

STEMCELLS INC  
Form 10-K/A  
April 06, 2004

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**SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

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**FORM 10-K /A**

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

**FOR THE FISCAL YEAR ENDED DECEMBER 31, 2002**

**OR**

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

**COMMISSION FILE NUMBER 0-19871**

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**STEMCELLS, INC.**

(Exact name of Registrant as specified in its charter)

DELAWARE  
(State or other jurisdiction

94-3078125  
(I.R.S. Employer Identification  
No.)

of incorporation or organization)

**3155 PORTER DRIVE, PALO ALTO, CA 94304**

(Address of principal offices) (zip code)

Registrant's telephone number, including area code: (650) 475 3100

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

NONE

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

**COMMON STOCK, \$.01 PAR VALUE  
JUNIOR PREFERRED STOCK PURCHASE RIGHTS**

Title of class

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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 /X/ No / /

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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. /X/

Indicate by check mark whether the registrant is an accelerated filer as defined in Exchange Act Rule 126(2). Yes / / No /X/

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Aggregate market value of Common Stock held by non-affiliates at June 30, 2002: \$36,808,269. Inclusion of shares held beneficially by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of management policies of the registrant, or that such person is controlled by or under common control with the Registrant.

Common stock outstanding at March 20, 2003: 26,957,856 shares.

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Portions of the registrant's definitive Proxy Statement relating to the registrant's 2003 Annual Meeting of Stockholders to be filed with the Commission pursuant to Regulation 14A are incorporated by reference in Part III of this report.

**FORWARD LOOKING STATEMENTS**

THIS REPORT CONTAINS FORWARD-LOOKING STATEMENTS AS DEFINED UNDER THE FEDERAL SECURITIES LAWS. ACTUAL RESULTS COULD VARY MATERIALLY. FACTORS THAT COULD CAUSE ACTUAL RESULTS TO VARY MATERIALLY ARE DESCRIBED HEREIN AND IN OTHER DOCUMENTS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. READERS SHOULD PAY PARTICULAR ATTENTION TO THE CONSIDERATIONS DESCRIBED IN THE SECTION OF THIS REPORT ENTITLED "MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS" AS WELL AS EXHIBIT 99 TO THIS REPORT, ENTITLED "CAUTIONARY FACTORS RELEVANT TO FORWARD-LOOKING INFORMATION." READERS SHOULD ALSO CAREFULLY REVIEW ANY RISK FACTORS DESCRIBED IN OTHER DOCUMENTS WE FILE FROM TIME TO TIME WITH THE SECURITIES AND EXCHANGE COMMISSION.

This amendment on Form 10-K/A amends the Annual Report of the Company on Form 10-K previously filed for the year ended December 31, 2002. This Annual Report on Form 10-K/A is filed in connection with the Company's restatement of its consolidated financial statements for the years ended December 31, 2002 and 2001. The Company has determined that it needs to restate the treatment of its continuing cost of operating the Company's former corporate headquarters in Rhode Island in line with applicable accounting guidance, including EITF issue 94-3(B) - Other Costs to Exit an Activity. EITF issue 94-3(B) requires that, instead of expensing costs as incurred, the Company accrue what it can reasonably estimate as its carrying cost to an estimated fully leased or disposal date. Accordingly, in its restated consolidated financial statements for the years ended December 31, 2002 and 2001, based on information estimated as of those dates, the Company has revised its estimate and accrued an estimated \$775,000 and \$575,000, respectively as wind-down expenses (See note 9 to the consolidated financial statements)

As a result of an amendment to the Company's lease on its current facilities in California, part of the lease incentive amounting to \$1,079,201 had been recognized as income received in 2002 instead of being deferred and recognized over the lease period. The consolidated financial statements for the year ended December 31, 2002 are being restated to defer this amount at December 31, 2002 over the remainder of the lease. (See note 6 to the financial statements.)

In addition, in the Consolidated Statements of Operations for the years ended December 31, 2002, the line for Dividends to preferred shareholders was inadvertently omitted. This amendment on Form 10-K/A rectifies the omission.

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### **ITEM 1. BUSINESS**

#### **Overview**

We are engaged in research aimed at the development of therapies that would use stem and progenitor cells to treat, and possibly cure, human diseases and injuries such as Parkinson's disease, hepatitis, diabetes, spinal cord injuries, stroke, and some metabolic genetic disorders. The body uses certain key cells known as stem cells to produce all the functional mature cell types found in normal organs of healthy individuals. Progenitor cells are cells that have already developed from the stem cells, but can still produce one or more types of mature cells within an organ. We use cells derived from fetal or adult sources, and are not developing embryonic stem cells for therapeutic use. Neither are we involved in any activity directed toward human cloning; our programs are all directed toward the use of tissue-derived cells for treating or curing diseases and injuries.

Many diseases, such as Alzheimer's, Parkinson's, and other degenerative diseases of the brain or nervous system, involve the failure of organs that cannot be transplanted. Other diseases, such as hepatitis and diabetes, involve organs such as the liver or pancreas that can be transplanted, but there is a very limited supply of those organs available for transplant. We estimate, based on information available to us from the Alzheimer's Association, the Alzheimer's Disease Education & Referral Center (National Institute on Aging), the National Institutes of Health, the Centers for Disease Control and Prevention, Duke University, the American Liver Foundation, and the Parkinson's Action Network, that these neural, liver and pancreatic conditions affect more than 47 million people in the United States and account for more than \$200 billion annually in health care costs.

We believe that our stem cell technologies, if successfully developed, may provide the basis for effective therapies for these and other conditions. Our aim is to return patients to productive lives and significantly reduce the substantial health care costs often associated with these diseases and disorders.

Our stem cell discovery engine relies upon our state of the art cell sorting capabilities and our library of proprietary monoclonal antibodies to human proteins. Using this library of monoclonal antibodies, we have successfully identified, purified, and characterized the human central nervous system stem cell.

We have also used our proprietary monoclonal antibodies to make significant advances in our search for stem or progenitor cells of the liver, for which we have filed a patent application, and for the pancreas, by identifying markers, some of which are novel, on the surface of cells so they can be isolated and tested to determine whether they are stem cells. We have established an intellectual property position in all three areas of our stem cell research—the nervous system, the liver and the pancreas—by patenting our discoveries and entering into exclusive in-licensing arrangements. We believe that, if successfully developed, our platform of stem cell technologies may create the basis for therapies that would address a number of conditions with significant unmet medical needs. We are concentrating our in-house efforts on our neural and liver programs and, for the present, pursuing work on the pancreas primarily through an external collaborator.

#### **Cell Therapy Background**

##### *Role of Cells in Human Health and Traditional Therapies*

Cells maintain normal physiological function in healthy individuals by secreting or metabolizing substances, such as sugars, amino acids, neurotransmitters and hormones, which are essential to life. When cells are damaged or destroyed, they no longer produce, metabolize or accurately regulate those substances. Impaired cellular function is associated with the progressive decline common to many degenerative diseases of the nervous system, such as Parkinson's disease and Alzheimer's disease. Recent advances in medical science have identified cell loss or impaired

cellular function as leading causes of degenerative diseases. Biotechnology advances have led to the identification of some of the specific substances or proteins that are deficient. While administering these substances or proteins as medication does overcome some of the limitations of traditional pharmaceuticals such as lack of specificity, there is no existing technology that can deliver them to the precise sites of action and in the appropriate physiological regulation and quantities or for the duration required to cure the degenerative condition. Cells, however, can do this naturally. As a result, investigators have considered supplementing the failing cells that are no longer producing the needed substances or proteins by implanting stem or

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progenitor cells. Where there has been irreversible tissue damage or organ failure, transplantation of these stem or progenitor cells offers the possibility of generating new and healthy mature cells, thus potentially restoring the organ function and the patient's health.

### ***The Potential of our Tissue-Derived Stem Cell-Based Therapy***

We believe that, if successfully developed, stem cell-based therapy—the use of stem or progenitor cells to treat diseases—has the potential to provide a broad therapeutic approach comparable in importance to traditional pharmaceuticals and genetically engineered biologics.

Stem cells are rare and only available in limited supply, whether from the patients themselves or from donors. Cells obtained from the same person who will receive them may be abnormal if the patient is ill or the tissue is contaminated with disease-causing cells. Also, the cells can often be obtained only through significant surgical procedures. The challenge, therefore, has been three-fold:

- 1) to identify the stem cells;
- 2) to create techniques and processes that can be used to expand these rare cells in sufficient quantities for effective transplants; and
- 3) to establish a bank of normal human stem or progenitor cells that can be used for transplantation into individuals whose own cells are not suitable because of disease or other reasons.

We have discovered, and patented the use of, monoclonal antibodies to markers on the cell surface that identify the human central nervous system, or CNS stem cells. This allows us to purify them and eliminate other unwanted cell types. We have also developed a process, based on a proprietary *in vitro* culture system in chemically defined media, and demonstrated that this process reproducibly grows normal human CNS, stem and progenitor cells. We believe this is the first reproducible process for growing normal human CNS stem cells. Together, these discoveries enable us to select normal human CNS stem cells and to expand them in culture to produce a large number of pure stem cells. This process facilitates the banking of large quantities of individual vials of these cells, which could then be used for distribution to transplant centers worldwide for administration to patients.

Because these cells have not been genetically modified, they may be especially suitable for transplantation and may provide a safer and more effective alternative to therapies that are based on cells derived from cancer cells, from cells modified by a cancer gene to make them grow, from an unpurified mixture of many different cell types, or from animal derived cells. We believe our proprietary stem cell technologies may enable therapies to replace specific cells that have been damaged or destroyed, permitting the restoration of function through the replacement of normal cells where this has not been possible in the past. In our research, we have shown that stem cells of the central nervous system transplanted into hosts are accepted, migrate, and successfully specialize to produce mature neurons and glial cells.

More generally, because the tissue-derived stem cell is the pivotal cell that produces all the functional mature cell types in an organ, we believe these cells, if successfully identified and developed for transplantation, may serve as platforms for five major areas of regenerative medicine and biotechnology:

- tissue repair and replacement,
- correction of genetic disorders,



- drug discovery and screening,
- gene discovery and use, and
- diagnostics.

We intend to pursue a series of non-exclusive agreements whereby third parties would have access to our cells for use in diagnostics, gene discovery and use, drug discovery and screening, and correction of genetic disorders, while in

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connection with tissue repair and replacement, we intend to enter into exclusive agreements with larger entities for the development of the technology and use of the cells in transplantation on a disease-specific basis.

### **Our Stem Cell Technology Platforms**

Stem cells have two defining characteristics:

- some of the cells developed from stem cells produce all the kinds of mature cells making up the particular organ; and
- they self renew that is, other cells developed from stem cells are themselves new stem cells, thus permitting the process to continue again and again.

Stem cells are known to or thought to exist for many systems of the human body, including the blood and immune system, the central and peripheral nervous systems (including the brain), and the liver, pancreas endocrine, and the skin systems. These cells are responsible for organ regeneration during normal cell replacement and, to a more or less limited extent, after injury. We believe that further research and development will allow stem cells to be cultivated and administered in ways that enhance their natural function, so as to form the basis of therapies that will replace specific subsets of cells that have been damaged or lost through disease, injury or genetic defect.

We also believe that the person or entity that first identifies and isolates a stem cell and defines methods to culture any of the finite number of different types of human stem cells will be able to obtain patent protection for the methods and the composition, making the commercial development of stem cell treatment and possible cure of currently intractable diseases financially feasible.

Our strategy is to be the first to identify, isolate and patent multiple types of human stem and progenitor cells with commercial importance. Our portfolio of issued patents includes a method of culturing normal human central nervous system stem and progenitor cells in our proprietary chemically defined medium, and our published studies show that these cultured and expanded cells give rise to all three major cell types of the central nervous system. In rodents, we have shown that these cells exhibit the unique properties of stem cells: They migrate and colonize throughout the organ from which they were derived and mature into the specialized cells, such as neurons and glial cells, that are normally found in that region of the organ.

We have published the results of a study that showed that human central nervous system stem cells can be successfully isolated by markers present on the surface of freshly obtained brain cells. We believe this is the first reproducible process for isolating highly purified populations of well-characterized normal human central nervous system stem cells. We own or have exclusive licenses to U.S. patents on this process, and our composition of matter patent application is pending. Because the cells are highly purified and have not been genetically modified, they may be especially suitable for transplantation and may provide a safer and more effective alternative than therapies that are based on cells derived from cancer cells, or from cells modified by a cancer gene to make them grow, or from an unpurified mixture of many different cell types or cells derived from animals. We are the exclusive licensee of a U.S. patent issued in December, 2002, covering the transplantation of central nervous system stem cells (U.S. Patent No. 6,497,872, Neural transplantation using proliferated multipotent neural stem cells and their progeny ). We have also filed patent applications covering the growth and expansion of these purified normal human central nervous system cells.

In 2001, we also announced the results of a new study (published in 2002) in which we used novel human specific monoclonal antibodies to demonstrate the extent of engraftment, migration and site-specific formation of the human neural stem cells into mature neurons. These neuronal cells integrate in a 3-dimensional array within the normal architecture of the mouse brain. Astrocytes and oligodendrocytes, the other two principle types of central nervous

system cells, are also generated from the human neural stem cells.

Neurological disorders such as Parkinson's disease, Alzheimer's disease, the side effects of stroke, and the mental retardation that accompanies genetic disorders such as Gaucher's Disease, Tay-Sachs Disease, and Batten's Disease affect a significant portion of the U.S. population and there currently are no effective long-term therapies for them. We believe that therapies based on our process for identifying, isolating and culturing neural stem and progenitor cells may be useful

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in treating such diseases. We are continuing our research into, and have initiated the development of, human central nervous system stem and progenitor cell-based therapies for some diseases of this kind.

We continue to advance our research programs to discover the liver stem cell and, through an outside collaborator, the islet stem cell in the human pancreas. Liver stem cells may be useful in the treatment of diseases such as hepatitis, liver failure, blood-clotting disorder, cirrhosis of the liver and liver cancer. Islet cells are the pancreas cells that produce insulin, so pancreatic stem cells may be useful in the treatment of Type 1 diabetes and those cases of Type 2 diabetes where insulin secretion is defective.

An important element of our stem cell discovery program is the further development of intellectual property positions with respect to stem and progenitor cells. We have also obtained rights to certain inventions relating to stem cells from, and are conducting stem cell related research at, several academic institutions. We expect to expand our search for new stem and progenitor cells and to seek to acquire rights to additional inventions relating to stem and progenitor cells from third parties.

### **Expected Advantages of Our Stem Cell Technology**

#### *No Other Treatment*

To our knowledge, no one has developed an FDA-approved method for replacing lost or damaged tissues from the human nervous system. Replacement of tissues in other areas of the human body is mainly limited to those few sites, such as bone marrow or peripheral blood cell transplants, where transplantation of the patient's own cells is now feasible. In a few additional areas, including the liver, transplantation of donor organs is now used, but is limited by the scarcity of organs available through donation. We believe that our stem cell technologies have the potential to reestablish function in at least some of the patients who have suffered the losses referred to above.

#### *Replaced Cells Provide Normal Function*

Because stem cells can duplicate themselves, or self-renew, and specialize into the multiple kinds of cells that are commonly lost in various diseases, transplanted stem cells may be able to migrate limited distances to the proper location within the body, to expand and specialize and to replace damaged or defective cells, facilitating the return to proper function. We believe that such replacement of damaged or defective cells by functional cells is unlikely to be achieved with any other treatment.

### **Research and Development Programs**

#### *Overview of Strategy*

We have devoted substantial resources to our research programs to isolate and develop a series of stem and progenitor cells that we believe can serve as a basis for replacing diseased or injured cells. Our efforts to date have been directed at methods to identify, isolate and culture large varieties of stem and progenitor cells of the human nervous system, liver and pancreas and to develop therapies utilizing these stem and progenitor cells.

The following table lists the potential therapeutic indications for, and current status of, our primary research and product development programs and projects. The table is qualified in its entirety by reference to the more detailed descriptions of such programs and projects appearing elsewhere in this report. We continually evaluate our research and product development efforts and reallocate resources among existing programs or to new programs in light of experimental results, commercial potential, availability of third party funding, likelihood of near-term efficacy, collaboration success or significant technology enhancement, as well as other factors. Our research and product

development programs are at relatively early stages of development and will require substantial resources to commercialize.

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**Research and Product Development Programs**

<b>Program Description and Objective</b>	<b>Stage/Status(1)</b>
<i>Human Neural Stem Cell</i>	<i>Preclinical</i>
Repair or replace damaged central nervous system tissue (including spinal cord, stroke-damaged tissue, and tissue affected by certain genetic disorders)	<ul style="list-style-type: none"> <li>- Demonstrated the ability to isolate neurosphere-initiating stem cells from human brain</li>   <li>- Demonstrated <i>in vitro</i> the ability to initiate and expand stem cell-containing human neural cultures and specialization into three types of central nervous system cells</li>   <li>- Demonstrated in rodent studies that transplanted human brain-derived stem cells are accepted and properly specialized into the three major cell types of the central nervous system</li>   <li>- Commenced preclinical testing of human neural stem cells in well-characterized small animal models of human diseases</li> </ul>
<i>Liver Stem Cell</i>	<i>Research</i>
Repair or replace liver tissue damaged or destroyed by cirrhosis and certain metabolic genetic diseases	<ul style="list-style-type: none"> <li>- Demonstrated the ability to isolate a liver stem cells from human brain</li>   <li>- Identified <i>in vitro</i> culture assay for growth of human liver progenitor cells that express markers for both bile duct cells and hepatocytes</li>   <li>- Showed that the <i>in vitro</i> culture of human liver progenitor cells can also grow human hepatitis virus</li>   <li>- Demonstrated the engraftment and survival of human liver cells in an <i>in vivo</i> mouse model</li> </ul>
<i>Pancreas Islet Stem Cell</i>	<i>Research</i>
Repair or replace damaged pancreas islet tissue	<ul style="list-style-type: none"> <li>- Identified a novel gene on the surface of regenerating mouse pancreas cells.</li>   <li>- Commenced testing enriched population of those mouse cells in <i>in vitro</i> and <i>in vivo</i> small animal model</li> </ul>

- Identified markers on the surface of a rare population of human pancreatic cells

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(1) Research refers to early stage research and product development activities *in vitro*, including the selection and characterization of product candidates for preclinical testing. Preclinical refers to further testing of a defined product candidate *in vitro* and in animals prior to clinical studies.

Our portfolio of stem cell technology results from our exclusive licensing of central nervous system, stem and progenitor cell technology, animal models for the identification and/or testing of stem and progenitor cells and our own research and development efforts to date. We believe that therapies using stem cells represent a fundamentally new approach to the treatment of diseases caused by lost or damaged tissue. We have assembled an experienced team of scientists and scientific advisors to consult with and advise our scientists on their continuing research and development of stem and progenitor cells. This team includes founding scientists Irving L. Weissman, M.D., of Stanford University, Fred H. Gage, Ph.D., of The Salk Institute, and David Anderson, Ph.D., of the California Institute of Technology, as well as other occasional consultants including William C. Mobley, M.D., Ph.D., Ben Barres, Ph.D., and Seung Kim, M.D., Ph.D., all of Stanford University.

### *Neural Program*

We began our work with central nervous system stem and progenitor cell cultures in collaboration with NeuroSpheres, Ltd., in 1992. We believe that NeuroSpheres was the first to invent these cultures. We are the exclusive, worldwide licensee from NeuroSpheres to such inventions and associated patents and patent applications for all uses, including transplantation in the human body, as embodied in these patents. See License Agreements and Sponsored Research Agreements NeuroSpheres, Ltd.

In 1997, our scientists invented a reproducible method for growing human CNS stem and progenitor cells in cultures. In preclinical *in vivo* and early *in vivo* studies, we demonstrated that these cells specialize into all three of the cell types of the central nervous system. Because of these results, we believe that these cells may form the basis for replacement of cells lost in certain degenerative diseases. We are continuing research into, and have initiated the development of, our human CNS stem and progenitor cell cultures. We have initiated the cultures and demonstrated that these cultures can be expanded for a number of generations *in vivo* in chemically defined media. In collaboration with us, Dr. Anders Bjorklund of Lund University, Sweden, showed that cells from these cultures can be successfully transplanted and accepted into the brains of rodents where they subsequently migrated and specialized into the appropriate cell types for the site of the brain into which they were placed.

We hold a substantial portfolio of issued and allowed US patents in the neural field. See **Patents, Proprietary Rights And Licenses**.

In 2000, using our proprietary markers on the surface of the cell, our researchers succeeded in identifying, isolating and purifying human CNS stem cells from brain tissue. We believe that this was the first study to show a reproducible process for isolating highly purified populations of well-characterized normal human CNS stem cells. Because the cells are normal human CNS stem cells and have not been genetically modified, they may be especially suitable for transplantation and may provide a safer and more effective alternative to therapies that are based on cells derived from cancer cells or from an unpurified mix of many different cell types, or from animal derived cells. Even more importantly, in our view, our researchers have been able to take these purified and expanded stem cells and transplant them into the normal brains of immunodeficient mouse hosts, where they take hold and grow into neurons and glial cells.

During the course of this long-term study, the transplanted human CNS stem cells survived for as long as one year and migrated to specific functional domains of the host brain, with *no sign* of tumor formation or adverse effects on the animal recipients; moreover, the cells were still dividing. These findings show that when CNS stem cells isolated and cultured with our proprietary processes are transplanted, they adopt the characteristics of the host brain and act



like normal stem cells. In other words, the study suggests the possibility of a continual replenishment of normal human brain cells.

The company has established a number of strategic collaborations in the neural field to assess the effects of transplanting the human CNS stem cells into preclinical animal models.

Collaborators in the Neural Field:

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<b>Investigator</b>	<b>Affiliation</b>	<b>Area of Research</b>
Dr. Aileen Anderson	Reeve-Irvine Center University of California, Irvine	Spinal cord injury
Dr. George Carlson	McLaughlin Research Institute Great Falls, MT	Alzheimer's and prion disease
Dr. William Mobley	Department of Neurology Stanford University	Genetic disorders affecting the nervous system
Dr. Jay Pasrichia	Department of Gastroenterology University of Texas Medical Branch, Galveston	Neurodegenerative disorders of the gut
Dr. Gary Steinberg	Department of Neurosurgery; Stanford Stroke Center Stanford University	Stroke

As noted above, human CNS stem and progenitor cells harvested and purified and expanded using our proprietary processes may be useful for creating therapies for the treatment of degenerative brain diseases such as Parkinson's and Alzheimer's diseases. These conditions affect about 5 million people in the United States and there are no effective long-term therapies currently available. We believe the ability to purify human brain stem cells directly from fresh tissue is important because:

- it provides an enriched source of normal stem cells, not contaminated by other unwanted or diseased cell types, that can be expanded in culture without fear of also expanding some unwanted cell types;
- it opens the way to a better understanding of the properties of these cells and how they might be manipulated to treat specific diseases. For example, in certain genetic diseases such as Tay Sachs and Batten's, a key metabolic enzyme required for normal development and function of the brain is absent. Brain-derived stem cells might produce enough enzyme after transplantation to degrade the toxic product build-up, or, if not enough enzyme is made naturally, the cells might be genetically modified to produce those proteins. The native or modified brain stem cells could be transplanted into patients with these genetic diseases;
- the efficient acceptance of these non-transformed normal human stem cells into host brains means that the cell product can be tested in animal models for its ability to correct deficiencies caused by various human neurological diseases. This technology could also provide a unique animal model for the testing of drugs that act on human brain cells either for effectiveness of the drug against the disease or its toxicity to human nerve cells.

*Liver Program*

We initiated our discovery work for the liver stem and progenitor cell through a sponsored research agreement with Markus Grompe, Ph.D., of Oregon Health Sciences University. Dr. Grompe's work focuses on the discovery and development of a suitable method for identifying and assessing liver stem and progenitor cells for use in transplantation. We have also obtained rights to a novel mouse model of liver failure for evaluating cell transplantation developed by Dr. Grompe: the FAH transgenic mouse lacks a key enzyme (FAH, or fumaryl-acetoacetate hydrolase), which results in build-up of a toxic substance which causes liver damage. In addition, we obtained an exclusive license to U.S. Patent No. 6,132,708, claiming a method of regenerating a functional liver by transplantation of pancreas cells in mammals, including humans.

Approximately 1 in 10 Americans suffers from diseases and disorders of the liver for many of which there are currently no effective, long-term treatments. Our researchers continue to advance methods for establishing enriched cell populations suitable for transplantation in preclinical animal models. We are focused on discovering and utilizing proprietary methods to identify and isolate liver stem and progenitor cells and to evaluate these cells in culture and in preclinical animal models.

Our researchers have devised a culture assay that we use in our efforts to identify liver stem and progenitor cells. In addition to supporting the growth of an early human liver bipotent progenitor cell, it is also possible to infect this

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culture with human hepatitis virus, providing a valuable system for study of the virus. This technology could also provide a unique *in vitro* model for the testing of drugs that act on, or are metabolized by, human liver cells.

There have been reports in the scientific community that bone marrow transplant patients show evidence of donor derived liver cells (hepatocytes). Our scientists (in conjunction with Markus Grompe, OHSU) showed that bone marrow derived hepatocytes are functional and can rescue mice in liver failure. Moreover, the only cells within the mouse bone marrow that are able to produce hepatocytes are highly purified hematopoietic stem cells that is, stem cells of the blood and immune system, often referred to as HSCs. We believe that these studies in stem cell plasticity are the most rigorous studies performed to date and show the possibility of transitioning from one cell type to another. More recent studies would suggest that the ability of HSCs to generate non-blood cell types may also be a consequence of a fusion event between the donor HSC and a host cell. Based upon recent data, we have decided not to pursue the mechanism of these events but rather to continue our efforts to identify and isolate the liver engrafting cell for a more robust generation of functional hepatocytes.

In parallel with the studies performed using mouse HSCs, our scientist have performed *in vitro* studies on human liver cells. To date, they have identified proprietary monoclonal antibodies that enrich for distinct subsets of fetal and/or pediatric and/or adult liver cells. These antibody enriched cells when tested in our *in vitro* culture assay result in the production of human serum albumin, a measure of hepatocyte generation. Currently, efforts are focused on demonstrating the engraftment and differentiation of the antibody enrich human liver cells in our *in vivo* assays. Further analysis and enrichments are in progress.

### *Pancreas Program*

Our pancreas discovery research program, which we are currently pursuing the pancreas program through an external collaborator and not in house, is directed to the identification, isolation and culturing of the pancreas stem and progenitor cells. We obtained an exclusive, worldwide license from The Scripps Research Institute (Scripps), to novel technology developed by Dr. Nora Sarvetnick, Ph.D., which may facilitate the identification and isolation of those cells by using a mouse model that continuously regenerates the pancreas. U.S. Patent Number 6,242,666 was issued on the animal model on June 5, 2001. We believe that stem cells produce the regeneration, in which case this animal model may be useful for identifying specific markers on the cell surface unique to the pancreas stem cells.

We believe this may lead to the development of cell-based treatments for Type 1 diabetes and that portion of Type 2 diabetes characterized by defective secretion of insulin. We also obtained licenses from Scripps to novel markers on the cell surface identified by Dr. Sarvetnick and her research team as being unique to the pancreas islet stem cell, for which a US patent application has been allowed. This gene is expressed on regenerating mouse pancreas cells and is unique. Antibodies to the protein encoded by this gene have been generated and used to enrich for cell populations expressing this marker for testing in vitro and in animal models. .

The company has identified, in its library of proprietary monoclonal antibodies, key monoclonal antibodies that identify a rare subset of human pancreatic cells that may be candidate stem cells. For the present, the company is not pursuing its pancreas program in-house. In 2002, we established a collaboration with Dr. Seung Kim of Stanford University to pursue other avenues to identify an insulin producing cell. Dr. Kim's laboratory is studying the developmental biology and controlling events of generating insulin producing cells. His laboratory has recently published an article on the conversion of embryonic stem cells to insulin producing cells and is pursuing several lines of research in this area.

### **Subsidiary**

*StemCells California, Inc.*

On September 26, 1997, we acquired by merger StemCells California, Inc., a California corporation, in exchange for 1,320,691 shares of our common stock and options and warrants for the purchase of 259,296 common shares. StemCells California remains our wholly-owned subsidiary, and the owner or licensee of most of our intellectual property. The members of its Board of Directors are Irving L. Weissman, M.D., David J. Anderson, Ph.D., and Fred H. Gage, Ph.D., who were the founders of StemCells California, as well as John J. Schwartz, Ph.D. and Martin McGlynn.

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Drs. Weissman and Schwartz and Mr. McGlynn are also members of the Board of the parent company; Mr. McGlynn is President of StemCells California as well as President and CEO of StemCells, Inc.

## **License Agreements**

We have entered into a number of research-plus-license agreements with academic organizations. The research components of these have been concluded, and have resulted in a number of license agreements for resultant technology. Under the license agreements, we are typically subject to obligations of due diligence and the requirement to pay royalties on products that use patented technology licensed under such agreements. The organizations with which we have such agreements include The Scripps Research Institute, the California Institute of Technology (Cal Tech), and the Oregon Health Sciences University (OHSU). The license agreements with these institutions relate largely to stem or progenitor cells and or to processes and methods for the isolation, identification, expansion or culturing of stem or progenitor cells. Generally speaking, these license agreements will terminate upon expiration, revocation or invalidation of the patents licensed to us, unless governmental regulations require a shorter term. They also will terminate earlier if we breach our obligations under the agreement and do not cure the breach, or if we declare bankruptcy, and we can terminate the license agreements at any time upon notice.

In the case of Scripps, we must pay \$50,000 upon the initiation of the Phase II trial for our first product using Scripps licensed technology, and upon completion of that Phase II trial we must pay Scripps an additional \$125,000. Upon approval of the first product for sale in the market, we must pay Scripps \$250,000.

Pursuant to the terms of our license agreement with Cal Tech and our acquisition of our wholly owned subsidiary, StemCells California, we issued 14,513 shares of our common stock to Cal Tech. We issued an additional 12,800 shares of common stock to Cal Tech with a market value of approximately \$40,000 in May 2000, upon execution of an amendment adding four families of patent applications to the license agreement. We must pay an additional \$10,000 upon the issuance of the patent licensed to us under the relevant agreement and \$5,000 on the first anniversary of the issuance of the patent licensed to us under the relevant agreement. These amounts are creditable against royalties we must pay under the license agreements. The maximum royalties that we will have to pay to the California Institute of Technology will be \$2 million per year, with an overall maximum of \$15 million. Once we pay the \$15 million maximum royalty, the licenses will become fully paid and irrevocable. In August 2002 we acquired an additional license from Cal Tech to different technology, pursuant to which we issued 27,535 shares of our common stock with a market value of approximately \$35,000.

Pursuant to the terms of the license agreement with OHSU and our acquisition of StemCells California, we issued 4,838 shares of our common stock and an option to purchase up to 62,888 additional shares to OHSU with an exercise price of \$.01 per share. The option has vested as to 9,675 shares for which shares were issued on March 31, 2002; the remaining option was terminated and we issued 4,000 shares of our common stock, with a market value of approximately \$3,900, to OHSU in January 2003, pursuant to an amendment to the license agreement.

In April, 2002, we issued a license to BioWhittaker, Inc., for the exclusive right to make, sell and distribute one of our proprietary cells for the research market only. This license is not expected to generate material revenues.

### *Signal Pharmaceuticals, Inc.*

In December 1997, we entered into two license agreements with Signal Pharmaceuticals, Inc. under which each party licensed to the other certain patent rights and biological materials for use in defined fields. Signal has now been acquired by Celgene. Each agreement with Signal will terminate at the expiration of all patents licensed under it, but the licensing party can terminate earlier if the other party breaches its obligations under the agreement or declares bankruptcy. Also, the party receiving the license can terminate the agreement at any time upon notice to the other

party. Under these agreements, we must reimburse Signal for payments it must make to the University of California based on products we develop and for 50% of certain other payments Signal must make.

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### *NeuroSpheres, Ltd.*

In March 1994, we entered into a Contract Research and License Agreement with NeuroSpheres, Ltd., which was clarified in a License Agreement dated as of April 1, 1997. Under the agreement as clarified, we obtained an exclusive patent license from NeuroSpheres in the field of transplantation, subject to a limited right of NeuroSpheres to purchase a nonexclusive license from us, which right was not exercised and has expired. We have developed additional intellectual property relating to the subject matter of the license. We entered into an additional license agreement with NeuroSpheres as of October 30, 2000, under which we obtained an exclusive license in the field of non-transplant uses, such as drug discovery and drug testing. Together, our rights under the licenses are exclusive for all uses of the technology. We made up-front payments to NeuroSpheres of 65,000 shares of our common stock in October 2000 and \$50,000 in January 2001, and we will make additional cash payments when milestones are achieved in the non-transplant field, or in any products employing NeuroSpheres patents for generating cells of the blood and immune system from neural stem cells. In addition, in October 2000 we reimbursed NeuroSpheres for patent costs amounting to \$341,000. Milestone payments would total \$500,000 for each product that is approved for market. Our agreements with NeuroSpheres will terminate at the expiration of all patents licensed to us, but can terminate earlier if we breach our obligations under the agreement and do not cure the breach, or if we declare bankruptcy. We would have a security interest in the licensed technology in the event that NeuroSpheres declares bankruptcy.

## **Manufacturing**

We believe that our facility in Palo Alto has the capacity to be used for manufacture of cells under FDA-determined clinical Good Manufacturing Practices conditions in quantities sufficient for clinical trials, and we have developed a robust and replicable process for producing and processing the cells. We are at the pre-clinical stage of our stem and progenitor cell programs, and are keeping all options open about the means by which potential future cell products will be manufactured.

## **Marketing**

Because of the early stage of our stem and progenitor cell programs, we have not yet addressed questions of channels of distribution and marketing of potential future products.

## **Patents, Proprietary Rights And Licenses**

We believe that proprietary protection of our inventions will be critical to our future business. We vigorously seek out intellectual property that we believe might be useful in connection with our products, and have an aggressive program of protecting our intellectual property. We believe that our know-how will also provide a significant competitive advantage, and we intend to continue to develop and protect our proprietary know-how. We may also from time to time seek to acquire licenses to important externally developed technologies.

We have exclusive or non-exclusive rights to a portfolio of patents and patent applications related to various stem and progenitor cells and methods of deriving and using them. These patents and patent applications relate to compositions of matter, methods of obtaining such cells, and methods for preparing, transplanting and utilizing such cells. Currently, our U.S. patent portfolio in the stem cell therapy area includes thirty-five issued U.S. patents, five of which issued in 2002. Approximately twenty-five additional patent applications are pending, two of which have been allowed. In addition, we have foreign counterparts to many of the U.S. applications and patents, more than twenty of which have been issued.

In December 1998, the US Patent and Trademark Office granted Patent No. 5,851,832, covering our methods for the human CNS cell cultures containing central nervous system stem cells, for compositions of human CNS cells



expanded by these methods, and for use of these cultures in human transplantation. These human CNS stem and progenitor cells expanded in culture may be useful for repairing or replacing damaged central nervous system tissue, including the brain and the spinal cord. U.S. Patent No. 5,968,829, entitled Human CNS Neural Stem Cells, which covers our composition of matter for human CNS stem cells, was granted in 1999, and U.S. Patent No. 6,103,530, covering our media for culturing human CNS stem cells, was granted in 2000.

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In 2002, the U.S. Patent Office issued a key strategic patent to us: U.S. Patent Number 6,468,794, entitled "Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations." The patent issued on October 22, 2002 and covers the identification and purification of the human CNS stem cell. In 2001, we were granted U.S. Patent No. 6,238,922 ( "Use of collagenase in the preparation of neural stem cell cultures" ) which described methods to advance the *in vivo* culture and passage of human CNS stem cells that result in a 100-fold increase in CNS stem and progenitor cell production after 6 passages. We believe the methodologies of these two patents together will augment our leadership position in the stem cell field by providing a reproducible proprietary method for obtaining and expanding stem cells for therapeutic uses.

Another significant patent in the neural field, of which we are the exclusive licensees, was also issued in 2002, and, we believe, may prove even more important. : We believe that U.S. Patent Number 6,497,872, entitled "Neural transplantation using proliferated multipotent neural stem cells and their progeny," covers transplanting any neural stem cells or their differentiated progeny, whether the cells have been cultured in suspension or as adherent cells, for the treatment of any disease. The patent gives us the right to exclude others from practicing the claimed invention.

These new patents, together with U.S. Patent Number 6,294,346 ( "Use of multipotent neural stem cells and their progeny for the screening of drugs and other biological agents" ), which issued September 25, 2001, have strengthened our already extensive patent portfolio and, we believe, give us the dominant intellectual property position in the field, covering methods for identification, isolation, expansion, and transplantation of neural stem cells as well as drug discovery and testing.

The following table lists our issued U.S. patents and published international patent applications:

U.S. Patent Number	Subject
<i>Owned by StemCells</i>	
5,968,829	Human CNS neural stem cells
6,103,530	Human CNS neural stem cells culture media
6,238,922	Use of collagenase in the preparation of neural stem cell cultures
6,468,794	Enriched neural stem cell populations, and methods for identifying, isolating and enriching for neural stem cells
6,498,018	Human CNS neural stem cells
<i>Licensed from NeuroSpheres</i>	
5,750,376	<i>In vitro</i> genetic modification
5,851,832	<i>In vitro</i> proliferation
5,980,885	Methods for inducing <i>in vivo</i> proliferation of precursor cells
5,981,165	

*In vitro* production of dopaminergic cells from mammalian central nervous system multipotent stem cell compositions

6,071,889	Methods for <i>in vivo</i> transfer of a nucleic acid sequence to proliferating neural cells)
6,093,531	Generation of hematopoietic cells from multipotent neural stem cells
6,165,783	Methods of inducing differentiation of multipotent neural stem cells
6,294,346	Methods for screening biological agents
6,368,854	Hypoxia-mediated neurogenesis
6,399,369	cDNA libraries derived from populations of non-primary neural cells
6,497,872	Neural transplantation using proliferated multipotent neural stem cells and their progeny

*Licensed from  
University of*

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<b>U.S. Patent Number</b>	<b>Subject</b>
<i>California, San Diego</i>	
5,766,948	Method of production of neuroblasts
6,013,521	Method of production of neuroblasts
6,020,197	Method of production of neuroblasts
6,045,807	Method of production of neuroblasts
6,265,175	Method of production of neuroblasts
<i>Licensed from the California Institute of Technology</i>	
5,589,376	Mammalian neural crest stem cells
5,629,159	Immortalization and disimmortalization of cells
5,654,183	Genetically engineered mammalian neural crest stem cells
5,672,499	Methods for immortalizing multipotent neural crest stem cells
5,693,482	<i>In vitro</i> neural crest stem cell assay
5,824,489	Methods for isolating mammalian multipotent neural crest stem cells
5,849,553	Immortalizing and disimmortalizing multipotent neural crest stem cells
5,928,947	Mammalian multipotent neural crest stem cells
5,935,811	Neuron restrictive silencer factor proteins
6,001,654	Methods for differentiating neural stem cells to neurons or smooth muscle cells (TGFb)
6,033,906	Differentiating mammalian neural stem cells to glial cells using neuregulins
6,270,990	Neuron restrictive silencer factor proteins
<i>Licensed from the Scripps Research Institute</i>	
6,242,666	An animal model for identifying a common stem/progenitor to liver cells and pancreatic cells

*Licensed from  
Oregon Health  
Sciences University*

6,132,708                      Liver regeneration using pancreas cells

<b>Published International Patent Applications</b>	<b>Subject</b>
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*Owned by  
StemCells*

WO 99/11758	Cultures of human CNS neural stem cells
WO 00/47762	Enriched neural stem cell populations and methods of identifying, isolating, and enriching neural stem cells
WO 00/50572	Use of collagenase in the preparation of neural stem cell cultures
WO 01/28574	Method for inducing <i>in vivo</i> proliferation and migration of transplanted progenitor cells in the brain

*Licensed from  
NeuroSpheres*

WO 93/01275	Mammalian central nervous system multipotent stem cell compositions
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<b>Published International Patent Applications</b>	<b>Subject</b>
WO 94/09119	Remyelination using mammalian central nervous system multipotent stem cell compositions
WO 94/10292	Biological factors useful in differentiating mammalian central nervous system multipotent stem cell compositions
WO 94/16718	Genetically engineered mammalian central nervous system multipotent stem cell compositions
WO 95/13364	<i>In situ</i> modification and manipulation of stem cells of the CNS
WO 96/15224	<i>In vitro</i> production of dopaminergic cells from mammalian central nervous system multipotent stem cell composition
WO 99/16863	Generation of hematopoietic cells
WO 99/21966	Erythropoietin-mediated neurogenesis
<i>Licensed from University of California, San Diego</i>	
WO 94/16059	Method of production of neuroblasts
<i>Licensed from the California Institute of Technology</i>	
WO 94/02593	Mammalian neural crest stem cells
WO 00/52143	Isolation and enrichment of neural stem cells from uncultured tissue based on cell-surface marker expression
<i>Licensed from The Scripps Research Institute</i>	
WO 00/36091	An animal model for identifying a common stem/progenitor to liver cells and pancreatic cells

We also rely upon trade-secret protection for our confidential and proprietary information and take active measures to control access to that information.

Our policy is to require our employees, consultants and significant scientific collaborators and sponsored researchers to execute confidentiality agreements upon the commencement of an employment or consulting relationship with us. These agreements generally provide that all confidential information developed or made known to the individual by us during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and consultants, the agreements generally provide that all inventions conceived by the individual in the course of rendering services to us shall be our exclusive property.

We have obtained rights from universities and research institutions to technologies, processes and compounds that we believe may be important to the development of our products. These agreements typically require us to pay license fees, meet certain diligence obligations and, upon commercial introduction of certain products, pay royalties. These include exclusive license agreements with NeuroSpheres, The Scripps Institute, the California Institute of Technology and the Oregon Health Sciences University, to certain patents and know-how regarding present and certain future developments in CNS, liver and pancreas stem cells. Our licenses may be canceled or converted to non-exclusive licenses if we fail to use the relevant technology or if we breach our agreements. Loss of such licenses could expose us to the risks of third party patents and/or technology. There can be no assurance that any of these licenses will provide effective protection against our competitors

The patent positions of pharmaceutical and biotechnology companies, including ours, are uncertain and involve complex and evolving legal and factual questions. The coverage sought in a patent application can be denied or significantly reduced before or after the patent is issued. Consequently, we do not know whether any of our pending

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applications will result in the issuance of patents, or if any existing or future patents will provide significant protection or commercial advantage or will be circumvented by others. Since patent applications are secret until the applications are published (usually eighteen months after the earliest effective filing date), and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we were the first to make the inventions covered by each of our pending patent applications or that we were the first to file patent applications for such inventions. There can be no assurance that patents will issue from our pending or future patent applications or, if issued, that such patents will be of commercial benefit to us, afford us adequate protection from competing products, or not be challenged or declared invalid.

In the event that a third party has also filed a patent application relating to inventions claimed in our patent applications, we may have to participate in interference proceedings declared by the United States Patent and Trademark Office to determine priority of invention, which could result in substantial uncertainties and cost for us, even if the eventual outcome is favorable to us. There can be no assurance that our patents, if issued, would be held valid by a court of competent jurisdiction.

A number of pharmaceutical, biotechnology and other companies, universities and research institutions have filed patent applications or have been issued patents relating to cell therapy, stem cells and other technologies potentially relevant to or required by our expected products. We cannot predict which, if any, of such applications will issue as patents or the claims that might be allowed. We are aware that a number of companies have filed applications relating to stem cells. We are also aware of a number of patent applications and patents claiming use of genetically modified cells to treat disease, disorder or injury. We are aware of two patents issued to a competitor claiming certain methods for treating defective, diseased or damaged cells in the mammalian CNS by grafting genetically modified donor cells from the same mammalian species.

If third party patents or patent applications contain claims infringed by our technology and such claims or claims in issued patents are ultimately determined to be valid, there can be no assurance that we would be able to obtain licenses to these patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, we may not be able to develop certain products commercially. There can be no assurance that we will not be obliged to defend ourselves in court against allegations of infringement of third party patents. Patent litigation is very expensive and could consume substantial resources and create significant uncertainties. An adverse outcome in such a suit could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties, or require us to cease using such technology.

## **Competition**

The targeted disease states for our initial products in some instances currently have no effective long-term therapies. However, we do expect that our initial products will have to compete with a variety of therapeutic products and procedures. Major pharmaceutical companies currently offer a number of pharmaceutical products to treat neurodegenerative and liver diseases, diabetes and other diseases for which our technologies may be applicable. Many pharmaceutical and biotechnology companies are investigating new drugs and therapeutic approaches for the same purposes, which may achieve new efficacy profiles, extend the therapeutic window for such products, alter the prognosis of these diseases, or prevent their onset. We believe that our products, when and if successfully developed, will compete with these products principally on the basis of improved and extended efficacy and safety and their overall economic benefit to the health care system. The market for therapeutic products that address degenerative diseases is large, and competition is intense. We expect competition to increase. We believe that our most significant competitors will be fully integrated pharmaceutical companies and more established biotechnology companies. Smaller companies may also be significant competitors, particularly through collaborative arrangements with large pharmaceutical or biotechnology companies. Many of these competitors have significant products approved or in development that could be competitive with our potential products.



Competition for any stem and progenitor cell products that we may develop may be in the form of existing and new drugs, other forms of cell transplantation, ablative and simulative procedures, and gene therapy. We believe that some of our competitors are also trying to develop stem and progenitor cell-based technologies. We expect that all of these products will compete with our potential stem and progenitor cell products based on efficacy, safety, cost and intellectual property positions.

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We may also face competition from companies that have filed patent applications relating to the use of genetically modified cells to treat disease, disorder or injury. We may be required to seek licenses from these competitors in order to commercialize certain of our proposed products, and such licenses may not be granted.

If we develop products that receive regulatory approval, they would then have to compete for market acceptance and market share. For certain of our potential products, an important success factor will be the timing of market introduction of competitive products. This is a function of the relative speed with which we and our competitors can develop products, complete the clinical testing and approval processes, and supply commercial quantities of a product to market. These competitive products may also impact the timing of clinical testing and approval processes by limiting the number of clinical investigators and patients available to test our potential products.

While we believe that the primary competitive factors will be product efficacy, safety, and the timing and scope of regulatory approvals, other factors include, in certain instances, obtaining marketing exclusivity under the Orphan Drug Act, availability of supply, marketing and sales capability, reimbursement coverage, price, and patent and technology position.

**Government Regulation**

Our research and development activities and the future manufacturing and marketing of our potential products are, and will continue to be, subject to regulation for safety and efficacy by numerous governmental authorities in the United States and other countries.

In the United States, pharmaceuticals, biologicals and medical devices are subject to rigorous Food and Drug Administration, or FDA, regulation. The Federal Food, Drug and Cosmetic Act, as amended, and the Public Health Service Act, as amended, the regulations promulgated thereunder, and other Federal and state statutes and regulations govern, among other things, the testing, manufacture, safety, efficacy, labeling, storage, export, record keeping, approval, marketing, advertising and promotion of our potential products. Product development and approval within this regulatory framework takes a number of years and involves significant uncertainty combined with the expenditure of substantial resources. In addition, the federal, state, and other jurisdictions have restrictions on the use of fetal tissue.

*FDA Approval*

The steps required before our potential products may be marketed in the United States include:

<b>Steps</b>	<b>Considerations</b>
1. Preclinical laboratory and animal tests	Preclinical tests include laboratory evaluation of the product and animal studies in specific disease models to assess the potential safety and efficacy of the product and our formulation as well as the quality and consistency of the manufacturing process.
2. Submission to the FDA of an application for an Investigational New Drug Exemption, or IND, which must become effective before U.S. human clinical trials may commence	The results of the preclinical tests are submitted to the FDA as part of an IND, and the IND becomes effective 30 days following its receipt by the FDA, as long as there are no questions, requests for delay or objections from the FDA.

3. Adequate and well-controlled human clinical trials to establish the safety and efficacy of the product

Clinical trials involve the evaluation of the product in healthy volunteers or, as may be the case with our potential products, in a small number of patients under the supervision of a qualified physician. Clinical trials are conducted in accordance with protocols that detail the

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<b>Steps</b>	<b>Considerations</b>
4. Submission to the FDA of marketing authorization applications	<p>objectives of the study, the parameters to be used to monitor safety and the efficacy criteria to be evaluated. Any product administered in a U.S. clinical trial must be manufactured in accordance with clinical Good Manufacturing Practices, or cGMP, determined by the FDA. Each protocol is submitted to the FDA as part of the IND. The protocol for each clinical study must be approved by an independent Institutional Review Board, or IRB, at the institution at which the study is conducted and the informed consent of all participants must be obtained. The IRB will consider, among other things, the existing information on the product, ethical factors, the safety of human subjects, the potential benefits of the therapy and the possible liability of the institution.</p> <p>Clinical development is traditionally conducted in three sequential phases, which may overlap:</p> <p>In Phase I, products are typically introduced into healthy human subjects or into selected patient populations to test for adverse reactions, dosage tolerance, absorption and distribution, metabolism, excretion and clinical pharmacology.</p> <p>Phase II involves studies in a limited patient population to (i) determine the efficacy of the product for specific targeted indications and populations, (ii) determine optimal dosage and dosage tolerance and (iii) identify possible adverse effects and safety risks. When a dose is chosen and a candidate product is found to be effective and to have an acceptable safety profile in Phase II evaluations, Phase III trials begin.</p> <p>Phase III trials are undertaken to conclusively demonstrate clinical efficacy and to test further for safety within an expanded patient population, generally at multiple study sites.</p> <p>The FDA continually reviews the clinical trial plans and results and may suggest changes or may require discontinuance of the trials at any time if significant safety issues arise.</p> <p>The results of the preclinical studies and clinical studies are submitted to the FDA in the form of</p>

marketing approval authorization applications.

5. FDA approval of the application(s) prior to any commercial sale or shipment of the drug. Biologic product manufacturing establishments located in certain states also

The testing and approval process will require substantial time, effort and expense. The time for approval is affected by a number of factors, including relative risks and benefits demonstrated

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<b>Steps</b>	<b>Considerations</b>
<p>may be subject to separate regulatory and licensing requirement</p> <p>After FDA approval for the product, the manufacturing and the initial indications, further clinical trials may be required to gain approval for the use of the product for additional indications. The FDA may also require unusual or restrictive post-marketing testing and surveillance to monitor for adverse effects, which could involve significant expense, or may elect to grant only conditional approvals.</p>	<p>in clinical trials, the availability of alternative treatments and the severity of the disease. Additional animal studies or clinical trials may be requested during the FDA review period, which might add to that time.</p>

*FDA Manufacturing Requirements*

Among the conditions for product licensure is the requirement that the prospective manufacturer's quality control and manufacturing procedures conform to the FDA's current good manufacturing practice (cGMP) requirement. Even after product licensure approval, the manufacturer must comply with cGMP on a continuing basis, and what constitutes cGMP may change as the state of the art of manufacturing changes. Domestic manufacturing facilities are subject to regular FDA inspections for cGMP compliance, which are normally held at least every two years. Foreign manufacturing facilities are subject to periodic FDA inspections or inspections by the foreign regulatory authorities with reciprocal inspection agreements with the FDA. Domestic manufacturing facilities may also be subject to inspection by foreign authorities.

*Orphan Drug Act*

The Orphan Drug Act provides incentives to drug manufacturers to develop and manufacture drugs for the treatment of diseases or conditions that affect fewer than 200,000 individuals in the United States. Orphan drug status can also be sought for treatments for diseases or conditions that affect more than 200,000 individuals in the United States if the sponsor does not realistically anticipate its product becoming profitable from sales in the United States. We may apply for orphan drug status for certain of our therapies. Under the Orphan Drug Act, a manufacturer of a designated orphan product can seek tax benefits, and the holder of the first FDA approval of a designated orphan product will be granted a seven-year period of marketing exclusivity in the United States for that product for the orphan indication. While the marketing exclusivity of an orphan drug would prevent other sponsors from obtaining approval of the same compound for the same indication, it would not prevent other types of products from being approved for the same use including, in some cases, slight variations on the originally designated orphan product.

*Proposed FDA Regulations*

Our research and development is based on the use of human stem and progenitor cells. The FDA has published a Proposed Approach to Regulation of Cellular and Tissue-Based Products which relates to the use of human cells. As part of this approach, the FDA has published final rules for registration of establishments that engage in the recovery, screening, testing, processing, storage or distribution of human cells, tissues, and cellular and tissue-based products, and for the listing of such products. These products specifically include hematopoietic stem cells (stem cells that are progenitors of blood cells); however, the FDA makes no explicit statement regarding the inclusion of other types of stem cells. In addition, the FDA has published proposed rules for making suitability determinations for donors of cells and tissue and for current good tissue practice for manufacturers using them. We cannot now determine the full effects of this regulatory initiative, including precisely how it may affect the clarity of regulatory obligations and the extent of regulatory burdens associated with pluripotent stem cell research (for stem cells that give rise to various tissue types,

including blood), and the manufacture and marketing of stem cell products.

*Other Regulations*

In addition to safety regulations enforced by the FDA, we are also subject to regulations under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act and other present and potential future foreign, Federal, state and local regulations.

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Outside the United States, we will be subject to regulations that govern the import of drug products from the United States or other manufacturing sites and foreign regulatory requirements governing human clinical trials and marketing approval for our products. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursements vary widely from country to country. In particular, the European Union, or EU, is revising its regulatory approach to high tech products, and representatives from the United States, Japan and the EU are in the process of harmonizing and making more uniform the regulations for the registration of pharmaceutical products in these three markets.

## **Reimbursement and Health Care Cost Control**

Reimbursement for the costs of treatments and products such as ours from government health administration authorities, private health insurers and others both in the United States and abroad is a key element in the success of new health care products. Significant uncertainty often exists as to the reimbursement status of newly approved health care products.

The revenues and profitability of some health care-related companies have been affected by the continuing efforts of governmental and third party payers to contain or reduce the cost of health care through various means. Payers are increasingly attempting to limit both coverage and the level of reimbursement for new therapeutic products approved for marketing by the FDA, and are refusing, in some cases, to provide any coverage for uses of approved products for disease indications for which the FDA has not granted marketing approval. For example, in certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. In the United States, there have been a number of Federal and state proposals to implement government control over health care costs.

## **Employees**

As of December 31, 2002, we had twenty-eight full-time employees, of whom ten have Ph.D. degrees. Twenty-one full-time employees work in research and development and laboratory support services. No employees are covered by collective bargaining agreements.

## **Scientific Advisory Board**

Members of our Scientific Advisory Board provide us with strategic guidance in regard to our research and product development programs, as well as assistance in recruiting employees and collaborators. Each Scientific Advisory Board member has entered into a consulting agreement with us. These consulting agreements specify the compensation to be paid to the consultant and require that all information about our products and technology be kept confidential. All of the Scientific Advisory Board members are employed by employers other than us and may have commitments to or consulting or advising agreements with other entities that limit their availability to us. The Scientific Advisory Board members have generally agreed, however, for so long as they serve as consultants to us, not to provide any services to any other entities that would conflict with the services the member provides to us. We are entitled to terminate the arrangement if we determine that there is such a conflict. Members of the Scientific Advisory Board offer consultation on specific issues encountered by us as well as general advice on the directions of appropriate scientific inquiry for us. In addition, Scientific Advisory Board members assist us in assessing the appropriateness of moving our projects to more advanced stages. The following persons are members of our Scientific Advisory Board:

- Irving L. Weissman, M.D., is the Karel and Avice Beekhuis Professor of Cancer Biology, Professor of Pathology and Professor of Developmental Biology at Stanford University, Stanford California, and is Director of the Stanford University Institute for Cancer/Stem Cell Biology and Medicine. Dr. Weissman, a member of the National Academy of Science, was a cofounder of SyStemix, Inc. and is the founder and Chairman of Cellerant, Inc. Dr. Weissman is Chairman of the Scientific Advisory Board of StemCells. Dr. Weissman's lab discovered the mouse hematopoietic



stem cell and he is co-discoverer of the human hematopoietic stem cell.

- David J. Anderson, Ph.D., is Professor of Biology, California Institute of Technology, Pasadena, California and Investigator, Howard Hughes Medical Institute. Dr. Anderson is the discoverer of the rat neural crest-peripheral nervous system stem cell.

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- Fred H. Gage, Ph.D., is Professor, Laboratory of Genetics, The Salk Institute for Biological Studies, La Jolla, California and Adjunct Professor, Department of Neurosciences, University of California, San Diego, California. Dr. Gage is the discoverer of the mammalian central nervous system stem cell.

Consultants to our SAB include William C. Mobley, M.D., Ph.D., Ben Barres, Ph.D., and Seung Kim, M.D., Ph.D., all of Stanford University.

## **AVAILABLE INFORMATION**

Our principal executive offices are located at 3155 Porter Drive, Palo Alto, CA 94304, and our main telephone number is (650) 475-3100. Investors can obtain access to this annual report on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and all amendments to these reports, free of charge, on our website at <http://www.stemcellsinc.com> as soon as reasonably practicable after such filings are electronically filed with the SEC. The public may read and copy any material we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington D.C., 20549. The public may obtain information on the operations of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site, <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

## **ITEM 2. PROPERTIES**

We entered into a 5-year lease, as of February 1, 2001, for a 40,000 square foot facility, located in the Stanford Research Park in Palo Alto, California. This facility includes space for animals as well as laboratories, offices, and a Good Manufacturing Practices suite, signifying that the facility can be used to manufacture materials for clinical trials. The facility will better enable us to achieve our goal of utilizing genetically unmodified human stem cells for the treatment of disorders of the nervous system, liver, and pancreas. We have space-sharing agreements for part of the animal facility not needed for our own use, including one with Stanford University.

We continue to lease the following facilities in Lincoln, Rhode Island obtained in connection with our former encapsulated cell technology: our former research laboratory and corporate headquarters building which contains 65,000 square feet of wet labs, specialty research areas and administrative offices held on a lease agreement that goes through June 2013, as well as a 21,000 square-foot pilot manufacturing facility and a 3,000 square-foot cell processing facility financed by bonds issued by the Rhode Island Industrial Facilities Corporation. We have subleased the 21,000 square-foot facility. We have also subleased approximately one-fourth of the 65,000 square foot facility. We are actively seeking to sublease, assign or sell our remaining interests in these properties.

## **ITEM 3. LEGAL PROCEEDINGS**

None.

## **ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

None.

## **PART II**

**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDERS MATTERS**

The common stock of StemCells is traded on the SmallCap Market System of NASDAQ under the Symbol STEM. Prior to December 23, 2002 our common stock was traded on the NASDAQ National Market. The quarterly ranges of high and low bid prices for the last two fiscal years as reported by NASDAQ are shown below:

<b>2002</b>	<b>HIGH</b>	<b>LOW</b>
First Quarter	\$3.84	\$2.13
Second Quarter	\$2.34	\$1.41
Third Quarter	\$2.07	\$0.65
Fourth Quarter	\$1.24	\$0.51

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<b>2001</b>	<b>HIGH</b>	<b>LOW</b>
First Quarter	\$3.56	\$1.75
Second Quarter	\$5.41	\$1.56
Third Quarter	\$7.00	\$1.94
Fourth Quarter	\$4.15	\$2.07

No cash dividends have been declared on the Company common stock since the Company's inception.

As of March 20, 2003, there were approximately 398 holders of record of the common stock.

On March 31, 2002, the Company issued 9,675 shares of its authorized, unregistered shares of common stock to the Oregon Health Sciences University ( OHSU ) upon the exercise of an option granted in March 1997 in connection with a license agreement. An additional 4,000 shares were issued to OHSU in January 2003, pursuant to an amendment to the license agreement. On September 17, 2002, the Company issued 27,535 shares of its authorized, unregistered common stock to the California Institute of Technology in connection with a license agreement and its amendment. In December 2002 and in January 2003, the Company issued 107,812 shares and 58,516 shares respectively of its authorized common stock to Sativum Investments Limited as part of a drawdown on its existing equity line. By agreement with one of the Company's outside providers of legal services, a part of the fees incurred are paid in authorized, unregistered stock of the Company. In 2002 we issued 33,884 shares under that agreement.

All of these shares were issued pursuant to the exemption from registration provided by Section 4(2) of the Securities Act of 1933, as amended.

**Equity Compensation Plan Information**

The following table provides certain information with respect to all of the Company's equity compensation plans in effect as of December 31, 2002.

**Equity Compensation Plan Information**

<b>Plan category</b>	<b>(A) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</b>	<b>(B) Weighted-average Exercise Price of Outstanding Options, Warrants and rights</b>	<b>(C) Number of Securities Remaining Available for Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (A))</b>
Equity compensation plans approved by	4,294,050(1)	\$ 3.248	1,833,437

security holders Equity compensation arrangements not approved by security holders	196,699	\$ 3.840	N/a
Totals	4,490,749	\$ 3.274	1,833,437

(1) Consists of Incentive Stock Options issued to employees and options issued as compensation to consultants for consultation services. These options were issued under the Company's 1992 Equity Incentive Plan, its Directors Stock Option Plan, its StemCells, Inc. Stock Option Plan, or its 2001 Equity Incentive Plan.

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The Company has fully vested warrants outstanding to purchase 50,500 shares of our common stock for \$5.04 per share, issued in August 2000, and exercisable, in whole or in part, for five years from the date of issuance. The Company also has a warrant outstanding to purchase 146,199 shares of our common stock that was issued in December 2001, issued fully vested with an exercise price of \$3.42 per share, and exercisable, in whole or in part, for four years from the date of issuance. These warrants, which constitute non-plan equity compensation arrangements, were issued in exchange for placement agent or advisory services by non-employees.

**ITEM 6. SELECTED FINANCIAL DATA**

The following selected historical information has been derived from the audited financial statements of the Company. The financial information as of December 2002 and 2001 and for each of the three years in the period ended December 31, 2002 are derived from audited financial statements included elsewhere in this Form 10-K.

	Year ended December 31,				
	2002	2001	2000	1999	1998
	<b>RESTATED</b>				
	<b>(3)</b>				
	<b>(in thousands, except per share amounts)</b>				
Consolidated Statement of Operations					
Revenue from collaborative and licensing agreements	\$ 40	\$	\$ 74	\$ 5,022	\$ 8,803
Revenue from grants	375	505			
Revenue from assignment of rights to technology		300			
	_____	_____	_____	_____	_____
Total revenue	415	805	74	5,022	8,803
Research and development expenses	7,382	8,603	5,979	9,984	17,659
Encapsulated Cell Technology wind-down and corporate relocation (1)	1,164	575	3,327	6,048	
Loss before deemed dividends and cumulative effect of change in accounting principle	(11,644)	(4,021)	(11,125)	(15,709)	(12,628)
Net loss applicable to common shareholders	(13,276)	(5,567)	(11,606)	(15,709)	(12,628)
Basic and diluted loss available to common shareholders before cumulative effect of an accounting change per share	\$ (0.53)	\$ (0.25)	\$ (0.57)	\$ (0.84)	\$ (0.69)
Cumulative effect of a change in accounting principle			(0.01)		
	_____	_____	_____	_____	_____

Net loss applicable to common shareholders	\$ (0.53)	\$ (0.25)	\$ (0.58)	\$ (0.84)	\$ (0.69)
Shares used in computing basic and diluted per share amounts	25,096	22,242	20,068	18,706	18,291

**December 31,**

	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>
<b>RESTATED(3)</b>		<b>RESTATED(3)</b>			

(in thousands)

Consolidated Balance Sheet					
Cash and cash equivalents	\$ 4,236	\$ 13,697	\$ 6,069	\$ 4,760	\$ 17,386
Restricted investments			16,356		
Total assets	11,329	20,803	29,795	15,781	32,866
Long-term debt, including capital leases	2,087	2,316	2,605	2,937	3,762
Redeemable common stock				5,249	5,249
Redeemable preferred stock (2)	2,660	2,663	1,283	5,249	5,249
Stockholders' equity	1,933	12,633	21,699	3,506	17,897

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- (1) See footnote 9 in the consolidated financial statements.
- (2) See footnote 11 in the consolidated financial statements.
- (3) 2001 and 2002 amounts have been restated for a revision to the accrual for facilities related wind-down expenses, and correction of an error related to a lease amendment. See footnotes 1, 6 and 9 in the consolidated financial statements.

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

The following discussion of our financial condition and results of operations should be read in conjunction with the accompanying financial statements and the related footnotes thereto.

This report contains forward looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act that involve substantial risks and uncertainties. Such statements include, without limitation, all statements as to expectation or belief and statements as to our future results of operations, the progress of our research, product development and clinical programs, the need for, and timing of, additional capital and capital expenditures, partnering prospects, costs of manufacture of products, the protect of and the need for additional intellectual property rights, effects of regulations, the need for additional facilities and potential market opportunities. Our actual results may vary materially from those contained in such forward-looking statements because of risks to which we are subject, such as failure to obtain a corporate partner or partners to support the development of our stem cell programs, our ability to sell, assign or sublease our interest in our facilities related to our encapsulated cell technology program, risks of delays in, or adverse results from, our research, development and clinical testing programs, obsolescence of our technology, lack of available funding, competition from third parties, intellectual property rights of third parties, failure of our collaborators to perform, regulatory constraints, litigation and other risks to which we are subject. See **Cautionary Factors Relevant to Forward-Looking-Information** filed herewith as Exhibit 99 and incorporated herein by reference.

**Overview**

Since our inception in 1988, we have been primarily engaged in research and development of human therapeutic products. As a result of the acquisition of StemCells California, Inc. in 1997 and restructuring in the second half of 1999, our sole focus is now on our stem cell technology.

We have not derived any revenues from the sale of any products apart from license revenue for the research use of our human neural stem cells, and we do not expect to receive revenues from product sales for at least several years. We have not commercialized any product and in order to do so we must, among other things, substantially increase our research and development expenditures as research and product development efforts accelerate and clinical trials are initiated. We have incurred annual operating losses since inception and expect to incur substantial operating losses in the future. As a result, we are dependent upon external financing from equity and debt offerings and revenues from collaborative research arrangements with corporate sponsors to finance our operations. There are no such collaborative research arrangements at this time and there can be no assurance that such financing or partnering revenues will be available when needed or on terms acceptable to us.

In September 2002, in order to concentrate all our resources on our primary goal of evaluating the potential of using our stem and progenitor cells to treat or even cure some of the world's most debilitating diseases, we announced that we had initiated a cost reduction program that curtailed expenditures on our discovery research activities in favor



of channeling resources into accelerating preclinical development of our proprietary cells for the treatment of neural and liver disease. The initiative, which was implemented during the third quarter of 2002, reduced our workforce and annualized expenses by approximately 25%.

In May 2001, we entered into an equity line enabling us to draw up to \$30,000,000 subject to various restrictions, and we did draw down \$4,000,000 in July of 2001. Subsequently, we have drawn down \$118,000 in December of 2002 and \$66,000 in January of 2003. In December of 2001, we issued 3% convertible preferred stock for \$5,000,000 gross. In

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addition, under the terms of the financing agreement we entered into in 2000 with Millennium Partners, LP, Millennium exercised its final option to purchase \$2,000,000 of our common stock in June 2001; that agreement has now terminated. In 2002, the Company entered into an agreement with Triton West Group, Inc. (Triton) pursuant to which the Company sold common stock to Triton for aggregate proceeds of \$1,100,000. (See Liquidity and Capital Resources below for further detail on each of these transactions.)

In 2001, we received two grants from the National Institutes of Health, one for work on hepatitis to be carried out jointly by us and Stanford University, and one focusing on the effort to identify liver stem and progenitor cells for the treatment of liver diseases. Although the grants are relatively small (\$300,000 a year for two years and \$225,000 a year for four years, respectively, and dependent on availability of funds and satisfactory progress), we are very pleased by this recognition of our work by the agency. Each of the grants was renewed for 2002, but no new grants have been received.

Our program in neural stem and progenitor cells has entered the preclinical stage, as we focus increasingly on testing human neural stem cells in small animal models of human diseases, both in-house and through external academic collaborators. In our liver stem cell program, we are intensifying our efforts to identify liver stem and progenitor cells. In part, we will do this by following up studies we have done showing that purified blood stem cells can give rise to liver tissue, to seek a possible transitional cell between the blood stem cells and the mature liver cells. Our pancreas program is being carried on for the present primarily through a collaborator.

Our results of operations have varied significantly from year to year and quarter to quarter and may vary significantly in the future due to the occurrence of material recurring and nonrecurring events, including without limitation the receipt and payment of recurring and nonrecurring licensing payments, the initiation or termination of research collaborations, the on-going expenses to lease and maintain our facilities in Rhode Island and the increasing costs associated with our facility in California. To expand and provide high quality systems and support to our Research and Development programs, we will need to hire more personnel, which will lead to higher operating expenses. We had in fact begun to hire more staff, but as noted above, our cost reduction program in September 2002 resulted in the reduction of personnel.

## **Critical Accounting Policies**

The Company believes the following critical accounting policies affect its more significant judgments and estimates used in the preparation of its consolidated financial statements:

### **Use Of Estimates**

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States, that requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. Actual results could differ from these estimates.

### **Stock-Based Compensation**

As permitted by the provisions of Statement of Financial Accounting Standards ( FAS ) No. 148, Accounting for Stock-Based Compensation Transition and Disclosure, and Statement of Financial Accounting Standards No. 123, Accounting for Stock-Based Compensation, the Company's employee stock option plan is accounted for under Accounting Principles Board Opinion No. 25 ( APB 25 ), Accounting for Stock Issued to Employees. The Company grants qualified stock options for a fixed number of shares to employees with an exercise price equal to the fair market value of the shares at the date of grant. In accordance with APB 25, the Company recognizes no compensation expense for qualified stock option grants. The Company also issues non-qualified stock options for a fixed number of

shares to employees with an exercise price less than the fair market value of the shares at the date of grant. When such options vest, the Company recognizes the difference between the exercise price and fair market value as compensation expense in accordance with APB 25. Note 11 of the Notes to the Consolidated Financial Statements describes our equity compensation plans, and Note 1 of the Notes to the Consolidated Financial Statements contains a summary of the pro forma effects to reported net (loss) and (loss) per share for 2002, 2001, and 2000 as if we had elected to recognize compensation cost based on the fair value of the options granted at grant date, as prescribed by FAS No. 123.

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For certain stock options granted to non-employees, the Company accounts for these grants in accordance with FAS No. 123 and Emerging Issues Task Force ( EITF ) 96-18 accounting for equity instruments that are issued to other than employees for acquiring, or in conjunction with selling, goods or services, and accordingly, recognizes as expense the estimated fair value of such options as calculated using the Black-Scholes valuation model, and is remeasured during the service period. Fair value is determined using methodologies allowable by FAS No. 123. The cost is amortized over the vesting period of each option or the recipient's contractual arrangement, if shorter.

## **Long-Lived Assets**

The Company adopted FAS No. 144, Accounting for the Impairment or Disposal of Long-lived Assets, at the beginning of 2002. As permitted by the transition rules of FAS No. 144, long-lived assets classified as held for sale as a result of activities that were initiated prior to this Statement's initial application shall continue to be accounted for in accordance with FAS No. 121. If however, the criteria for classifying long-lived assets held for sale under FAS No. 144 are not met by the end of the fiscal year in which this Statement is initially applied, the related long-lived assets shall be reclassified as held and used. At December 31, 2002, the criteria under FAS No. 144 for classifying the Company's long-lived assets held for sale were not met and accordingly, such assets were reclassified as held and used on the balance sheet.

The Company routinely evaluates the carrying value of its long-lived assets. The Company records impairment losses on long-lived assets used in operations when events and circumstances indicate that assets may be impaired and the undiscounted cash flows estimated to be generated by the assets are less than the carrying amount of those assets. If an impairment exists, the charge to operations is measured as the excess of the carrying amount over the fair value of the assets.

## **Research and Development Costs**

The Company expenses all research and development costs as incurred. Research and Development costs include costs of personnel, external services, supplies, facilities and miscellaneous other costs.

## **RESULTS OF OPERATIONS**

### **RESTATED (See notes 1, 6 and 9 to the consolidated financial statements)**

#### ***Years Ended December 31, 2002, 2001 and 2000***

Revenues totaled \$415,000, \$805,000 and \$74,000 for the years ending December 31, 2002, 2001 and 2000, respectively. Revenues for 2002 include \$150,000 that is a part of the grant awarded by the National Institutes of Health's Small Business Innovation Research (SBIR) office, \$225,000 that is a part of the grant awarded by the National Institute of Diabetes & Digestive & Kidney Disorders of the National Institutes of Health, and \$40,000 in licensing revenue. Revenues for 2001 include \$505,000 for grants received from the National Institute of Health's Small Business Innovation Research (SBIR) office for research relating to our Neural & Liver stem cell programs, and \$300,000 from the assignment to Modex Therapeutics, Ltd., of our retained rights to a portion of certain possible future revenues arising out of our sale of our former Encapsulated Cell Technology (ECT) to Neurotech, S.A. Revenues for 2000 were from Neurotech, S.A., in return for that sale of intellectual property assets related to our former encapsulated cell therapy program. The increase from 2000 to 2001 was primarily due to the receipt of money from grants in 2001. There were no receipts from grants in 2000. The decrease in revenue from 2001 to 2002 was primarily due to the one time receipt of \$300,000 from the assignment of rights to Modex Therapeutics, Ltd., and a decrease in grant revenue from \$505,000 in 2001 to \$375,000 in 2002.

Research and development expenses totaled \$7,382,000 in 2002, as compared to \$8,603,000 in 2001 and \$5,979,000 in 2000. The decrease of \$1,221,000, or 17%, from 2001 to 2002 was primarily attributable to the effect of the lower valuation of stock options on non-employee compensation in 2002 as compared to 2001. The increase of \$2,624,000 or 44%, from 2000 to 2001, was primarily attributable to the costs related to leasing a larger facility and an increase in personnel to facilitate the expansion of our research and initiate development.

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General and administrative expenses were \$3,359,000 in 2002, compared with \$3,788,000 in 2001 and \$3,361,000 in 2000. The decrease of \$429,000, or 11%, from 2001 to 2002 was primarily attributable to a decrease in external services expenses in 2002. The increase in general and administrative expenses of \$427,000 or 13% from 2000 to 2001 was primarily attributable to the related costs of an increase in personnel, which included the hiring of senior management personnel as part of the reorganization and consolidation of our operations in California, and the costs related to leasing a larger facility.

In 2000, wind-down expenses related to our former ECT research, our Rhode Island operations and the transfer of our headquarters to California totaled \$3,327,000. For 2001, \$1,780,000 in expenses for the Rhode Island facilities was recorded against a wind-down reserve that was created at December 31, 2000 for the carrying costs of the Rhode Island facilities through 2001. As of December 31, 2001 we revised our estimate and recorded an additional reserve of \$575,000 for operating expenses of our former corporate headquarters in Rhode Island. The amount of this reserve was based on the information provided by our broker/realtor in Rhode Island as to his reasonable estimate of the amount of time it would take until the facility would be fully subleased. In 2002 we incurred \$964,000 in operating expenses, net of subtenant income, for this facility. \$575,000 was recorded against the reserve and the remainder was recorded as wind-down expenses. In addition, based on an evaluation of information available as of the end of December 2002, we again revised our estimate and recorded an additional reserve of \$775,000. Even though it is our intent to dispose of this facility at the earliest possible time, we cannot determine with certainty a fixed date by which such disposal will occur. In light of this uncertainty, we will continue to re-evaluate and adjust our reserve periodically based on information that would allow us to reasonably estimate the reserve required.

Interest income for the years ended December 31, 2002, 2001 and 2000 totaled \$109,000, \$201,000 and \$304,000, respectively. The decrease in interest income from 2001 to 2002 was attributable to the lower interest rate on overnight and money market funds and a lower average bank balance in 2002 as compared to 2001. The decrease in interest income from 2000 to 2001 was attributable to a lower interest rate on overnight and money market funds.

In 2002, interest expense was \$227,000, compared to \$246,000 in 2001 and \$273,000 in 2000. Interest expense for year 2001 was charged against the wind-down reserve, as the expense was part of the bond payments related to the Rhode Island facilities. The decrease from 2000 to 2002 was attributable to lower outstanding debt and capital lease balances.

Gain on sale of short-term investments in 2001 relates to the sale of Modex Therapeutics Ltd. ( Modex ) shares. On January 9, 2001, we sold 22,616 Modex shares for a net price of 182.00 Swiss francs per share, which converted to \$112.76 per share, for total proceeds and a realized gain of \$2,550,230. On April 30, 2001, we sold our remaining shares in Modex for a net price of 87.30 Swiss Francs per share, which converted to approximately \$50.51, for total proceeds and a realized gain of \$5,232,000, net of commissions and fees. After the April 2001 sale, we no longer hold any shares of Modex.

The loss before deemed dividends and cumulative effect of a change in accounting principle in 2002, 2001 and 2000 was \$11,644,000, \$4,021,000, and \$11,125,000, respectively. The increase from 2001 to 2002 is primarily attributable to a realized gain of \$7,782,000 from our sale of Modex shares in 2001 and costs related to an increase in personnel in 2002, offset by lower cost of external services. The decrease in costs associated with external services was primarily attributable to a lower valuation of non-qualified stock options in 2002 as compared to 2001. The decrease in loss from 2000 to 2001 (before deemed dividends and cumulative effect of a change in accounting principle) was primarily attributable to a realized gain of \$7,782,000 from our sale of Modex shares in 2001, offset by an increase in operating expenses attributable to an increase in personnel and our move to a larger facility.

**Deemed Dividends Related to Convertible Preferred Stock and Change in Accounting Principle**

We recorded deemed dividends of \$1,280,004 and \$743,667 for 2002 and 2001 respectively. The dividends are related to the 3% Cumulative Convertible Preferred Stock (see note 11 to the consolidated financial statements) which includes the accretion of common stock warrants, the accretion of the beneficial conversion feature and the accretion of related issuance costs. The aggregate accretion value associated with the warrants, beneficial conversion feature and issuance costs were included in the calculation of net loss applicable to common stockholders.

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In 2000 we recorded an initial deemed dividend aggregating \$481,000 related to the 6% Cumulative Convertible Preferred Stock (see note 11 to the consolidated financial statements). The dividend reflects the value of warrants issued and the beneficial conversion feature. In November 2000, the FASB issued Emerging Issues Task Force Issue No. 00-27, Application of EITF Issue No. 98-5, Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios, to Certain Convertible Instruments ( EITF 00-27 ). Prior to the adoption of EITF 00-27, we recognized \$265,000 of deemed dividends on preferred stock. Upon adoption of the new accounting principle, we have presented an additional deemed dividend of \$216,000 as a cumulative effect of a change in accounting principle as allowed for in EITF 00-27.

In 2001, we recorded an additional deemed dividend of \$802,000 for the beneficial conversion feature of the 6% Cumulative Convertible Preferred Stock which resulted from the subsequent change to the effective conversion price of those shares due to the issuance in 2001 of adjustable warrants in connection with the common stock financing transaction with Millennium Partners, LP. (See Note 11 to the consolidated financial statements).

## **Liquidity and Capital Resources**

Since our inception, we have financed our operations through the sale of common and preferred stock, the issuance of long-term debt and capitalized lease obligations, revenues from collaborative agreements, research grants and interest income.

We had cash and cash equivalents totaling \$4,236,000 at December 31, 2002. Cash equivalents are invested in US Treasuries with maturities of less than 90 days. We used \$10.1 million, \$10.5 million, and \$6.3 million of cash, in 2002, 2001 and 2000 respectively, in our operating activities. The increase in cash used in 2001 and 2002 over 2000 is the result of the move to a larger facility and increase in personnel to facilitate our research.

Our liquidity and capital resources were, in the past, significantly affected by our relationships with corporate partners, which were related to our former ECT. These relationships are now terminated, and we have not yet established corporate partnerships with respect to our stem cell technology. Our liquidity and capital resources have, in the past, also been affected by our holdings of Modex, all of which holdings have now been sold, resulting in proceeds to us of \$7,782,000 in 2001.

On August 3, 2000, we completed a \$4 million common stock financing transaction with Millennium Partners, LP at \$4.33 per share. In the purchase agreement, we granted Millennium an option to purchase up to an additional \$3 million of our common stock. Millennium exercised its option to purchase \$1 million of our common stock on Aug 23, 2000 at \$5.53 per share. On June 8, 2001, Millennium exercised its remaining option to purchase \$2 million of our common stock at \$4.3692 per share. As a result of the financing agreement, Millennium received five year warrants to purchase 101,587 shares of common stock at \$4.725 per share, 19,900 shares of common stock at \$6.03 per share, and 50,352 shares at \$4.7664 per share. We may call the warrants at any time at \$7.875, \$10.05 and \$7.944 per underlying share respectively. In addition to the afore-mentioned warrants, Millennium was issued adjustable warrants in connection with the original \$4 million purchase, each of which entitled Millennium to receive additional shares on eight dates beginning six months from the respective closing dates and every three months thereafter. The exercisable price per share under the adjustable warrant was \$0.01. Millennium exercised the first of the adjustable warrants to purchase 463,369, 622,469, and 25,804 shares on March 30, 2001, July 26, 2001 and August 15, 2001 respectively at \$0.01 per share. On December 4, 2001, we entered into an agreement with Millennium under which we issued 176,101 shares of our common stock as a final cashless exercise of all outstanding adjustable warrants that Millennium was entitled to or would be entitled to. Immediately following delivery of these shares, any further right to acquire common stock under these adjustable warrants were cancelled by the agreement.



On May 10, 2001, we entered into a common stock purchase agreement with Sativum Investments Limited for the potential future issuance and sale of up to \$30,000,000 of our common stock, subject to restrictions and other obligations. We, at our sole discretion, may draw down on this facility, sometimes termed an equity line, from time to time, and Sativum is obligated to purchase shares of our common stock at a 6% discount to a volume weighted average market price over the 20 trading days following the draw-down notice. We are limited with respect to how often we can exercise a draw down and the amount of each draw down. We delivered a draw down notice to Sativum Investments Limited, dated as of July 11, 2001, exercising our right to draw down up to \$5,000,000 at a market-based share price not less than \$5.00 per share beginning July 12, 2001. Sativum purchased a total of 707,947 shares of our common stock at an average

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purchase price of \$5.65 per share, net of Sativum's discount of six percent. Because the market based price of our common stock was less than \$5.00 for 4 trading days during the draw down period, pursuant to the terms of our with Sativum agreement, our \$5,000,000 request was reduced to \$4,000,000. In connection with our execution of the common stock purchase agreement with Sativum, we issued three three-year warrants to purchase an aggregate of 350,000 shares of our common stock at \$2.38 per share to Sativum (250,000 shares), Pacific Crest Securities Inc. (75,000 shares) and Granite Financial Group, Inc. (25,000 shares). Our placement agents have exercised their warrants in full, and we have received payment of \$238,050 for the shares issued to them. In December 2002 and January 2003 we additionally drew down \$113,800 and \$62,778 respectively, net of the applicable discount and placement agent fee, issuing 107,812 shares and 58,516 shares on those respective occasions.

On December 4, 2001, we issued 5,000 shares of 3% Cumulative Convertible Preferred Stock to Riverview Group, L.L.C., a wholly owned subsidiary of Millennium Partners. We received total proceeds of \$4,727,515 net of the fee to Cantor Fitzgerald and other associated costs. This preferred stock is convertible into shares of our common stock at a current conversion price of \$2.00 per share of common stock. There is a mandatory redemption provision in the preferred stock under which any preferred stock remaining on December 4, 2003, is redeemed on that date. The conversion price may be below the trading market price of the stock at the time of conversion. In connection with the preferred stock agreement, we issued to Riverview Group a warrant to purchase 350,877 shares of our common stock at a price of \$3.42 per share. The warrant expires on December 4, 2005. We paid Cantor Fitzgerald & Co., our financial advisor in connection with the transaction, a fee of \$200,000 and issued them a warrant for 146,199 shares exercisable at \$3.42 per share.

On August 23, 2002, we entered into an agreement with Triton West Group, Inc. (Triton) pursuant to which we sold 1,028,038 shares of common stock to Triton for aggregate proceeds of \$1,100,000, or approximately \$1.07 per share.

We continue to have outstanding obligations in regard to our former facilities in Lincoln, Rhode Island, including lease payments and operating costs of approximately \$1,000,000 for 2003, net of subtenant income of \$776,245. We have subleased a portion of these facilities and are actively seeking to sublease, assign or sell our remaining interests in these facilities. Failure to do so within a reasonable period of time will have a material adverse effect on our liquidity and capital resources.

The following table summarizes our future contractual cash obligations (excluding interest and sub-lease income):

<b>December 31, 2002</b>	<b>Total</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008 and Beyond</b>
Capital lease payments	\$ 3,586,786	\$ 436,909	\$ 425,713	\$ 412,587	\$ 401,289	\$ 330,643	\$1,579,644
Operating lease payments	\$17,488,244	2,888,796	2,947,335	3,007,630	1,115,186	937,500	6,591,797
Mandatorily Redeemable, 3% Cumulative Convertible Preferred Stock	\$ 4,000,000	4,000,000					
	\$25,075,030	\$7,325,705	\$3,373,048	\$3,420,217	\$1,516,475	\$1,268,143	\$8,171,441

Total contractual  
cash obligations



We have incurred significant operating losses and negative cash flows since inception. We have not achieved profitability and may not be able to realize sufficient revenues to achieve or sustain profitability in the future. Although we have taken actions to reduce its expense rates over the last two quarters, we do not expect to be profitable in the next several years, but rather expect to incur additional operating losses. We have very limited liquidity and capital resources and must obtain significant additional capital resources in order to sustain our product development efforts, for acquisition of technologies and intellectual property rights, for preclinical and clinical testing of our anticipated products, pursuit of regulatory approvals, acquisition of capital equipment, laboratory and office facilities, establishment of production capabilities, for general and administrative expenses and other working capital requirements. We rely on cash balances and proceeds from equity and debt offerings, proceeds from the transfer or sale of our intellectual property rights, equipment, facilities or investments, and government grants and funding from collaborative arrangements, if obtainable, to fund our operations. If we exhaust our cash balances and are unable to realize adequate financing, we may be unable to

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meet operating obligations and be required to initiate bankruptcy proceedings. These conditions raise doubt about our ability to continue as a going concern. The financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

We intend to pursue opportunities to obtain additional financing in the future through equity and debt financings, grants and collaborative research arrangements. The source, timing and availability of any future financing will depend principally upon market conditions, interest rates and, more specifically, on our progress in our exploratory, preclinical and future clinical development programs. Funding may not be available when needed at all, or on terms acceptable to us. Our existing capital resources are not sufficient to fund our operations through the end of the second quarter of 2003. Lack of necessary funds may require us to delay, scale back or eliminate some or all of our research and product development programs and/or our capital expenditures or to license our potential products or technologies to third parties.

With the exception of operating leases for facilities, we have not entered into any off balance sheet financial arrangements and have not established any special purpose entities. We have not guaranteed any debts or commitments of other entities or entered into any options on non-financial assets. During 2001, we were party to a space-sharing agreement entered into between us and Celtrans, LLC. (now Cellerant, Inc.). Dr. Irving Weissman, a member of our Board of Directors and Chairman of our Scientific Advisory Board, is the founder and Chairman of Cellerant, a privately-owned biotechnology company that is also a tenant in the building in which the Company is located. Under the agreement, which was effective as of September 1, 2001, Cellerant or, with our approval, a subtenant of Cellerant, may use certain animal space in our facility, which we do not currently require for our own use. Cellerant pays the Company \$16,122 per month under the space-sharing agreement, at the same rate per square foot as we receive from Stanford University, with which we also have an agreement for sharing the animal facility. In addition, Dr. Weissman remains a consultant to us under an agreement entered in 1997.

## **Recent Accounting Pronouncements**

In November 2002, the FASB issued Interpretation No. 45 ( FIN 45 ), Guarantor s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 elaborates on the existing disclosure requirements for most guarantees, including residual value guarantees issued in conjunction with operating lease agreements. It also clarifies that at the time a company issues a guarantee, the company must recognize an initial liability for the fair value of the obligation it assumes under that guarantee and must disclose that information in its interim and annual financial statements. The initial recognition and initial measurement provisions apply on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements are effective for financial statements of interim or annual periods ending after December 15, 2002. The Company s adoption of FIN 45 did not have a material impact on its consolidated results of operations and financial position.

In December 2002, the FASB issued Statement No. 148, Accounting for Stock-Based Compensation Transition and Disclosure ( FAS 148 ). FAS 148 amends FAS 123 Accounting for Stock-Based Compensation to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, FAS 148 amends the disclosure requirements of FAS 123 to require more prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The additional disclosure requirements of FAS 148 are effective for fiscal years ending after December 15, 2002. The Company has elected to continue to follow the intrinsic value method of accounting as prescribed by Accounting Principles Board Opinion No. 25 ( APB 25 ), Accounting for Stock Issued to Employees, to account for employee stock options.

In January 2003, the FASB issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51( FIN46 ). FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective for all new variable interest entities created or acquired after January 31, 2003. The Company does not believe it has any investments in variable interest entities and does not anticipate any impact with the adoption of this interpretation.

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**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

The Company has no financial instruments that are sensitive to market risk.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**STEMCELLS, INC.  
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS (RESTATED)**

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Consolidated Statements of changes in Redeemable Convertible Preferred Stock and Stockholders Equity	36
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**REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS**

Stockholders and Board of Directors  
StemCells, Inc.

We have audited the accompanying consolidated balance sheets of StemCells, Inc. as of December 31, 2002 and 2001, and the related consolidated statements of operations, changes in redeemable convertible preferred stock and stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2002. 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 auditing standards generally accepted in the 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 StemCells, Inc. at December 31, 2002 and 2001, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States.

The accompanying financial statements have been prepared assuming that StemCells, Inc. will continue as a going concern. As more fully described in Note 1, the Company has incurred significant operating losses and negative cash flows since inception and expects to continue to incur significant operating losses for the foreseeable future. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

As discussed in Note 1, the consolidated financial statements for the years ended December 31, 2002 and 2001 have been restated.

/s/ ERNST & YOUNG LLP

Palo Alto, California

March 4, 2003, except for Note 1 - Restatement of Consolidated Financial Statements, as to which the date is March 31, 2004.

**Table of Contents****StemCells, Inc.****Consolidated Balance Sheets**

	December 31,	
	2002 RESTATED	2001 RESTATED
	<hr/>	<hr/>
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 4,236,367	\$ 13,697,195
Accrued interest receivable	2,951	4,638
Other receivable	61,941	49,590
Other current assets	102,829	361,636
	<hr/>	<hr/>
Total current assets	4,404,088	14,113,059
Property, plant and equipment, net	4,337,711	4,422,810
Other assets, net	2,587,023	2,267,207
	<hr/>	<hr/>
Total assets	\$ 11,328,822	\$ 20,803,076
	<hr/>	<hr/>
<b>Liabilities, redeemable convertible preferred stock, and stockholders equity</b>		
Current liabilities:		
Accounts payable	\$ 341,995	\$ 578,270
Accrued expenses and other	427,916	499,165
Accrued wind-down expenses	775,000	575,000
Current maturities of capital lease obligations	229,166	289,167
	<hr/>	<hr/>
Total current liabilities	1,774,077	1,941,602
Capital lease obligations, less current maturities	2,086,667	2,315,833
Deposits	233,240	129,897
Deferred rent	2,481,783	1,120,005
	<hr/>	<hr/>
Total liabilities	6,735,767	5,507,337
Commitments		
Convertible Preferred Stock, \$0.01 par value; 1,000,000 shares authorized issuable in series:		
3% Cumulative Redeemable Convertible Preferred Stock, 5,000 shares issued and 4,000 shares outstanding at December 31, 2002, and 2001 (aggregate liquidation preference of \$4,000,000 at December 31, 2002, and 2001)	2,659,686	1,379,682
6% Cumulative Convertible Preferred Stock, 2,626		1,283,250



designated as 6%, 1,500 shares issued with no shares  
outstanding at December 31, 2002 and 1,500 shares  
outstanding at December 31, 2001  
Stockholders' equity:

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	<b>December 31,</b>	
	<b>2002</b>	<b>2001</b>
	<b>RESTATED</b>	<b>RESTATED</b>
	<hr/>	<hr/>
Common stock, \$.01 par value; 45,000,000 shares authorized; 26,860,078 and 24,220,021 shares issued and outstanding at December 31, 2002 and 2001, respectively	<b>268,601</b>	242,200
Additional paid-in capital	<b>149,238,207</b>	149,180,388
Accumulated deficit	<b>(146,515,666)</b>	(134,519,684)
Deferred compensation	<b>(1,057,773)</b>	(2,270,097)
	<hr/>	<hr/>
Total stockholders' equity	<b>1,933,369</b>	12,632,807
	<hr/>	<hr/>
Total liabilities, redeemable convertible preferred stock, and stockholders' equity	<b>\$ 11,328,822</b>	\$ 20,803,076
	<hr/>	<hr/>

*see accompanying notes to consolidated financial statements.*

**Table of Contents****StemCells, Inc.****Consolidated Statements of Operations**

	Year Ended December 31,		
	2002	2001	2000
	<u>RESTATED</u>	<u>RESTATED</u>	
Revenue from collaborative and licensing agreements	\$ 40,010	\$	\$ 74,300
Revenue from grants	375,367	505,231	
Revenue from assignment of rights to technology		300,000	
	<u>415,377</u>	<u>805,231</u>	<u>74,300</u>
Total Revenues			
Operating Expenses			
Research and development	7,382,272	8,603,444	5,979,007
General and administrative	3,358,581	3,787,759	3,361,231
Encapsulated Cell Therapy wind-down and corporate relocation	1,163,804	575,000	3,327,360
	<u>11,904,657</u>	<u>12,966,203</u>	<u>12,667,598</u>
Loss from operations	(11,489,280)	(12,160,972)	(12,593,298)
Other Income (expense):			
Interest income	108,702	200,766	303,746
Interest expense	(226,723)		(272,513)
Gain on sale of short-term investment		7,782,398	1,427,686
Loss on disposal of property, plant and equipment	(2,736)	(30,477)	
Other income (expense)	(34,218)	186,788	8,902
	<u>(154,975)</u>	<u>8,139,475</u>	<u>1,467,821</u>
Loss before deemed dividend and cumulative effect of change in accounting principle	(11,644,255)	(4,021,497)	(11,125,477)
Deemed dividend to preferred shareholders	(1,280,004)	(1,545,917)	(265,000)
Dividends to preferred shareholders	(351,727)		
	<u>(13,275,986)</u>	<u>(5,567,414)</u>	<u>(11,390,477)</u>
Loss applicable to common shareholders			

before cumulative effect of change in accounting principle Cumulative effect of a change in accounting principle	_____	_____	(216,000) _____
 Net loss applicable to common shareholders	 \$(13,275,986) _____	 \$ (5,567,414) _____	 \$(11,606,477) _____
 Basic and diluted loss per share applicable to common shareholders before cumulative effect Cumulative effect of change in accounting principle	 \$ (0.53) _____	 \$ (0.25) _____	 \$ (0.57) _____
 Basic and diluted net loss per share applicable to common shareholders	 \$ (0.53) _____	 \$ (0.25) _____	 \$ (0.58) _____
 Shares used in basic and diluted per share amounts	 25,096,252 _____	 22,241,564 _____	 20,067,760 _____

*See accompanying notes to consolidated financial statements.*

**Table of Contents****Stem Cells, Inc.****Consolidated Statements of Changes In Redeemable Convertible Preferred Stock and Stockholders Equity**

	<b>Redeemable Common Stock</b>		<b>Redeemable Convertible Preferred Stock</b>		<b>Common Stock</b>	
	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>
Balances, December 31, 1999	524,337	\$ 5,248,610			18,635,565	\$ 186,355
Issuance of common stock to Millennium Partners LP, net of issuance costs of \$598,563					1,104,435	11,044
Issuance of common stock related to license agreements					77,800	778
Common stock issued pursuant to employee benefit plan					6,672	68
Exercise of employee stock options					608,078	6,081
Redeemable common stock conversion	(524,337)	(5,248,610)			524,337	5,243
Issuance of 6% convertible preferred stock			1,500	1,283,250		
Deferred compensation						
Amortization of deferred compensation						
Unrealized gain on short-term restricted investments						
Net loss						
Comprehensive income						
Balances, December 31, 2000			1,500	\$ 1,283,250	20,956,887	\$ 209,569

[Additional columns below]

[Continued from above table, first column(s) repeated]

	<b>Additional Paid-in Capital</b>	<b>Accumulated Deficit</b>	<b>Accumulated Other Comprehensive Income (Loss)</b>	<b>Deferred Compensation</b>	<b>Total Stockholders Equity</b>
Balances, December 31, 1999	\$ 123,917,758	\$(119,372,710)	\$	\$(1,225,000)	\$ 3,506,403
Issuance of common stock to Millennium Partners LP, net of issuance costs of \$598,563	4,390,393				4,401,437
Issuance of common stock related to license agreements	364,222				365,000
Common stock issued pursuant to employee benefit plan	27,112				27,180
Exercise of employee stock options	651,828				657,909
Redeemable common stock conversion	5,243,367				5,248,610
Issuance of 6% convertible preferred stock	216,750				216,750
Deferred compensation	3,555,387			(3,555,387)	
Amortization of deferred compensation				2,044,626	2,044,626
Unrealized gain on short-term restricted investments			16,356,334		16,356,334
Net loss		(11,125,477)			(11,125,477)
Comprehensive income					5,230,857
Balances, December 31, 2000	\$ 138,366,817	\$(130,498,187)	\$ 16,356,334	\$(2,735,761)	\$ 21,698,772

**Table of Contents****StemCells, Inc.****Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders Equity  
(continued)**

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital
	Shares	Amount	Shares	Amount	
Balances at, December 31, 2000	1,500	\$ 1,283,250	20,956,887	\$ 209,569	\$ 138,366,817
Issuance of common stock related to equity financing net of issuance cost \$396,593			707,947	7,079	3,596,328
Exercise of warrants			1,856,333	18,563	2,230,603
Issuance of redeemable 3% convertible preferred stock, net of issuance cost \$272,485	5,000	1,542,515			3,185,000
Conversion of redeemable convertible preferred shares to common stock	(1,000)	(906,500)	500,125	5,001	901,499
Accretion of redeemable preferred stock		743,667			(743,667)
Common stock issued pursuant to employee benefit plan			28,221	283	71,882
Exercise of employee and consultant stock options			170,508	1,705	242,833
Compensation expense from grant of options					552,349
Deferred compensation					776,744
Amortization of deferred compensation					
Unrealized loss on short-term investments					
Realized gain on short-term investments					
Net loss (RESTATED) Comprehensive (loss)					
Balances, December 31, 2001 (RESTATED)	5,500	\$ 2,662,932	24,220,021	\$ 242,200	\$ 149,180,388

[Additional columns below]

[Continued from above table, first column(s) repeated]

	<b>Accumulated Deficit</b>	<b>Accumulated Other Comprehensive Income (Loss)</b>	<b>Deferred Compensation</b>	<b>Total Stockholders Equity</b>
Balances at, December 31, 2000	\$(130,498,187)	\$16,356,334	\$(2,735,761)	\$21,698,772
Issuance of common stock related to equity financing net of issuance cost \$396,593				3,603,407
Exercise of warrants				2,249,166
Issuance of redeemable 3% convertible preferred stock, net of issuance cost \$272,485				3,185,000
Conversion of redeemable convertible preferred shares to common stock				906,500
Accretion of redeemable preferred stock				(743,667)
Common stock issued pursuant to employee benefit plan				72,165
Exercise of employee and consultant stock options				244,538
Compensation expense from grant of options				552,349
Deferred compensation			(776,744)	
Amortization of deferred compensation			1,242,408	1,242,408
Unrealized loss on short-term investments		(8,573,936)		(8,573,936)
Realized gain on short-term investments		(7,782,398)		(7,782,398)
Net loss (RESTATED) Comprehensive (loss)	(4,021,497)			(4,021,497)
	<hr/>	<hr/>	<hr/>	<hr/>
Balances, December 31, 2001 (RESTATED)	\$(134,519,684)	\$	\$(2,270,097)	\$12,632,807



**Table of Contents****StemCells, Inc.****Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders Equity  
(continued)**

	<b>Redeemable Convertible Preferred Stock</b>		<b>Common Stock</b>		<b>Additional Paid-in Capital</b>
	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>	
Balances at, December 31, 2001 (RESTATED)	5,500	\$ 2,662,932	24,220,021	\$242,200	\$149,180,388
Issuance of common stock related to equity financing net of issuance cost \$89,706			1,135,850	11,359	1,117,285
Dividends paid to 3% convertible preferred holders in stock			97,969	980	128,290
Conversion of redeemable convertible preferred shares to common stock	(1500)	(1,283,250)	1,252,244	12,522	1,493,185
Accretion of redeemable preferred stock		1,280,004			(1,280,004)
Common stock issued for external services			61,419	614	90,913
Common stock issued pursuant to employee benefit plan			44,988	450	56,015
Exercise of employee and consultant stock options			47,587	476	8,859
Compensation expense from grant of options					124,689
Deferred compensation					(1,681,413)
Amortization of deferred compensation					
Net loss (RESTATED)					
Balances, December 31, 2002 (RESTATED)	4,000	\$ 2,659,686	26,860,078	\$268,601	\$149,238,207

[Continued from above table, first column(s) repeated]

	<b>Accumulated Deficit</b>	<b>Accumulated Other Comprehensive Income (Loss)</b>	<b>Deferred Compensation</b>	<b>Total Stockholders Equity</b>
Balances at, December 31, 2001 (RESTATED)	\$(134,519,684)	\$	\$(2,270,097)	\$ 12,632,807
Issuance of common stock related to equity financing net of issuance cost \$89,706				1,128,644
Dividends paid to 3% convertible preferred holders in stock	(129,270)			
Conversion of redeemable convertible preferred shares to common stock	(222,457)			1,283,250
Accretion of redeemable preferred stock				(1,280,004)
Common stock issued for external services				91,527
Common stock issued pursuant to employee benefit plan				56,465
Exercise of employee and consultant stock options				9,335
Compensation expense from grant of options				124,689
Deferred compensation			1,681,413	
Amortization of deferred compensation			(469,089)	(469,089)
Net loss (RESTATED)	(11,644,255)			(11,644,255)
Balances, December 31, 2002 (RESTATED)	\$(146,515,666)	\$	\$(1,057,773)	\$ 1,933,369

**Table of Contents****StemCells, Inc.****Consolidated Statements of Cash Flows**

	2002	Year ended December 31, 2001	2000
	RESTATED	RESTATED	
<b>Cash flows from operating activities:</b>			
Loss before deemed dividend and cumulative effect of change in accounting principle	\$(11,644,255)	\$ (4,021,497)	\$(11,125,477)
Adjustments to reconcile net loss before deemed dividend and cumulative effect of change in accounting principle to net cash used in operating activities:			
Depreciation and amortization	402,190	648,273	738,593
Changes in deferred compensation	(469,089)	1,242,408	2,044,627
Issue of options in exchange for services	237,680	563,872	
Gain on sale of short-term investments		(7,782,398)	(1,427,686)
Gain on sale of rights to technology		(300,000)	
Loss on disposal of fixed assets		30,477	
Changes in operating assets and liabilities:			
Accrued interest receivable	1,687	12,087	25,488
Other receivable	(12,351)	(49,590)	3,000,000
Other current assets	258,807	162,873	315,213
Other assets, net	(379,572)	(196,432)	
Accounts payable and accrued expenses	52,477	(1,344,195)	(92,255)
Accrued rent	1,361,776	414,259	203,393
Deposits	103,345	103,896	
Net cash used in operating activities	(10,087,305)	(10,515,967)	(6,318,104)
<b>Cash flows from investing activities:</b>			
Proceeds from sale of short-term investments		7,782,398	1,427,686
Purchases of property, plant and equipment	(222,335)	(334,321)	(151,212)
Proceeds on sale of fixed assets		40,795	
Acquisition of other assets		(50,344)	(886,751)
Proceeds from sale of rights to technology, net		300,000	
Net cash provided by (used in) investing activities	(222,335)	7,738,528	389,723
<b>Cash flows from financing activities:</b>			
Proceeds from issuance of common stock, net	1,128,644	5,852,573	4,401,437

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Proceeds from the exercise of stock options	<b>9,335</b>	157,682	685,089
Common stock issued for agreements			365,000
Proceeds from issuance of preferred stock, net		4,727,515	1,500,000
Change in debt service fund			609,905
Repayments of debt and lease obligations	<b>(289,167)</b>	(332,083)	(324,167)
	<hr/>	<hr/>	<hr/>
Net cash provided by financing activities	<b>848,812</b>	10,405,687	7,237,264
	<hr/>	<hr/>	<hr/>
Increase (decrease) in cash and cash equivalents	<b>(9,460,828)</b>	7,628,248	1,308,883
Cash and cash equivalents at beginning of year	<b>13,697,195</b>	6,068,947	4,760,064
	<hr/>	<hr/>	<hr/>
Cash and cash equivalents at end of the year	<b>\$ 4,236,367</b>	\$ 13,697,195	\$ 6,068,947
	<hr/>	<hr/>	<hr/>
Supplemental disclosure of cash flow information:			
Interest paid	<b>\$ 226,722</b>	\$ 246,328	\$ 272,513

*see accompanying notes to consolidated financial statements.*

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**StemCells, Inc.**

**Notes to Consolidated Financial Statements**

**December 31, 2002**

**1. Summary of Significant Accounting Policies**

**Nature of Business**

StemCells, Inc. (the Company) is a biopharmaceutical company that operates in one segment, engaged in the development of novel stem cell therapies designed to treat human diseases and disorders. The accompanying financial statements have been prepared on the basis that the Company will continue as a going concern. Since inception, the Company has incurred annual losses and negative cash flows from operations and has an accumulated deficit of approximately \$144.7 million at December 31, 2002. The Company has not derived revenues from the sale of products, and does not expect to receive revenues from product sales for at least several years. It may not be able to realize sufficient revenues to achieve or sustain profitability in the future.

Although StemCells has taken actions to reduce its expenses over the last two quarters, it expects to incur additional operating losses over the next several years. The Company has very limited liquidity and capital resources and must obtain significant additional capital resources in order to sustain its product development efforts, for acquisition of technologies and intellectual property rights, for preclinical and clinical testing of our anticipated products, pursuit of regulatory approvals, acquisition of capital equipment, laboratory and office facilities, establishment of production capabilities, for general and administrative expenses and other working capital requirements. StemCells relies on cash reserves and proceeds from equity and debt offerings, proceeds from the transfer or sale of intellectual property rights, equipment, facilities or investments, and government grants and funding from collaborative arrangements, if obtainable, to fund its operations. If the Company exhausts its cash balances and is unable to realize adequate financing, it may be unable to meet operating obligations and be required to initiate bankruptcy proceedings. The Company's existing capital resources are not sufficient to fund its operations through the end of the second quarter of 2003. These conditions raise doubt about StemCells' ability to continue as a going concern. The financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

**Principles of Consolidation**

The consolidated financial statements include accounts of the Company and StemCells California, Inc., a wholly owned subsidiary. Significant inter-company balances and transactions have been eliminated on consolidation.

**RESTATEMENT OF CONSOLIDATED FINANCIAL STATEMENTS**

The Company has restated its consolidated financial statements the years ended December 31, 2002 and December 31, 2001. The Company has determined that it needs to restate the treatment of its continuing cost of operating the Company's former corporate headquarters in Rhode Island in line with applicable accounting guidance, including EITF issue 94-3(B) - Other Costs to Exit an Activity. EITF issue 94-3(B) requires that, instead of expensing costs as incurred, the Company accrue what it can reasonably estimate as its carrying cost to an estimated fully leased or disposal date. Accordingly, in its restated financial statements for the years ended December 31, 2002 and 2001, based on information estimated as of those dates, the Company has revised its estimate and accrued \$775,000 and \$575,000 respectively as estimated wind-down expenses. (See note 9 to the financial statements).

In addition, as a result of an amendment to the Company's lease on its current facilities in California, part of the lease incentive amounting to \$1,079,201 had been incorrectly recognized as income received in 2002 instead of being deferred and recognized over the lease period. The consolidated financial statements for the year ended December 31, 2002 have been restated to defer this amount at December 31, 2002. (See note 6 to the financial statements.)

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In addition, in the Consolidated Statements of Operations for the years ended December 31, 2002, the line for Dividends to preferred shareholders was inadvertently omitted. This amendment on Form 10-K/A rectifies the omission.

The restatement increased net loss applicable to common shareholders by \$1,631,000 in 2002 and \$575,000 in 2001 or \$0.07 and \$0.03 per share respectively.

**Use of Estimates**

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States, requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. Actual results could differ from these estimates.

**Cash and Cash Equivalents**

The Company considers cash equivalents to be only those investments that are highly liquid, readily convertible to cash and which mature within three months from the date of purchase.

**Available-for-Sale Securities**

The Company determines the appropriate classification of securities at the time of purchase and reevaluates such designation as of each balance sheet date. The Company classifies such holdings as available-for-sale securities, which are carried at fair value, with unrealized gains and losses reported as a separate component of stockholders equity. At December 31, 2000, the Company owned 126,193 shares of Modex Therapeutics Ltd ( Modex ). The Company sold all of its shares of Modex in 2001 for a realized gain of \$7.8 million. The Company no longer holds any available-for-sale securities.

**Comprehensive Income (Loss)**

Comprehensive income (loss) is comprised of net income (loss) and other comprehensive income (loss). The Company has no items of other comprehensive income therefore comprehensive income (loss) equals net income (loss).

**Property, Plant and Equipment**

Property, plant and equipment, including that held under capital lease obligations, is stated at cost and depreciated using the straight-line method over the estimated life of the respective asset, or the lease term if shorter, as follows:

Building and improvements	3 - 15 years
Machinery and equipment	3 - 10 years
Furniture and fixtures	3 - 10 years

Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or lease terms.

The Company adopted FAS No. 144, Accounting for the Impairment or Disposal of Long-lived Assets, at the beginning of 2002. As permitted by the transition rules of FAS No. 144, long-lived assets classified as held for sale as a result of activities that were initiated prior to this Statement's initial application shall continue to be accounted for in

accordance with FAS No. 121. If however, the criteria for classifying long-lived assets held for sale under FAS No. 144 are not met by the end of the fiscal year in which this Statement is initially applied, the related long-lived assets shall be reclassified as held and used. At December 31, 2002, the criteria under FAS No. 144 for classifying the Company's long-lived assets held for sale were not met and accordingly, such assets with a fair value of \$3,203,491 at December 31, 2001 were reclassified as held and used on the balance sheet for all periods presented and are included in Property, Plant and Equipment, net.



**Table of Contents****Patent and License Costs**

Prior to fiscal year 2001, the Company capitalized certain patent costs related to patent applications. Accumulated costs were amortized over the estimated economic life of the patents, not to exceed 17 years, using the straight-line method, commencing at the time the patent is issued. Costs related to patent applications are charged to expense at the time such patents are deemed to have no continuing value. Effective in 2001 the Company expenses all patent costs as incurred. At December 31, 2002 and 2001, total costs capitalized were \$980,000 and the related accumulated amortization was \$180,000 and \$125,000, respectively. The increase in year 2001 was a result of a reclassification from licenses to patents. Patent expense totaled \$650,000, \$647,000, and \$305,000 in 2002, 2001 and 2000, respectively. License costs are capitalized and amortized over the period of the license agreement.

**Stock Based Compensation**

The Company's employee stock option plan is accounted for under Accounting Principles Board Opinion No. 25 ( APB 25 ), Accounting for Stock Issued to Employees. The Company grants qualified stock options for a fixed number of shares to employees with an exercise price equal to the fair market value of the shares at the date of grant. In accordance with APB 25, the Company recognizes no compensation expense for qualified stock option grants. The Company also issues non-qualified stock options for a fixed number of shares to employees with an exercise price less than the fair market value of the shares at the date of grant. When such options vest, the Company recognizes the difference between the exercise price and fair market value as compensation expense in accordance with APB 25.

For purposes of disclosures pursuant to Statement of Financial Accounting Standards No. 123, Accounting for Stock-Based Compensation, (FAS 123) as amended by Statement of Financial Accounting Standards No. 148, Accounting for Stock-Based Compensation Transition and Disclosure, (FAS 148), the estimated fair value of options is amortized to expense over the options' vesting period. The following table illustrates the effect on net loss and net loss per share if we had applied the fair value recognition provisions of FAS 123 to stock-based employee compensation ( in thousands, except per share amounts):

	<b>Year ended December 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>RESTATED</b>	<b>RESTATED</b>	
Net loss applicable to common stockholders as reported	\$(13,275,986)	\$ (5,567,414)	\$(11,606,477)
Add: Stock-based employee/ director compensation expense included in reported net loss	\$ 143,002	\$ 491,706	\$ 147,499
Deduct: Total stock-based employee/director compensation expense under the fair value based method for all awards	\$ (619,631)	\$ (2,246,983)	\$ (1,182,774)
	<hr/>	<hr/>	<hr/>
Net loss applicable to common stockholders pro forma	\$(13,752,615)	\$ (7,322,691)	\$(12,641,752)
	<hr/>	<hr/>	<hr/>
	\$ (0.53)	\$ (0.25)	\$ (0.58)

Basic and diluted net loss per share applicable to common stockholders as reported			
Basic and diluted net loss per share applicable to common stockholders pro forma	\$ (0.55)	\$ (0.33)	\$ (0.63)
Shares used in Basic and Diluted loss per share amounts	25,096,252	22,241,564	20,067,760

The effects on pro forma net loss and net loss per share of expensing the estimated fair value of stock options are not necessarily representative of the effects on reporting the results of operations for future years. As required by FAS 123, the Company has used the Black-Scholes model for option valuation, which method may not accurately value the options described.

## **Table of Contents**

The company accounts for stock options granted to non-employees in accordance with FAS No. 123 and Emerging Issues Task Force (EITF) 96-18 Accounting For Equity Instruments That Are Issued To Other Than Employees For Acquiring, Or In Conjunction With Selling, Goods Or Services, and accordingly, recognizes as expense the estimated fair value of such options as calculated using the Black-Scholes valuation model. The fair value is remeasured during the service period and is amortized over the vesting period of each option or the recipient's contractual arrangement, if shorter.

## **Long Lived Assets**

The Company routinely evaluates the carrying value of its long-lived assets. The Company records impairment losses on long-lived assets used in operations when events and circumstances indicate that assets may be impaired and the undiscounted cash flows estimated to be generated by the assets are less than the carrying amount of those assets. If an impairment exists, the charge to operations is measured as the excess of the carrying amount over the fair value of the assets.

## **Income Taxes**

The liability method is used to account for income taxes. Deferred tax assets and liabilities are determined based on differences between financial reporting and income tax bases of assets and liabilities as well as net operating loss carry forwards and are measured using the enacted tax rates and laws that are expected to be in effect when the differences reverse. Deferred tax assets may be reduced by a valuation allowance to reflect the uncertainty associated with their ultimate realization.

## **Revenue Recognition**

Revenues from collaborative agreements and grants are recognized as earned upon either the incurring of reimbursable expenses directly related to the particular research plan or the completion of certain development milestones as defined within the terms of the collaborative agreement. Payments received in advance of research performed are designated as deferred revenue. The Company recognizes non-refundable upfront license fees and certain other related fees on a straight-line basis over the development period. Fees associated with substantive at risk, performance based milestones are recognized as revenue upon their completion, as defined in the respective agreements. Incidental assignment of technology rights are recognized as revenue at time of receipt.

## **Recent Accounting Pronouncements**

In November 2002, the FASB issued Interpretation No. 45 (FIN 45), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others. FIN 45 elaborates on the existing disclosure requirements for most guarantees, including residual value guarantees issued in conjunction with operating lease agreements. It also clarifies that at the time a company issues a guarantee, the company must recognize an initial liability for the fair value of the obligation it assumes under that guarantee and must disclose that information in its interim and annual financial statements. The initial recognition and initial measurement provisions apply on a prospective basis to guarantees issued or modified after December 31, 2002. The disclosure requirements are effective for financial statements of interim or annual periods ending after December 15, 2002. The Company's adoption of FIN 45 did not have a material impact on its consolidated results of operations and financial position.

In December 2002, the FASB issued Statement No. 148, Accounting for Stock-Based Compensation Transition and Disclosure (FAS 148). FAS 148 amends FAS 123 Accounting for Stock-Based Compensation to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, FAS 148 amends the disclosure requirements of FAS 123 to require more

prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The additional disclosure requirements of FAS 148 are effective for fiscal years ending after December 15, 2002. The Company has elected to continue to follow the intrinsic value method of accounting as prescribed by Accounting Principles Board Opinion No. 25 ( APB 25 ), Accounting for Stock Issued to Employees, to account for employee stock options.

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In January 2003, the FASB issued FASB Interpretation No. 46, Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51( FIN46 ). FIN 46 requires certain variable interest entities to be consolidated by the primary beneficiary of the entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 is effective for all new variable interest entities created or acquired after January 31, 2003. The Company does not believe it has any investments in variable interest entities and does not anticipate any impact with the adoption of this interpretation.

**Research and Development Costs**

The Company expenses all research and development costs as incurred. Research and Development costs include costs of personnel, external services, supplies, facilities and miscellaneous other costs.

**Net Loss per Share**

Basic and diluted net loss per share has been computed using the weighted-average number of shares of common stock outstanding during the period. Basic earnings per share excludes any dilutive effects of options, shares subject to repurchase, warrants and convertible securities. Diluted earnings per share includes the impact of potentially dilutive securities.

	<b>Years Ended December 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>RESTATED</b>	<b>RESTATED</b>	
	<b>(In thousands, except per share amounts)</b>		
Net loss applicable to common stockholders	\$(13,276)	\$ (5,567)	\$(11,606)
Weighted average shares used in computing basic and diluted net loss per share amounts	25,096	22,242	20,068
Basic and diluted net loss per share applicable to common stockholders	\$ (0.53)	\$ (0.25)	\$ (0.58)

The Company has excluded outstanding stock options and warrants from the calculation of diluted loss per common share because all such securities are anti-dilutive for all applicable periods presented. These outstanding securities consist of the following potential common shares:

<b>Years Ended December 31,</b>		
<b>2002</b>	<b>2001</b>	<b>2000</b>

Convertible preferred stock	<u>2,000,000</u>	<u>2,856,192</u>	<u>806,690</u>
Outstanding options	<u>4,294,050</u>	<u>3,652,560</u>	<u>2,716,966</u>
Outstanding warrants	<u>1,074,593</u>	<u>1,056,687</u>	<u>252,595</u>

## 2. Investments

In October 1997, the Company completed a series of transactions, which resulted in the establishment of its previously 50%-owned Swiss subsidiary, Modex Therapeutics, Ltd., (Modex) as an independent company.

In April 1998, Modex completed an additional equity offering, in which the Company did not participate. This resulted in a reduction in the Company's ownership to less than 20% ownership; therefore, the Company accounted for this investment under the cost method from that date. On June 23, 2000, Modex completed an initial public offering of its common stock. At December 31, 2000, the Company owned 126,193 shares of Modex. On January 9, 2001, the Company sold 22,616 Modex shares for a net price of 182.00 Swiss francs per share, which converts to \$112.76 per share, for total proceeds of \$2,550,230. On May 1, 2001, the Company sold its remaining shares in Modex for a net price of 87.30 Swiss Francs per share, which converts to approximately \$50.51 per share, for total proceeds of approximately \$5,232,168, net of commissions and fees. The Company no longer holds any shares of Modex.

**Table of Contents****3. Property, Plant and Equipment**

Property, plant and equipment consists of the following:

	<b>December 31,</b>	
	<b>2002</b>	<b>2001</b>
	<hr/>	<hr/>
Building and improvements	\$ 3,918,889	\$ 3,918,889
Machinery and equipment	2,077,563	1,884,580
Furniture and fixtures	303,351	273,999
	<hr/>	<hr/>
	<b>6,299,803</b>	<b>6,077,468</b>
Less accumulated depreciation and amortization	<b>(1,962,092)</b>	<b>(1,654,658)</b>
	<hr/>	<hr/>
	<b>\$ 4,337,711</b>	<b>\$ 4,422,810</b>
	<hr/>	<hr/>

Depreciation and amortization expense was \$307,000, \$495,000, and \$451,000 for the years ending December 31, 2002, 2001 and 2000, respectively.

The Company adopted FAS No. 144, Accounting for the Impairment or Disposal of Long-lived Assets, at the beginning of 2002. As permitted by the transition rules of FAS No. 144, long-lived assets classified as held for sale as a result of activities that were initiated prior to this Statement's initial application shall continue to be accounted for in accordance with FAS No. 121. If however, the criteria for classifying long-lived assets held for sale under FAS No. 144 are not met by the end of the fiscal year in which this Statement is initially applied, the related long-lived assets shall be reclassified as held and used. At December 31, 2002, the criteria under FAS No. 144 for classifying the Company's long-lived assets held for sale were not met and accordingly, such assets with a fair value of \$3,203,491 at December 31, 2001 were reclassified as held and used on the balance sheet for all periods presented and are included in building and improvements. Depreciation of these assets will resume in 2003.

**4. Other Assets, Net**

Other assets are as follows:

	<b>December 31,</b>	
	<b>2002</b>	<b>2001</b>
	<hr/>	<hr/>
Patents, net	\$ 799,173	\$ 854,974
License agreements, net	376,137	380,092
Security deposit building lease	752,500	752,500
Deposit other	3,338	4,641
Employee loan	115,315	

Restricted Cash-(Letter of Credit)	<u>540,560</u>	<u>275,000</u>
	<u>\$2,587,023</u>	<u>\$2,267,207</u>

At December 31, 2002 and 2001, accumulated amortization was \$1,388,000 and \$1,293,000, respectively, for patents and license agreements.

## 5. Accrued Expenses

Accrued expenses are as follows:

	December 31,	
	2002	2001
	<u>          </u>	<u>          </u>
External services	\$183,813	\$ 88,649
Employee compensation	233,447	173,645
Other	<u>10,656</u>	<u>236,871</u>
	<u>\$427,916</u>	<u>\$499,165</u>



**Table of Contents****6. Leases**

The Company has undertaken direct financing transactions with the State of Rhode Island and received proceeds from the issuance of industrial revenue bonds totaling \$5,000,000 to finance the construction of its pilot manufacturing facility. The related leases are structured such that lease payments will fully fund all semiannual interest payments and annual principal payments through maturity in August 2014. Interest rates vary with the respective bonds maturities, ranging from 5.1% to 9.5%. The bonds contain certain restrictive covenants which limit, among other things, the payment of cash dividends and the sale of the related assets. The Company entered into a fifteen-year lease for a laboratory facility in connection with a sale and leaseback arrangement in 1997. The lease has escalating rent payments and accordingly, the Company is recognizing rent expense on a straight-line basis. At December 31, 2002, the Company had \$1,156,362 in deferred rent expense for this facility.

As of February 1, 2001, the Company entered into a 5-year lease for a 40,000 square foot facility located in the Stanford Research Park in Palo Alto, CA. The facility includes space for animals, laboratories, offices, and a GMP (Good Manufacturing Practices) suite. GMP facilities can be used to manufacture materials for clinical trials. On December 19, 2002 the Company negotiated an amendment to the lease, which resulted in reducing the average rent per year over the term of the lease from approximately \$3.15 million to \$2.1 million. This reduction will be recognized as income over the remaining life of the lease, which terminates on February 1, 2006. As part of the lease amendment the Company issued a letter of credit on January 2, 2003 for \$503,079, which was an addition to the letter of credit amounting to \$275,000 issued at commencement of the lease to serve as a deposit for the duration of the lease. The lease has escalating rent payments and accordingly, the Company is recognizing rent expense on a straight-line basis. At December 31, 2002 the Company had \$1,325,420 in deferred rent expense for this facility.

As of December 31, 2002, future minimum lease payments and sublease income under operating and capital leases and principal payments on equipment loans are as follows:

	<b>Capital Leases</b>	<b>Operating Leases</b>	<b>Sublease Income</b>
2003	\$ 436,909	\$ 2,888,796	1,263,736
2004	425,713	2,947,335	1,396,919
2005	412,587	3,007,630	1,409,463
2006	401,289	1,115,186	791,463
2007	330,644	937,500	60,890
Thereafter	<u>1,579,644</u>	<u>6,591,797</u>	<u>                    </u>
Total minimum lease payments	<b>3,586,786</b>	<b>\$17,488,244</b>	<b>\$4,922,472</b>
Less amounts representing interest	<u>1,270,953</u>	<u>                    </u>	<u>                    </u>
Present value of minimum lease payments	<b>2,315,833</b>	<u>                    </u>	<u>                    </u>
Less current maturities	<u>229,166</u>	<u>                    </u>	<u>                    </u>

Capitalized lease obligations, less  
current maturities

**\$2,086,667**

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Rent expense for the years ended December 31, 2002, 2001 and 2000, was \$2,565,000, \$2,629,000 and \$1,111,000 respectively.

## 7. Grants

In February 2001, the Company was awarded a two-year, \$300,000 per year grant from the National Institutes of Health's Small Business Innovation Research (SBIR) office. The grant, which will support joint work with virologist Dr. Jeffrey Glenn at Stanford University, is aimed at characterizing the human cells that can be infected by human hepatitis viruses and to develop a small animal model using the cells that are most infectable by these viruses to develop screening assays and identify novel drugs for the disease. For each of 2001 and 2002, the Company received \$300,000, of which \$150,367 represents the Company's share of the joint effort and has been recognized as revenue. The remainder,

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\$149,633, was paid to Stanford University as its share of the joint effort each year of the grant. In addition in 2001, the Company received and recognized as revenue \$298,614 for research from a prior SBIR grant relating to the neural program.

On September 30 2001, the Company was awarded a four-year, \$225,000 per year grant from the National Institute of Diabetes & Digestive & Kidney Disorders of the National Institutes of Health for the Company's liver stem cell program which focuses on identifying liver stem and progenitor cells for the treatment of liver diseases. The grant is subject to the availability of funds and satisfactory progress of the project. For this award, the Company has recognized \$56,250 and \$225,000 for 2001 and 2002 respectively.

### **8. Assignment of Rights**

On April 30, 2001, in consideration for \$300,000 received from Modex and the assistance of Modex in executing the sale of StemCells' holding of Modex shares, StemCells agreed to assign to Modex the rights concerning future payments under the Asset Purchase and License Agreement between the Company and Neurotech SA, by which Neurotech SA purchased the Company's former encapsulated cell therapy technology.

### **9. Wind-down of Encapsulated Cell Technology Research and Development Program (RESTATED)**

Until mid-1999, the Company engaged in research and development in encapsulated cell therapy technology, including a pain control program funded by AstraZeneca Group plc. In June 1999 AstraZeneca terminated the collaboration, as allowed under the terms of the original collaborative agreement signed in 1995. As a result of termination, management determined in July 1999 to restructure its research operations to abandon all further encapsulated cell technology research and concentrate its resources on the research and development of its proprietary platform of stem cell technologies. The Company wound down its research and manufacturing operations in Lincoln, Rhode Island, and relocated its remaining research and development activities, and its corporate headquarters, to California, in October 1999. Wind-down expenses totaled \$3,327,360 for the year ended 2000.

The Company provided for the estimated lease payments and operating costs of the Rhode Island facilities through an expected disposal date of June 30, 2000. The Company did not sublet the Rhode Island facilities in 2000 and therefore made a change in estimate to accrue additional expenses of \$3.3 million to cover operating lease payments, utilities, taxes, insurance, maintenance, interest and other non-employee expenses through 2001. In the year 2001 the Company paid \$1.7 million of expenses, which were recorded against the reserve. As of December 31, 2001 an additional reserve of \$0.6 million was recorded as operating expenses for the Company's former corporate headquarters in Rhode Island. This reserve was based in part on information provided by the Company's broker/realtor that estimated, using data available to him as of the end of 2001, the time it would be likely to take until the facility would be fully sub-leased, and the amount of loss the Company would incur during such time. This estimate was revised at December 31, 2002 to \$0.8 million. In 2002, the Company incurred \$1.0 million in operating expenses for this facility. Even though it is the intent of the Company to dispose the facility at the earliest possible time, the Company cannot determine with certainty a fixed date by which such disposal will occur. In light of this uncertainty, the Company will continue to re-evaluate and adjust its reserve periodically, based on information that would allow the Company to reasonably estimate the reserve required.

### **10. Consulting Arrangements**

In September 1997, the Company entered into consulting arrangements with the principal scientific founders of StemCells California, Dr. Irving Weissman, Dr. Fred H. Gage and Dr. David Anderson and with Dr. Richard M. Rose, then President and CEO of the StemCells California. To attract and retain Drs. Rose, Weissman, Gage and Anderson, and to expedite the progress of the Company's stem cell program, the Company awarded these individuals options to

acquire a total of approximately 1.6 million shares of the Company's common stock, at an exercise price of \$5.25 per share, the quoted market price at the grant date. The Company also designated a pool of 400,000 options to be granted to persons in a position to make a significant contribution to the success of the stem cell program. Under the original grants, approximately 100,000 of these options were exercisable immediately on the date of grant, 1,031,000 of these options would vest and become exercisable only upon the achievement of specified milestones related to the Company's stem cell development program and the remaining 468,750 options would vest over eight years. In connection with the 468,750 options issued to a non-employee, Dr. Anderson, the Company recorded deferred compensation of \$1,750,000, the fair value of such options at the date of grant, which will be amortized over an eight-year period. The deferred compensation

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expense associated with the unvested portion of the grants as of December 31, 2002 was \$918,000. The fair value was determined using the Black-Scholes method.

Effective October 31, 2000, the Company agreed with Drs. Weissman and Gage to revise their 468,750 milestone-vesting stock options to time-based vesting, on the same schedule as Dr. Anderson's option. Under each of the revised options, 168,750 shares vested immediately, and the remaining 300,000 shares will vest at 50,000 per year on September 25, until September 25, 2005, when the final 100,000 shares will vest. The exercise price remains \$5.25 per share. The Company recorded recovery of \$419,000 and expense of \$692,000 for the years 2002 and 2001 respectively, as compensation expense for the fair market value of the vested portion of such options in an amount determined using the Black-Scholes method. The deferred compensation expense associated with the unvested portion of the grants was determined to be approximately \$127,000 at December 31, 2002. As part of the revision of the options, Drs. Weissman and Gage relinquished all rights under an agreement. These individuals had the right to license the non-brain stem cell technology in exchange for a payment to the Company equal to all prior funding for such research plus royalty payments. The Company plans to revalue the options using the Black-Scholes method on a quarterly basis and recognize additional or reduced compensation expense accordingly.

**11. Stockholders Equity****Sale Of Common Stock**

On August 3, 2000, the Company completed a \$4 million common stock financing transaction with Millennium Partners, LP at \$4.33 per share. In the purchase agreement, the Company granted Millennium an option to purchase up to an additional \$3 million of its common stock. Millennium exercised its option to purchase \$1 million of the Company's common stock on August 23, 2000 at \$5.53 per share. On June 8, 2001, Millennium exercised its remaining option to purchase \$2 million of the Company's common stock at \$4.3692 per share. As a result of the financing agreement, Millennium received five year warrants to purchase 101,587 shares of common stock at \$4.725 per share, 19,900 shares of common stock at \$6.03 per share, and 50,352 shares at \$4.7664 per share. The warrants are callable by StemCells any time at \$7.875, \$10.05 and \$7.944 per underlying share respectively. The calculated value of these callable warrants using the Black-Scholes method is \$701,073, which is accounted for as stock issuance cost.

In addition to the above, Millennium was issued adjustable warrants in connection with the original \$4 million purchase, each of which entitled Millennium to receive additional shares on eight dates beginning six months from the respective closing dates and every three months thereafter. The adjustable warrants could be exercised at any time prior to the thirtieth day after the last of such dates. The number of additional shares Millennium was entitled to on each date was based on the number of shares of common stock Millennium continued to hold on each date and the market price of the Company's common stock over a period prior to each date. The exercise price per share under the adjustable warrant was \$0.01. Millennium exercised the first of the adjustable warrants to purchase 463,369, 622,469, and 25,804 shares on March 30, 2001, July 26, 2001 and August 15, 2001 respectively at \$0.01 per share. The Company has accounted for the sale of the stock and warrants by adding that portion of the proceeds equal to the par value of the new shares to common stock and the balance including the value of the warrants to additional paid in capital. On December 4, 2001, the Company entered into an agreement with Millennium under which it issued 176,101 shares of the Company's common stock as a final cashless exercise of all outstanding adjustable warrants that Millennium was entitled to or would be entitled to. Immediately following delivery of these shares, any further right to acquire common stock under these adjustable warrants was cancelled by the agreement.

On August 23, 2002, the Company entered into an agreement with Triton West Group, Inc. (Triton) pursuant to which the Company sold 1,028,038 shares of common stock to Triton for aggregate proceeds of \$1,100,000, or approximately \$1.07 per share.

**Equity Line**

On May 10, 2001, the Company entered into a common stock purchase agreement with Sativum Investments Limited for the potential future issuance and sale of up to \$30,000,000 of the Company's common stock, subject to restrictions and other obligations. The Company, at its sole discretion, may draw down on this facility, from time to time, and Sativum is obligated to purchase shares of the Company's common stock at a 6% discount to a volume weighted average market price over the 20 trading days following the draw-down notice. There is neither a requirement that the

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Company draw on the facility nor a penalty for not doing so. The equity line agreement expires on December 10, 2003. The Company's volume weighted average market price is calculated by adding the total dollars traded in every transaction in a given trading day and dividing that number by the total number of shares traded during that trading day. The Company is limited with respect to how often it can exercise a draw down and the amount of each draw down.

In connection with the Company's execution of the common stock purchase agreement with Sativum, the Company issued three three-year warrants to purchase an aggregate of 350,000 shares of the Company's common stock at \$2.38 per share to Sativum (250,000 shares), Pacific Crest Securities Inc. (75,000 shares) and Granite Financial Group, Inc. (25,000 shares). The Company has valued the warrants using the Black-Scholes method and recorded the fair value in stockholders' equity. These amounts are \$522,500, \$167,750 and \$55,250 respectively. The exercise price and number of shares are subject to adjustment for subdivisions, combinations, stock dividends and reorganizations.

The Company cannot sell more than 3,922,606 shares pursuant to the common stock purchase agreement without stockholder approval. The Company delivered a draw down notice to Sativum Investments Limited, dated as of July 11, 2001, exercising the Company's right to draw down up to \$5,000,000 at a market-based share price not less than \$5.00 per share beginning July 12, 2001. Sativum purchased a total of 707,947 shares of the Company's common stock at an average purchase price of \$5.65 per share, net of Sativum's discount of six percent. Because the market based price of the Company's common stock was less than \$5.00 for four trading days during the draw down period, the \$5,000,000 request was reduced to \$4,000,000. The Company's placement agents, Pacific Crest Securities, Inc. and Granite Financial Group, Inc. received \$80,000 and \$40,000, respectively, as placement fees in connection with this draw down, resulting in net proceeds to the Company of \$3,603,407, after paying escrow fees and other associated costs. The Company's placement agents have exercised their warrants in full, and the Company has received payment of \$238,050 for the shares issued to them. Additionally, in December 2002 and January 2003 the Company drew down \$113,800 and \$62,778 respectively, net of the applicable discount.

**3% Cumulative Convertible Preferred Stock**

On December 4, 2001, the Company issued 5,000 shares of 3% cumulative convertible preferred stock to Riverview Group, L.L.C., (Riverview Group), a wholly owned subsidiary of Millennium Partners, L.P. plus a 5-year warrant to purchase 350,877 shares of common stock at \$3.42 per share. The Company received net proceeds of \$4,727,515. This preferred stock is convertible into shares of the Company's common stock at a conversion price of \$2.00 per share at the option of Riverview Group. The preferred stock contains a mandatory redemption feature where the Company will redeem unconverted preferred stock on December 4, 2003. The conversion price is subject to adjustment for stock splits, dividends, distributions, reclassifications and similar events. The conversion price may be below the trading market price at the time of the conversion. The final closing on the NASDAQ National Market of the Company's common stock on December 4, 2001 was \$2.90 per share. The company has valued the warrants and the beneficial conversion feature reflecting the Dec 4, 2001 commitment date and the most beneficial per share discount available to the preferred shareholders. As the preferred shares contain a stated redemption, such value of \$3,185,000, including issuance costs of \$272,485, is recorded as a discount to the preferred shares. The preferred shares will be accreted to its mandatory redemption amount and the accretion will result in a deemed dividend. The deemed dividend has been reflected as an adjustment to net loss applicable to common stockholders. On December 7, 2001, Riverview Group converted 1,000 shares of its 3% cumulative convertible preferred stock for 500,125 shares of the Company's common stock. The holders of the preferred stock have liquidation rights equal to their original investment plus accrued but unpaid dividends. Dividends due on the shares of the preferred stock outstanding on a Dividend Payment Date (June 30 and December 31) may be paid in the Company's common stock if the Company so elects by such date. The Company elected to pay the June 30, 2002 and the December 31, 2002 dividends in stock valued at approximately \$60,000 and \$69,000 respectively. Accordingly, 38,313 and 59,656 shares of common stock respectively were issued on July 3, 2002 and December 23, 2002.

**6% Cumulative Convertible Preferred Stock**

On April 13, 2000 the Company issued 1,500 shares of 6% cumulative convertible preferred stock plus a warrant for 75,000 shares of common stock to two members of its Board of Directors for \$1,500,000 on terms more favorable to the Company than it was then able to obtain from outside investors. The shares are initially convertible at the option of the holders into common stock at \$3.77 per share (based on the face value of the preferred shares). The conversion price is subject to adjustment upon certain equity transactions, as defined by the applicable agreement and may be below the



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trading market price of the stock at the time of conversion. The Company has valued the beneficial conversion feature reflecting the April 13, 2000 commitment date and the most beneficial per share discount available to the preferred shareholders. Such value was \$481,000 and is treated as a deemed dividend as of the commitment date. The holders of the preferred stock have liquidation rights equal to their original investment plus accrued but unpaid dividends.

During the first and second quarters of 2001, the conversion price was reduced as a result of the issuance of adjustable warrants to Millennium LP, as described above. The Company has revalued the beneficial conversion feature reflecting the reduced conversion prices and the most beneficial per share discount available to the preferred shareholders and has recorded additional deemed dividends aggregating \$802,000 as of the applicable reset dates.

On June 7, 2002, one of the preferred stockholders converted 750 shares of 6% cumulative convertible preferred stock plus accumulated dividends, at an effective conversion price of \$1.94 per share for 439,442 shares of common stock. On October 4, 2002, the remaining 750 shares, which were held by the other preferred shareholder, together with accumulated dividends, converted automatically at the then-effective conversion price of \$1.07 to 812,802 shares of common stock.

## **Stock Issued For Technology Licenses**

Under a 1997 License Agreement with NeuroSpheres, Ltd., the Company obtained an exclusive patent license in the field of transplantation. The Company entered into an additional license agreement with NeuroSpheres as of October 31, 2000, under which the Company obtained an exclusive license in the field of non-transplant uses, such as drug discovery and drug testing, so that together the licenses are exclusive for all uses of the technology. The Company made up-front payments to NeuroSpheres of 65,000 shares of its common stock and \$50,000, and will make additional cash payments when milestones are achieved in the non-transplant field, or in any products employing NeuroSpheres patents for generating cells of the blood and immune system from neural stem cells.

Pursuant to the terms of a license agreement with the California Institute of Technology (Cal Tech) and the Company's acquisition of its wholly owned subsidiary, StemCells California, StemCells issued 14,513 shares of common stock to Cal Tech. The Company issued an additional 12,800 shares of common stock to Cal Tech with a market value of approximately \$40,000 in May 2000, upon execution of an amendment adding four families of patent applications to the license agreement. The Company must pay an additional \$10,000 upon the issuance of each of the four patents licensed under the amended agreement. In August 2002 we acquired an additional license from Cal Tech to different technology, pursuant to which we issued 27,535 shares of our common stock with a market value of approximately \$35,000. Under the new license, the Company must pay an additional \$10,000 upon the issuance of one patent and \$5,000 on the anniversary of its issuance. All such payments may be made in stock at the Company's election. Upon entering a license agreement with the Oregon Health Sciences University (OHSU) in March 1997, the Company issued it 4,838 shares of common stock and an option to purchase up to 62,888 additional shares to OHSU with an exercise price of \$.01 per share. The option has vested as to 9,675 shares for which shares were issued on March 31, 2002; the remaining option was terminated and we issued 4,000 shares of our common stock, with a market value of approximately \$3,900, to OHSU in January 2003, pursuant to an amendment to the license agreement.

## **Stock Option Plans**

The Company has adopted several stock plans that provide for the issuance of incentive and nonqualified stock options, performance awards and stock appreciation rights, at prices to be determined by the Board of Directors. In the case of incentive stock options, such price will not be less than the fair market value on the date of grant. Options generally vest ratably over four years and are exercisable for ten years from the date of grant or within three months of termination. .



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The following table presents the combined activity of the Company's stock option plans for the years ended December 31:

	2002		2001		2000	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at January 1	3,652,560	\$ 2.65	2,716,966	\$ 4.32	939,335	\$ 2.65
Granted	1,041,478	0.98	1,212,082	2.61	2,485,090	4.08
Exercised	(47,587)	0.20	(170,105)	0.93	(540,927)	1.02
Canceled	(352,401)	4.51	(106,383)	2.26	(166,532)	4.77
Outstanding at December 31	<u>4,294,050</u>	<b>3.14</b>	<u>3,652,560</u>	\$ 3.98	<u>2,716,966</u>	\$ 4.32
Options exercisable at December 31	<u>2,378,778</u>	<b>\$ 3.45</b>	<u>1,287,918</u>	\$ 3.74	<u>731,523</u>	\$ 4.01

The following table presents weighted average price and life information about significant option groups outstanding at December 31, 2002:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (Yrs.)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
Less than \$5.00	2,629,321	8.33	\$ 1.98	1,402,134	\$ 2.19
\$5.01 - \$10.00	1,663,729	4.87	5.25	975,644	5.25
Greater than \$10.00	1,000	3.37	13.75	1,000	13.75
	<u>4,294,050</u>			<u>2,378,778</u>	

The weighted average fair value per share of options granted during 2002, 2001 and 2000 was \$1.15, \$2.61 and \$4.13, respectively. The fair value of options at the date of grant were estimated using the Black-Scholes model with the following weighted average assumptions:

	<b>Options</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
Expected life (years)	5	5	5
Interest rate	3.03%	4.39%	6.5%
Volatility	171.8%	154.2%	167.8%

The Company has never declared nor paid dividends on any of its common stock and does not expect to do so in the foreseeable future.

### **Common Stock Reserved**

The Company has the following shares of common stock reserved for the exercise of options, warrants and other contingent issuances of common stock.

Shares reserved for exercise of stock options	6,500,566
Shares reserved for the employee benefit plan	174,292
Shares reserved for compensation of external services	216,116
Shares reserved for the equity line and related warrants	5,142,188
Shares Reserved for 6% convertible preferred stock and related warrants	158,242
Shares Reserved for 3% convertible preferred stock and related warrants	2,071,144
Shares Reserved for possible future issuances of shares	13,971,962
	<hr/>
Total	28,234,510
	<hr/>

**Table of Contents****12. Research Agreements**

The Company has entered various research agreements and collaborations with academic institutions. Under such arrangements, the Company is typically granted rights to the related intellectual property or an option to obtain such rights on terms to be agreed, in exchange for research funding and specified royalties on any resulting product revenue.

In November 1997, the Company signed a Research Funding and Option Agreement with The Scripps Research Institute ( Scripps ) relating to certain stem cell research. Under the terms of the Agreement, StemCells agreed to fund research in the total amount of approximately \$931,000 at Scripps over a period of three years. StemCells paid Scripps approximately \$225,000 in 2000. In addition, the Company agreed to issue to Scripps 4,837 shares of the Company's common stock and a stock option to purchase 9,674 shares of the Company's Common Stock with an exercise price of \$.01 per share upon the achievement of specified milestones. Under the Agreement, StemCells has an option for an exclusive license to the inventions resulting from the sponsored research, subject to the payment of royalties and certain other amounts, and is obligated to make payments totaling \$425,000 for achievement of certain milestones. The Company also entered a Sponsored Research Agreement and a License Agreement with Oregon Health Sciences University ( OHSU ) in March 1997, relating to other certain research concerning liver repopulating cells. Under subsequent Sponsored Research Agreements with OHSU, StemCells paid OHSU approximately \$80,500 in 2000, \$105,000 in 2001 and \$110,000 in 2002. In addition, the Company issued 4,838 shares of common stock and an option to purchase up to 62,888 additional shares to OHSU with an exercise price of \$.01 per share. The option has vested as to 9,675 shares for which shares were issued on March 31, 2002; the remaining option was terminated and we issued 4,000 shares of our common stock, with a market value of approximately \$3,900, to OHSU in January 2003, pursuant to an amendment to the license agreement.

In 2001, the Company entered into a collaboration with Stanford University to pursue certain additional research funded by the National Institutes of Health under an SBIR grant discussed above. Pursuant to its agreement, the Company paid Stanford approximately \$150,000 in each of 2001 and 2002. In 2002, the Company entered into a research agreement with the University of California, Irvine ( Irvine ), under which it paid Irvine approximately \$3,200 in 2002 and will pay it approximately \$23,300 in 2003. The Company also entered a sponsored research agreement with the University of Texas Medical Branch ( UTMB ) under which it paid UTMB approximately \$21,000 in 2002 and will pay it approximately \$42,000 in 2003.

**13. Income Taxes**

Deferred income taxes reflect 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 the Company's deferred tax assets and liabilities are as follows:

	<b>December 31,</b>	
	<b>2002</b>	<b>2001</b>
	<hr/>	<hr/>
Deferred tax assets:		
Capitalized research and development costs	\$ 9,690,000	\$ 3,770,000
Net operating losses	42,900,000	43,700,000
Research and development credits	4,140,000	4,460,000
Other	160,000	80,000
	<hr/>	<hr/>

Valuation allowance	56,890,000 <u>(56,890,000)</u>	52,010,000 <u>(52,010,000)</u>
Net deferred tax assets	\$ <u>                    </u>	\$ <u>                    </u>

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Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by \$4,880,000, \$3,400,000, and \$1,084,000 during 2002, 2001, and 2000 respectively.

As of December 31, 2002, the Company had net operating loss carryforwards for federal income tax purposes of approximately \$107,000,000 which expire in the years 2004 through 2022, and federal research and development tax credits of approximately \$3,700,000 which expire in the years 2004 through 2022.

As of December 31, 2002, the Company had net operating loss carryforwards for state income tax purposes of approximately \$107,000,000 which expire in the years 2004 through 2019, and state research and development tax credits of approximately \$550,000 which do not expire.

Utilization of the Company's net operating loss may be subject to substantial annual limitation due to ownership change limitations provide by the Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of the net operating loss before utilization.

**14. Employee Retirement Plan**

The Company has a qualified defined contribution plan covering substantially all employees. Participants are allowed to contribute a fixed percentage of their annual compensation to the plan and the Company matches 50% of employee contributions, up to a maximum of 6% of the employee's compensation, with the Company's common stock. The related expense was \$76,000, \$63,000, and \$33,000 for the years ended December 31, 2002, 2001 and 2000, respectively

**15. Quarterly Financial Information (unaudited)**

(in thousands, except per share data) Year ended December 31, 2002:	Quarter			
	First	Second	Third	Fourth
				<b>RESTATED</b>
Total revenue	\$ 111	\$ 125	\$ 90	\$ 89
Operating expenses	2,876	3,166	2,765	3,098
Income (loss) before deemed dividend to preferred shareholders	(2,810)	(3,058)	(2,725)	(3,051)
Net loss applicable to common shareholders	(3,130)	(3,543)	(3,045)	(3,558)
Basic and diluted (loss) per share applicable to common shareholders	\$ (0.13)	\$ (0.15)	\$ (0.12)	\$ (0.13)
Year ended December 31, 2001:				
Total revenue	\$ 100	\$ 300	\$ 276	\$ 129
Operating expenses	2,641	3,959	2,119	4,247
Income (loss) before deemed dividend to preferred shareholders	269	1,595	(1,787)	(4,099)
Net loss applicable to common shareholders	(63)	1,124	(1,787)	(4,841)
Basic and diluted income (loss) per share applicable to common shareholders	*	\$ 0.05	\$ (0.08)	\$ (0.21)

\* Less than \$0.01 per share



**Table of Contents****ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

**PART III****ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT, PROMOTERS AND CONTROL**

The information required by this Item is incorporated by reference from our Proxy Statement for the 2003 Annual Meeting of Shareholders.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required by this Item is incorporated by reference from our Proxy Statement for the 2003 Annual Meeting of Shareholders.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table provides certain information with respect to all of the Company's equity compensation plans in effect as of the end of December 31, 2002.

**Equity Compensation Plan Information**

<b>Plan category</b>	<b>(A) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</b>	<b>(B) Weighted-average Exercise Price of Outstanding Options, Warrants and rights</b>	<b>(C) Number of Securities Remaining Available for Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (A))</b>
Equity compensation plans approved by security holders	4,294,050(1)	\$ 3.248	1,833,437
Equity compensation arrangements not approved by security holders	196,699(2)	\$ 3.840	N/a

	_____	_____	_____
Totals	4,490,749		1,833,437
	_____	_____	_____

- (1) Consists of Incentive Stock Options issued to employees and options issued as compensation to consultants for consultation services. These options were issued under the Company's 1992 Equity Incentive Plan, its Directors Stock Option Plan, its StemCells, Inc. Stock Option Plan, or its 2001 Equity Incentive Plan.

The Company has fully vested warrants outstanding to purchase 50,500 shares of our common stock for \$5.04 per share, issued in August 2000, and exercisable, in whole or in part, for five years from the date of issuance. The Company also has a warrant outstanding to purchase 146,199 shares of our common stock that was issued in December 2001, issued fully vested with an exercise price of \$3.42 per share, and exercisable, in whole or in part, for four years from the date of issuance. These warrants, which constitute the equity compensation arrangements not approved by security holders, were all issued in exchange for placement agent or advisory services by non-employees.

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Certain information required by this Item is incorporated by reference from our Proxy Statement for the 2003 Annual Meeting of Shareholders.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

The information required by this Item is incorporated by reference from our Proxy Statement for the 2003 Annual Meeting of Shareholders.

**PART IV**

**ITEM 14. Controls and Procedures**

In response to the requirement of the Sarbanes-Oxley Act of 2002, within 90 days prior to the date of this report, our chief executive officer and (acting) chief financial officer, along with other members of management, reviewed the effectiveness of the design and operation of our disclosure controls and procedures. Such controls and procedures are designed to ensure that information required to be disclosed in the Company's Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, the chief executive officer and acting chief financial officer have concluded that the Company's disclosure controls and procedures are effective. Subsequent to this evaluation there were no significant changes in internal controls or other factors that could significantly affect the internal controls of the Company, and no corrective actions were required or undertaken.

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K**

(a) DOCUMENTS FILED AS PART OF THIS FORM 10-K.

(1) Financial Statements:

The financial statements filed as part of this Report are listed and indexed under Item 8 above.

(2) Financial Statement Schedules:

Schedules are not included herein because they are not applicable or the required information appears in the Financial Statements or Notes thereto.

(3) Exhibits.

<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
3.1*	Restated Certificate of Incorporation of the Registrant
3.2++	Amended and Restated By-Laws of the Registrant.
4.1*	Specimen Common Stock Certificate.

4.2++++	Form of Warrant Certificate issued to a certain purchaser of the Registrant's Common Stock in April 1995.
4.3X	Warrant to Purchase Common Stock Mark Angelo
4.4X	Warrant to Purchase Common Stock Robert Farrell

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
4.5X	Warrant to Purchase Common Stock Joseph Donahue
4.6X	Warrant to Purchase Common Stock Hunter Singer
4.7X	Warrant to Purchase Common Stock May Davis
4.8X	Common Stock Purchase Warrant
4.9X	Callable Warrant
4.10XXX	Registration Rights Agreement dated as of May 10, 2001 between the Registrant and Sativum Investments Limited.
4.11XXX	Warrant, dated May 10, 2001, to Purchase Common Stock issued to Sativum Investments Limited.
4.12XXX	Warrant, dated May 10, 2001, to Purchase Common Stock issued to Pacific Crest Securities, Inc.
4.13XXX	Warrant dated May 10, 2001 to Purchase Common Stock issued to Granite Financial Group, Inc.
4.14XXX	Callable Warrant, dated June 21, 2001, issued to Millennium Partners, L.P.
4.15XXX	Common Stock Purchase Warrant, Class A, dated June 21, 2001, issued to Millennium Partners, L.P.
4.16{**}	Certificate of Designations of the Powers, Preferences and Relative, Participating, Optional and other Special Rights of Preferred Stock and Qualifications, Limitations and Restrictions Thereof of 3% Cumulative Convertible Preferred Stock for StemCells, Inc.
4.17{**}	Warrant to Purchase Common Stock Riverview Group, LLC
4.18XXXX	Warrant to Purchase Common Stock Cantor Fitzgerald & Co.
10.1*	Amendment to Registration Rights dated as of February 14, 1992 among the Registrant and certain of its stockholders.
10.2*	Form of at-will Employment Agreement between the Registrant and most of its employees.
10.3*	Form of Agreement for Consulting Services between the Registrant and members of its Scientific Advisory Board.
10.4*	Form of Nondisclosure Agreement between the Registrant and its Contractors.
10.5*	

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Master Lease and Warrant Agreement dated April 23, 1991 between the Registrant and PacifiCorp Credit, Inc.

10.6*	1988 Stock Option Plan.
10.7*	1992 Equity Incentive Plan.
10.8*	1992 Stock Option Plan for Non-Employee Directors.
10.9**!!!!	1992 Employee Stock Purchase Plan.

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
10.12++	Research Agreement dated as of March 16, 1994 between NeuroSpheres, Ltd. and Registrant.
10.13++	Term Loan Agreement dated as of September 30, 1994 between The First National Bank of Boston and Registrant.
10.14++	Lease Agreement between the Registrant and Rhode Island Industrial Facilities Corporation, dated as of August 1, 1992.
10.15++	First Amendment to Lease Agreement between Registrant and The Rhode Island Industrial Facilities Corporation dated as of September 15, 1994.
10.17**++++	Development, Marketing and License Agreement, dated as of March 30, 1995 between Registrant and Astra AB.
10.18++++	Form of Unit Purchase Agreement to be executed by the purchasers of the Common Stock and Warrants offered in April 1995.
10.19+++	Form of Common Stock Purchase Agreement to be executed among the Registrant and certain purchasers of the Registrant's Common Stock.
10.22###	Lease Agreement dated as of November 21, 1997 by and between Hub RI Properties Trust, as Landlord, and CytoTherapeutics, Inc., as Tenant.
10.24!!	CTI individual stockholders option agreement dated as of July 10, 1996 among the Company and the individuals listed therein.
10.25!!	CTI Valoria option agreement dated of July 10, 1996 between the Company and the Societe Financiere Valoria SA.
10.26!!!	Term Loan Agreement dated as of October 22, 1996 between The First National Bank of Boston and the Registrant.
10.27***	Agreement and Plan of Merger dated as of August 13, 1997 among StemCells, Inc., the Registrant and CTI Acquisition Corp.
10.28***	Consulting Agreement dated as of September 25, 1997 between Dr. Irving Weissman and the Registrant.
10.29###	Letter Agreement among each of Dr. Irving Weissman and Dr. Fred H. Gage and the Registrant.
10.32****	StemCells, Inc. 1996 Stock Option Plan.
10.33****	1997 StemCells Research Stock Option Plan (the 1997 Plan )

10.34****	Form of Performance-Based Incentive Option Agreement issued under the 1997 Plan.
10.35###	Employment Agreement dated as of September 25, 1997 between Dr. Richard M. Rose and the Registrant.
10.38{*}	Rights Agreement, dated as of July 27, 1998 between Bank Boston, N.A. as Rights Agent and the Registrant.



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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
10.40\$**	Consulting Services Agreement dated as of July 27, 1998, as amended December 19, 1998 between Dr. John J. Schwartz and the Registrant.
10.41\$**	Letter Agreement dated as of December 19, 1998 between John J. Schwartz and the Registrant.
10.42\$**	License Agreement dated as of October 27, 1998 between The Scripps Research Institute and the Registrant.
10.43\$**	License Agreement dated as of October 27, 1998 between The Scripps Research Institute and the Registrant.
10.44\$**	License Agreement dated as of November 20, 1998 between The Scripps Research Institute and the Registrant.
10.45\$\$**	Purchase Agreement and License Agreement dated as of December 29, 1999 between Neurotech S.A. and the Registrant.
10.46++++**	License Agreement dated as of June 1999 between The Scripps Research Institute and the Registrant.
10.47++++**	License Agreement dated as of June 1999 between The Scripps Research Institute and the Registrant.
10.48X	Form of Registration Rights Agreement dated as of July 31, 2000 between the Registrant and investors.
10.49X	Subscription Agreement dated as of July 31, 2000 between the Registrant and Millennium Partners, L.P.
10.50XXX	Common Stock Purchase Agreement, dated as of May 10, 2001, between the Registrant and Sativum Investments Limited.
10.51XXX	Escrow Agreement, dated as of May 10, 2001, among the Registrant, Sativum Investments Limited and Epstein, Becker & Green, P.C.
10.52XX	License Agreement, dated as of October 30, 2000, between the Registrant and NeuroSpheres Ltd.
10.53XX	Letter Agreement, dated January 2, 2001, between the Registrant and Martin McGlynn
10.54XX	Lease, dated February 1, 2001, between the Board of Trustees of Stanford University and the Registrant.
10.55XXX	Registration Rights Agreement, dated as of June 21, 2001, by and between the Registrant and Millennium Partners, L.P.

10.56XXX	Subscription Agreement, dated as of June 21, 2001, by and between the Registrant and Millennium Partners, L.P.
10.57\$\$\$	2001 Equity Incentive Plan
10.58{**}	Subscription Agreement, dated as of December 4, 2001 between the Registrant and Riverview Group, L.L.C.

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
10.59{**}	Registration Rights Agreement, dated as of December 4, 2001 between the Registrant and Riverview Group, L.L.C.
10.60{**}	Agreement dated as of December 4, 2001 between the Registrant and Millennium Partners, L.P.
10.61{**}	Agreement dated as of December 4, 2001 among the Registrant, Millennium Partners, L.P. and Riverview Group, L.L.C.
21X	Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
31.1	Certification Pursuant to Securities Exchange Act Rule 13(a)-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Martin McGlynn, Chief Executive Officer).
31.2	Certification Pursuant to Securities Exchange Act Rule 13(a)-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (George Koshy, Acting Chief Financial Officer).
32.1	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Martin McGlynn, Chief Executive Officer)
32.2	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (George Koshy, Acting Chief Financial Officer)
99	Cautionary Factors Relevant to Forward-Looking Information
99.1XX	Side Letter, dated March 17, 2001, between the Company and Oleh S. Hnatiuk regarding NeuroSpheres License Agreement, dated October 30, 2000.

++ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-1, File No. 33-85494.

+++ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-3, File No. 33-97272.

++++ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-1, File No. 33-91228.

\* Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, Registration Statement on Form S-1, File No. 33-45739.

# Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Annual Report on Form 10-K for fiscal year ended December 31, 1992 and filed March 30, 1993.

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- \*\* Confidential treatment requested as to certain portions. The term confidential treatment and the mark \*\* as used throughout the indicated Exhibits mean that material has been omitted and separately filed with the Commission.
- ## Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1994 and filed on May 14, 1994.
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- {\*} Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's current report on Form 8-K filed on August 3, 1998.
- {\*\*} Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's current report on Form 8-K filed on December 7, 2001.
- \$ Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's annual report on Form 10-K for the fiscal year ended December 31, 1998 and filed on March 31, 1999.
- \$\$ Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's current report on Form 8-K on January 14, 2000.



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\$\$\$ Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's definitive proxy statement filed May 1, 2001.

X Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-1, File No. 333-45496.

XX Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2000 and filed on April 2, 2001.

XXX Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's Registration Statement filed on Form S-1 as amended to Form S-3, File No. 333-61726.

XXXX Previously filed with the Commission as an Exhibit to, and incorporated herein by reference to, the Registrant's Registration Statement filed on Form S-3, File No. 333-75806.

(b) CURRENT REPORTS ON FORM 8-K.

A current report on Form 8-K was filed by the Registrant on December 23, 2002. In that report, under Item 5, the Registrant reported that the Nasdaq Stock Market had approved its application to transfer the listing of its common stock from the National Market to the SmallCap Market, effective December 23, 2002.

**Table of Contents****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.

**STEMCELLS, INC.**

By: */s/ MARTIN MCGLYNN*  
*Martin McGlynn*  
*PRESIDENT AND CHIEF EXECUTIVE*  
*OFFICER*

Dated: April 5, 2004

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.

<b>SIGNATURE</b>	<b>CAPACITY</b>	<b>DATE</b>
<u>/s/ MARTIN MCGLYNN</u> Martin McGlynn	President and Chief Executive Officer and Director (principal executive officer)	April 5, 2004
<u>/s/ GEORGE KOSHY</u> George Koshy	Controller and Acting Chief Financial Officer (principal accounting officer)	April 5, 2004
<u>/s/ RICARDO B. LEVY, Ph.D.</u> Ricardo B. Levy, Ph.D.	Director	April 5, 2004
<u>/s/ ROGER PERLMUTTER, M.D.</u> Roger Perlmutter, M.D.	Director	April 5, 2004
<u>/s/ JOHN J. SCHWARTZ, Ph.D.</u> John J. Schwartz, Ph.D.	Director, Chairman of the Board	April 5, 2004
<u>/s/ IRVING L. WEISSMAN, M.D.</u> Irving L. Weissman, M.D.	Director	April 5, 2004
<u>/s/ Eric Bjerkholt</u> Eric Bjerkholt	Director	April 5, 2004





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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
3.1*	Restated Certificate of Incorporation of the Registrant
3.2++	Amended and Restated By-Laws of the Registrant.
4.1*	Specimen Common Stock Certificate.
4.2++++	Form of Warrant Certificate issued to a certain purchaser of the Registrant's Common Stock in April 1995.
4.3X	Warrant to Purchase Common Stock Mark Angelo
4.4X	Warrant to Purchase Common Stock Robert Farrell
4.5X	Warrant to Purchase Common Stock Joseph Donahue
4.6X	Warrant to Purchase Common Stock Hunter Singer
4.7X	Warrant to Purchase Common Stock May Davis
4.8X	Common Stock Purchase Warrant
4.9X	Callable Warrant
4.10XXX	Registration Rights Agreement dated as of May 10, 2001 between the Registrant and Sativum Investments Limited.
4.11XXX	Warrant, dated May 10, 2001, to Purchase Common Stock issued to Sativum Investments Limited.
4.12XXX	Warrant, dated May 10, 2001, to Purchase Common Stock issued to Pacific Crest Securities, Inc.
4.13XXX	Warrant dated May 10, 2001 to Purchase Common Stock issued to Granite Financial Group, Inc.
4.14XXX	Callable Warrant, dated June 21, 2001, issued to Millennium Partners, L.P.
4.15XXX	Common Stock Purchase Warrant, Class A, dated June 21, 2001, issued to Millennium Partners, L.P.
4.16{**}	Certificate of Designations of the Powers, Preferences and Relative, Participating, Optional and other Special Rights of Preferred Stock and Qualifications, Limitations and Restrictions Thereof of 3% Cumulative Convertible Preferred Stock for StemCells, Inc.
4.17{**}	Warrant to Purchase Common Stock Riverview Group, LLC

4.18XXXX	Warrant to Purchase Common Stock Cantor Fitzgerald & Co.
10.1*	Amendment to Registration Rights dated as of February 14, 1992 among the Registrant and certain of its stockholders.
10.2*	Form of at-will Employment Agreement between the Registrant and most of its employees.

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
10.3*	Form of Agreement for Consulting Services between the Registrant and members of its Scientific Advisory Board.
10.4*	Form of Nondisclosure Agreement between the Registrant and its Contractors.
10.5*	Master Lease and Warrant Agreement dated April 23, 1991 between the Registrant and PacifiCorp Credit, Inc.
10.6*	1988 Stock Option Plan.
10.7*	1992 Equity Incentive Plan.
10.8*	1992 Stock Option Plan for Non-Employee Directors.
10.9**!!!!	1992 Employee Stock Purchase Plan.
10.12++	Research Agreement dated as of March 16, 1994 between NeuroSpheres, Ltd. and Registrant.
10.13++	Term Loan Agreement dated as of September 30, 1994 between The First National Bank of Boston and Registrant.
10.14++	Lease Agreement between the Registrant and Rhode Island Industrial Facilities Corporation, dated as of August 1, 1992.
10.15++	First Amendment to Lease Agreement between Registrant and The Rhode Island Industrial Facilities Corporation dated as of September 15, 1994.
10.17**++++	Development, Marketing and License Agreement, dated as of March 30, 1995 between Registrant and Astra AB.
10.18++++	Form of Unit Purchase Agreement to be executed by the purchasers of the Common Stock and Warrants offered in April 1995.
10.19+++	Form of Common Stock Purchase Agreement to be executed among the Registrant and certain purchasers of the Registrant's Common Stock.
10.22###	Lease Agreement dated as of November 21, 1997 by and between Hub RI Properties Trust, as Landlord, and CytoTherapeutics, Inc., as Tenant.
10.24!!	CTI individual stockholders option agreement dated as of July 10, 1996 among the Company and the individuals listed therein.
10.25!!	CTI Valoria option agreement dated of July 10, 1996 between the Company and the Societe Financiere Valoria SA.
10.26!!!	

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Term Loan Agreement dated as of October 22, 1996 between The First National Bank of Boston and the Registrant.

10.27\*\*\* Agreement and Plan of Merger dated as of August 13, 1997 among StemCells, Inc., the Registrant and CTI Acquisition Corp.

10.28\*\*\* Consulting Agreement dated as of September 25, 1997 between

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
	Dr. Irving Weissman and the Registrant.
10.29###	Letter Agreement among each of Dr. Irving Weissman and Dr. Fred H. Gage and the Registrant.
10.32****	StemCells, Inc. 1996 Stock Option Plan.
10.33****	1997 StemCells Research Stock Option Plan (the 1997 Plan )
10.34****	Form of Performance-Based Incentive Option Agreement issued under the 1997 Plan.
10.35###	Employment Agreement dated as of September 25, 1997 between Dr. Richard M. Rose and the Registrant.
10.38{*}	Rights Agreement, dated as of July 27, 1998 between Bank Boston, N.A. as Rights Agent and the Registrant.
10.40\$**	Consulting Services Agreement dated as of July 27, 1998, as amended December 19, 1998 between Dr. John J. Schwartz and the Registrant.
10.41\$**	Letter Agreement dated as of December 19, 1998 between John J. Schwartz and the Registrant.
10.43\$**	License Agreement dated as of October 27, 1998 between The Scripps Research Institute and the Registrant.
10.45\$\$**	Purchase Agreement and License Agreement dated as of December 29, 1999 between Neurotech S.A. and the Registrant.
10.46++++**	License Agreement dated as of June 1999 between The Scripps Research Institute and the Registrant.
10.47++++**	License Agreement dated as of June 1999 between The Scripps Research Institute and the Registrant.
10.48X	Form of Registration Rights Agreement dated as of July 31, 2000 between the Registrant and investors.
10.49X	Subscription Agreement dated as of July 31, 2000 between the Registrant and Millennium Partners, L.P.
10.50XXX	Common Stock Purchase Agreement, dated as of May 10, 2001, between the Registrant and Sativum Investments Limited.
10.51XXX	Escrow Agreement, dated as of May 10, 2001, among the Registrant, Sativum Investments Limited and Epstein, Becker & Green, P.C.

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10.52XX	License Agreement, dated as of October 30, 2000, between the Registrant and NeuroSpheres Ltd.
10.53XX	Letter Agreement, dated January 2, 2001, between the Registrant and Martin McGlynn
10.54XX	Lease, dated February 1, 2001, between the Board of Trustees of Stanford University and the Registrant.
10.55XXX	Registration Rights Agreement, dated as of June 21,

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<b>EXHIBIT NO.</b>	<b>TITLE OR DESCRIPTION</b>
	2001, by and between the Registrant and Millennium Partners, L.P.
10.56XXX	Subscription Agreement, dated as of June 21, 2001, by and between the Registrant and Millennium Partners, L.P.
10.57\$\$\$	2001 Equity Incentive Plan
10.58{**}	Subscription Agreement, dated as of December 4, 2001 between the Registrant and Riverview Group, L.L.C.
10.59{**}	Registration Rights Agreement, dated as of December 4, 2001 between the Registrant and Riverview Group, L.L.C.
10.60{**}	Agreement dated as of December 4, 2001 between the Registrant and Millennium Partners, L.P.
10.61{**}	Agreement dated as of December 4, 2001 among the Registrant, Millennium Partners, L.P. and Riverview Group, L.L.C.
21X	Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
31.1	Certification Pursuant to Securities Exchange Act Rule 13(a)-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Martin McGlynn, Chief Executive Officer).
31.2	Certification Pursuant to Securities Exchange Act Rule 13(a)-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (George Koshy, Acting Chief Financial Officer).
32.1	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Martin McGlynn, Chief Executive Officer)
32.2	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (George Koshy, Acting Chief Financial Officer)
99	Cautionary Factors Relevant to Forward-Looking Information
99.1XX	Side Letter, dated March 17, 2001, between the Company and Oleh S. Hnatiuk regarding NeuroSpheres License Agreement, dated October 30, 2000.

++ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-1, File No. 33-85494.

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Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-3, File No. 33-97272.

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\* Previously filed with the Commission as Exhibits to, and

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incorporated herein by reference to, Registration Statement on Form S-1, File No. 33-45739.

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