical testing. Our ability to develop product candidates that progress to and through clinical trials is subject to our ability to, among other things:

- succeed in our research and development efforts;
- select therapeutic compounds for development;
- obtain required regulatory approvals;
- manufacture product candidates; and
- collaborate successfully with clinical trial sites, academic institutions, physician investigators, clinical research organizations and other third parties.

Potential lead drug compounds or other product candidates and technologies will require significant preclinical and clinical testing prior to regulatory approval in the United States and other countries. Our product candidates may prove to have undesirable and unintended side effects or other characteristics adversely affecting their safety, efficacy or cost-effectiveness that could prevent or limit their commercial use. In addition, our product candidates may not prove to be more effective for treating disease or injury than current therapies. Accordingly, we may have to delay or abandon efforts to research, develop or obtain regulatory approval to market our product candidates. In addition, we will need to determine whether any of our potential products can be manufactured in commercial quantities at an acceptable cost. Our research and development efforts may not result in a product that can be approved by regulators or marketed successfully. Because of the significant scientific, regulatory and commercial milestones that must be reached for any of our development programs to be successful, any program may be abandoned, even after we have expended significant resources on the program, such as our investments in telomerase technology and human embryonic stem cells, which could cause a sharp drop in our stock price.

The science and technology of telomere biology and telomerase, human embryonic stem cells, and nuclear transfer are relatively new. There is no precedent for the successful commercialization of product candidates based on our technologies. These development programs are therefore particularly risky. In addition, we, our licensees or our collaborators must undertake significant research and development activities to develop product candidates based on our technologies, which will require additional funding and may take years to accomplish, if ever.

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Risk factors

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

We have incurred operating losses every year since our operations began in 1990. As of June 30, 2005, our accumulated deficit was approximately $348.8 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 development efforts and clinical testing 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 revenues from our licensing arrangements. We may be unsuccessful in entering into any new corporate collaboration that results in revenues. We do not expect that the revenues generated from these arrangements will be sufficient alone to continue or expand our research or development activities and otherwise sustain our operations.

While we receive revenue from licenses of diagnostic product candidates, telomerase-immortalized cell lines and other licensing activities, we do not currently expect to receive sufficient revenues from these licenses to sustain our operations. Our ability to continue or expand our research activities and otherwise sustain our operations is dependent on our ability, alone or with others, to, among other things, manufacture and market therapeutic products.

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. Even if we do become profitable, we cannot assure you that we would be able to sustain or increase profitability on a quarterly or annual basis.

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

We will require substantial capital resources in order to conduct our operations and develop our candidates, and we cannot assure you that our existing capital resources, proceeds from this offering and the exercise of the Merck Warrant, interest income and equipment financing arrangements will be sufficient to fund our current and 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 in 2005 and beyond;
- the magnitude and scope of our research and development programs;
- the progress we make in our research and development programs and in preclinical development and clinical trials;
- our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- the number and type of product candidates that we pursue;
- the time and costs involved in obtaining regulatory approvals; and
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims.

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Risk factors

We do not have any committed sources of capital. 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. 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. Additional equity financings, if we obtain them, could result in significant dilution to stockholders. Further, in the event that additional funds are obtained through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies, product candidates or products that we would otherwise seek to develop and commercialize ourselves. If sufficient capital is not available, we may be required to delay, reduce the scope of or eliminate one or more of our programs, any of which could have a material adverse effect on our business.

We do not have experience as a company conducting large-scale clinical trials, or in other areas required for the successful commercialization and marketing of our product candidates.

We will need to receive regulatory approval for any product candidates before they may be marketed and distributed. Such approval will require, among other things, completing carefully controlled and well-designed clinical trials demonstrating the safety and efficacy of each product candidate. This process is lengthy, expensive and uncertain. We currently have no experience as a company in conducting large-scale, late stage clinical trials, and our experience with early-stage clinical trials with small numbers of patients is limited. Such trials would require either additional financial and management resources, or reliance on third-party clinical investigators or clinical research organizations (CROs). Relying on third-party clinical investigators or CROs may force us to encounter delays that are outside of our control. We also do not currently have marketing and distribution capabilities for our product candidates. Developing an internal sales and distribution capability would be an expensive and time-consuming process. We may enter into agreements with third parties that would be responsible for marketing and distribution. However, these third parties may not be capable of successfully selling any of our product candidates.

Because we or our collaborators must obtain regulatory approval to market our products in the United States and other countries, we cannot predict whether or when we will be permitted to commercialize our products.

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 creating commerc