AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON SEPTEMBER 17, 2002

REGISTRATION NO. 333-83992

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1 TO

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

STEMCELLS, INC.
(Exact name of registrant as specified in its charter)

DELAWARE	2836	94-3078125
(State or other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

3155 PORTER DRIVE
PALO ALTO, CA 94304
(650) 475-3100
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

IRIS BREST, ESQ.
STEMCELLS, INC.
3155 PORTER DRIVE
PALO ALTO, CA 94304
(650) 475-3100
(650) 475-3101 (FAX)
(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:
GEOFFREY B. DAVIS, ESQ.
Ropes & Gray
One International Place
Boston, Massachusetts 02110
(617) 951-7000
(617) 951-7050 (fax)

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. /X/

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If this Form is a post-effective amendment filed pursuant to Rule 462(c)

under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. / /

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- --

CALCULATION OF REGISTRATION FEE

PROPOSED MAXIMUM AGGREGATE OFFERING AMOUNT OF TITLES OF
EACH CLASS OF SECURITIES TO BE REGISTERED (1) PRICE (2)(3)
REGISTRATION FEE (3) Common Stock, par value $0.01 per
share.................... -- Preferred Stock, par value
$0.01 per share.................. --
Warrants..
--
Total...
$37,800,000 $ 3,478(4)

(1) An indeterminate number of shares of Common Stock, Preferred Stock and/or warrants of StemCells, Inc., as may be from time to time issued at indeterminate prices, including upon conversion of any such securities as are convertible or upon the exercise of warrants, with an aggregate offering price not to exceed $37,800,000.

(2) Pursuant to Rule 457(o) under the Securities Act of 1933, as amended, which permits the registration fee to be calculated on the basis of the maximum offering price of all the securities registered, the table does not specify by each class information as to the amount to be registered, proposed maximum offering price per unit or the proposed maximum aggregate offering price.

(3) Estimated in accordance with Rule 457(o) under the Securities Act, solely for the purpose of determining the registration fee.

(4) Previously paid.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

EXPLANATORY NOTE

The purpose of this Post-Effective Amendment No. 1 to Registration Statement 333-83992 is to provide for the issuance of preferred stock and warrants in addition to the common stock already registered under this registration statement.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED SEPTEMBER 17, 2002

PROSPECTUS

STEMCELLS, INC.
$37,800,000
COMMON STOCK, PREFERRED STOCK, WARRANTS

We may offer from time to time, in one or more offerings, any combination of common stock, preferred stock, and warrants we describe in this prospectus having a total initial offering price not exceeding $37,800,000. We will provide the specific terms of these securities in supplements to this prospectus. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock is listed on the Nasdaq National Market under the symbol "STEM." The last reported sale price for our common stock on the Nasdaq National Market on September 16, 2002 was $0.86 per share.

THE SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK.
SEE "RISK FACTORS" BEGINNING ON PAGE 2.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

THE DATE OF THIS PROSPECTUS IS   , 2002.

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement accompanying this prospectus. We have not authorized any other person to provide you with different information. We are not making an offer to sell these securities in any jurisdictions where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or in any prospectus supplement is accurate as of the date on the front cover of those documents.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission under a "shelf" registration process. Under this shelf process, we may sell any combination of common stock, preferred stock, and warrants we describe in this prospectus having a total initial offering price not exceeding $37,800,000. Each time we offer securities, we will provide a prospectus supplement that will describe the specific terms of the offering. The prospectus supplement and any pricing supplement may also add to, update or change the information contained in this prospectus. Please carefully read this prospectus, the prospectus supplement and any pricing supplement, in addition to the information contained in the documents we refer to under the heading "Where You Can Find More Information."

EXECUTIVE OFFICE

Our principal executive office is located at 3155 Porter Drive, Palo Alto, California 94304 and our telephone number is (650) 475-3100. We maintain a website on the Internet at WWW.STEMCELLSINC.COM. Our website, and the information contained therein, is not a part of this prospectus.

RISK FACTORS

THE OFFERING INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW AND THE OTHER INFORMATION IN THIS PROSPECTUS BEFORE MAKING AN INVESTMENT DECISION REGARDING STEMCELLS, INC. OUR BUSINESS, FINANCIAL CONDITION OR RESULTS OF OPERATIONS COULD BE MATERIALLY ADVERSELY AFFECTED IF ANY OF THESE RISKS ACTUALLY OCCUR. CONSEQUENTIALLY, THE TRADING PRICE OF OUR COMMON STOCK COULD DECLINE, RESULTING IN THE LOSS OF ALL OR PART OF YOUR INVESTMENT.

OUR TECHNOLOGY IS AT AN EARLY STAGE OF DISCOVERY AND DEVELOPMENT, AND WE MAY FAIL TO DEVELOP ANY COMMERCIALLY ACCEPTABLE PRODUCTS.

Our stem cell technology is at the early pre-clinical stage for the brain stem cell and at the discovery phase for the liver and pancreas stem cells and has not yet led to the development of any product. We may fail to discover the stem cells we are seeking, to develop any products, to obtain regulatory approvals, to enter clinical trials, or to commercialize any products. Any product using stem cell technology may fail to:

- survive and persist in the desired location;
- provide the intended therapeutic benefits;
- properly integrate into existing tissue in the desired manner; or
- achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing.

In addition, our products may cause undesirable side effects. Results of early pre-clinical research may not be indicative of the results that will be obtained in later stages of pre-clinical or clinical research. If regulatory authorities do not approve our products, or if we fail to maintain regulatory compliance, we would have limited ability to commercialize our products, and our business and results of operations would be harmed. Furthermore, because stem cells are a new form of therapy, the marketplace may not accept any products we may develop.

If we do succeed in developing products, we will face many potential obstacles such as the need to obtain regulatory approvals, and to develop or obtain manufacturing, marketing and distribution capabilities. In addition, we will face substantial additional risks such as product liability.

WE HAVE PAYMENT OBLIGATIONS RESULTING FROM REAL PROPERTY OWNED OR LEASED BY US IN RHODE ISLAND, WHICH DIVERTS FUNDING FROM OUR STEM CELL RESEARCH AND DEVELOPMENT.

Prior to our reorganization in 1999 and the consolidation of our business in

California, we carried out our encapsulated cell therapy programs in Lincoln, Rhode Island, where we also had our administrative offices. Although we have vacated the Rhode Island facilities, we remain obligated to make lease payments and payments for operating costs of approximately $1,200,000 per year for our former science and administrative facility, which we have leased through June 30, 2013, and debt service payments and payments for operating costs of approximately $1,000,000 per year for our former encapsulated cell therapy pilot manufacturing facility, which we own. We have currently subleased a portion of the science and administrative facility, but cannot be sure that we will be able to do so for the entire duration of our obligation. We are seeking to sublease the remaining portion of the science and administrative facility. We have currently subleased the entire pilot manufacturing facility, but may not be able to sublease or sell the facility in the future once the current sublease agreements expire. These continuing costs significantly reduce our cash resources and adversely affect our ability to fund further development of our stem cell technology.

WE MAY NEED BUT FAIL TO OBTAIN PARTNERS TO SUPPORT OUR STEM CELL DEVELOPMENT EFFORTS AND TO COMMERCIALIZE OUR TECHNOLOGY.

Equity and debt financings alone may not be sufficient to fund the cost of developing our stem cell technologies, and we may need to rely on our ability to reach partnering arrangements to provide financial support for our stem cell discovery and development efforts. In addition, in order to successfully develop and commercialize our technology, we may need to enter into a wide variety of arrangements with corporate sponsors, pharmaceutical companies, universities, research groups and others. While we have engaged, and expect to continue to engage, in discussions regarding such arrangements, we have not reached any agreement, and we may fail to obtain any such agreement on terms acceptable to us. Even if we enter into these arrangements, we may not be able to satisfy our obligations under them or renew or replace them after their original terms expire. Furthermore, these arrangements may require us to grant certain rights to third parties, including exclusive marketing rights to one or more products, may require us to issue securities to our collaborators or may contain other terms that are burdensome to us. If any of our collaborators terminates its relationship with us or fails to perform its obligations in a timely manner, the development or commercialization of our technology and potential products may be adversely affected.

WE HAVE A HISTORY OF OPERATING LOSSES AND WE MAY FAIL TO OBTAIN REVENUES OR BECOME PROFITABLE.

We expect to continue to incur substantial operating losses in the future in order to conduct our research and development activities, and, if those activities are successful, to fund clinical trials and other expenses. These expenses include the cost of acquiring technology, product testing, acquiring regulatory approvals, establishing production, marketing, sales and distribution programs and administrative expenses. We have not earned any revenues from sales of any product. All of our past revenues have been derived from, and any revenues we may obtain for the foreseeable future are expected to be derived from, cooperative agreements, research grants, investments and interest on invested capital. We currently have no cooperative agreements and we have received only two research grants for our stem cell technology, and we may not obtain any such agreements or additional grants in the future or receive any revenues from them.

IF WE ARE UNABLE TO PROTECT OUR PATENTS AND PROPRIETARY RIGHTS, OUR BUSINESS, FINANCIAL CONDITION AND RESULTS OF OPERATION WILL BE HARMED.

We own or license a number of patents and pending patent applications covering human nerve stem cell cultures, central nervous system stem cell cultures, neuroblast cultures, peripheral nervous system stem cell cultures, and an animal model for liver failure. Patent protection for products such as those we propose to develop is highly uncertain and involves complex and continually evolving factual and legal questions. The governmental authorities that consider patent applications can deny or significantly reduce the patent coverage requested in an application before or after issuing the patent. Consequently, we do not know whether any of our pending applications will result in the issuance of patents, or if any existing or future patents will provide sufficient protection or significant commercial advantage or if others will circumvent these patents. 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 because patent applications are secret until patents are issued in the United States or until the applications are published in foreign countries, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries. Patents may not issue from our pending or future patent applications or, if issued, may not be of commercial benefit to us, or may not afford us adequate protection from competing products. In addition, third

parties may challenge our patents or governmental authorities may declare them 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 proceedings to determine priority of invention. This could result in

substantial uncertainties and cost for us, even if the eventual outcome is favorable to us, and the outcome might not be favorable to us. Even if a patent issues, a court could decide that the patent was issued invalidly. Further, patents issue for a limited term and our patents may expire before we utilize them profitably.

Proprietary trade secrets and unpatented know-how are also important to our research and development activities. We cannot be certain that others will not independently develop the same or similar technologies on their own or gain access to our trade secrets or disclose such technology, or that we will be able to meaningfully protect our trade secrets and unpatented know-how and keep them secret. We 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 may, however, fail to provide meaningful protection or adequate remedies for us in the event of unauthorized use, transfer or disclosure of such information or inventions.

IF OTHERS ARE FIRST TO DISCOVER AND PATENT THE STEM CELLS WE ARE SEEKING TO DISCOVER, WE COULD BE BLOCKED FROM FURTHER WORK ON THOSE STEM CELLS.

Because the first person or entity to discover and obtain a valid patent to a particular stem or progenitor cell may effectively block all others, it will be important for us or our collaborators to be the first to discover any stem cell that we are seeking to discover. Failure to be the first could prevent us from commercializing all of our research and development affected by that patent.

IF WE ARE UNABLE TO OBTAIN NECESSARY LICENSES TO THIRD PARTY PATENTS AND OTHER RIGHTS, WE MAY NOT BE ABLE TO COMMERCIALLY DEVELOP OUR EXPECTED PRODUCTS.

A number of pharmaceutical, biotechnology and other companies, universities and research institutions have filed patent applications or have received patents relating to cell therapy, stem cells and other technologies potentially relevant to or necessary for our expected products. We cannot predict which, if any, of the applications will issue as patents. If third party patents or patent applications contain claims infringed by our technology and these claims are valid, we may be unable to obtain licenses to these patents at a reasonable cost, if at all, and may also be unable to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, our business could be significantly harmed.

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. Licensors may cancel our licenses or convert them to non-exclusive licenses if we fail to use the relevant technology or otherwise breach these agreements. Loss of these licenses could expose us to the risks of third party patents and/or technology. We can give no assurance that any of these licenses will provide effective protection against our competitors.

WE COMPETE WITH COMPANIES THAT HAVE SIGNIFICANT ADVANTAGES OVER US.

The market for therapeutic products that address degenerative diseases is large and competition is intense. For example, while we believe that our neural stem cells may have application to Parkinson's disease, we have no clinical program directed toward that disease at this time. More than twenty companies worldwide, including Merck, Roche, Cephalon, Schering AG, Pharmacia Corp., and Genzyme have at least one clinical trial for Parkinson's disease in progress at some phase, and some have more than one. At least seven companies already have products on the market. We expect competition to increase.

In general, we believe that our most significant competitors will be fully integrated pharmaceutical companies and more established biotechnology companies, such as Biogen, Inc. and Genzyme, an Elan

Corporation. These companies already produce or are developing treatments for degenerative diseases that are not stem cell-based, and they have significantly greater capital resources and expertise in research and development, manufacturing, testing, obtaining regulatory approvals and marketing than we do. Many of these potential competitors have significant products approved or in development that could be competitive with our potential products, and also

operate large, well-funded research and development programs. In addition, we expect to compete with other companies, some of which are smaller and may be privately owned, including CellFactors, Diacrin, Geron, Layton Bioscience, NeuralStem Biopharmaceuticals, NeuroNova, and ReNeuron, and with universities and other research institutions who are developing treatments for degenerative diseases that are stem cell-based.

Our competitors may succeed in developing technologies and products that are more effective than the ones we are developing, or that would render our technology obsolete or non-competitive.

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 will affect our ability to gather market acceptance and market share. With respect to clinical testing, competition may delay progress by limiting the number of clinical investigators and patients available to test our potential products.

DEVELOPMENT OF OUR TECHNOLOGY IS SUBJECT TO AND RESTRICTED BY EXTENSIVE GOVERNMENT REGULATION WHICH COULD IMPEDE OUR BUSINESS.

Our research and development efforts, as well as any future clinical trials, and the manufacturing and marketing of any products we may develop, will be subject to and restricted by extensive regulation by governmental authorities in the United States and other countries. The process of obtaining U.S. Food and Drug Administration and other necessary regulatory approvals is lengthy, expensive and uncertain. We or our collaborators may fail to obtain the necessary approvals to commence or continue clinical testing or to manufacture or market our potential products in reasonable time frames, if at all. In addition, the U.S. Congress and other legislative bodies may enact regulatory reforms or restrictions on the development of new therapies that could adversely affect the regulatory environment in which we operate or the development of any products we may develop.

We base our research and development on the use of human stem and progenitor cells obtained from fetal tissue. The federal and state governments and other jurisdictions impose restrictions on the use of fetal tissue. These restrictions change from time to time and may become more onerous. Additionally, we may not be able to identify or develop reliable sources for the cells necessary for our potential products--that is, sources that follow all state and federal guidelines for cell procurement. Further, we may not be able to obtain such cells in the quantity or quality sufficient to satisfy the commercial requirements of our potential products. As a result, we may be unable to develop or produce our products in a profitable manner.

Although we do not use embryonic stem cells, government regulation and threatened regulation of embryonic tissue may lead outstanding researchers to leave the field of stem cell research, or the country, in order to assure that their careers will not be impeded by restrictions on their work. Similarly, these factors may induce the best graduate students to choose other fields less vulnerable to changes in regulatory oversight, thus exacerbating the risk, discussed below, that we may not be able to attract and retain the scientific personnel we need in face of the competition among pharmaceutical, biotechnology and health care companies, universities and research institutions for what may become a shrinking class of qualified individuals. In addition, we cannot assure you that constraints on use of embryonic stem cells will not be extended to use of fetal stem cells. Moreover, it is possible that concerns regarding research using embryonic stem cells will impact our ability to attract collaborators and investors and our stock price.

We may apply for status under the Orphan Drug Act for some of our therapies to gain a seven year period of marketing exclusivity for those therapies. The U.S. Congress in the past has considered, and in the future again may consider, legislation that would restrict the extent and duration of the market exclusivity of an orphan drug. If enacted, such legislation could prevent us from obtaining some or all of the benefits of the existing statute even if we were to apply for and be granted orphan drug status with respect to a potential product.

IF WE LOSE THE SERVICES OF KEY PERSONNEL OR ARE UNABLE TO ATTRACT AND RETAIN ADDITIONAL QUALIFIED PERSONNEL, WE MAY HAVE TO DELAY, REDUCE OR ELIMINATE SOME OR ALL OF OUR RESEARCH AND DEVELOPMENT PROGRAMS.

We are highly dependent on the principal members of our management and scientific staff and some of our outside consultants, including the members of our scientific advisory board, our chief executive officer, our vice president and the directors of our neural stem cell and liver stem cell programs. Although we have entered into employment agreements with some of these individuals, they may terminate their agreements at any time. In addition, our operations are

dependent upon our ability to attract and retain additional qualified scientific and management personnel. We may not be able to attract and retain the personnel we need on acceptable terms given the competition for experienced personnel among pharmaceutical, biotechnology and health care companies, universities and research institutions.

SINCE HEALTH CARE INSURERS AND OTHER ORGANIZATIONS MAY NOT PAY FOR OUR PRODUCTS OR MAY IMPOSE LIMITS ON REIMBURSEMENTS, OUR ABILITY TO BECOME PROFITABLE COULD BE REDUCED.

In both domestic and foreign markets, sales of potential products are likely to depend in part upon the availability and amounts of reimbursement from third party health care payor organizations, including government agencies, private health care insurers and other health care payors, such as health maintenance organizations and self-insured employee plans. There is considerable pressure to reduce the cost of therapeutic products, and government and other third party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for new therapeutic products, and by refusing, in some cases, to provide any coverage for uses of approved products for disease indications for which the U.S. Food and Drug Administration has not granted marketing approval. Significant uncertainty exists as to the reimbursement status of newly approved health care products. We can give no assurance that reimbursement will be provided by such payors at all or without substantial delay, or, if such reimbursement is provided, that the approved reimbursement amounts will be sufficient to enable us to sell products we develop on a profitable basis. Changes in reimbursement policy could also adversely affect the willingness of pharmaceutical companies to collaborate with us on the development of our stem cell technology.

In certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. We also expect that there will continue to be a number of federal and state proposals to implement government control over health care costs. Efforts at health care reform are likely to continue in future legislative sessions. We do not know what legislative proposals federal or state governments will adopt or what actions federal, state or private payers for health care goods and services may take in response to health care reform proposals or legislation. We cannot predict the effect government control and other health care reforms may have on our business.

WE HAVE LIMITED LIQUIDITY AND CAPITAL RESOURCES AND MAY NOT OBTAIN THE SIGNIFICANT CAPITAL RESOURCES WE WILL NEED TO SUSTAIN OUR RESEARCH AND DEVELOPMENT EFFORTS.

We have limited liquidity and capital resources and must obtain substantial additional capital to support our research and development programs, for acquisition of technology and intellectual property rights, and, to the extent we decide to undertake these activities ourselves, for pre-clinical and clinical

testing of our anticipated products, pursuit of regulatory approvals, establishment of production capabilities, establishment of marketing and sales capabilities and distribution channels, and general administrative expenses. If we do not obtain the necessary capital resources, we may have to delay, reduce or eliminate some or all of our research and development programs or license our technology or any potential products to third parties rather than commercializing them ourselves.

If we are unable to draw down on our existing equity line or choose not to do so, we intend to pursue our needed capital resources through equity and debt financings, corporate alliances, grants and collaborative research arrangements. We may fail to obtain the necessary capital resources from any such sources when needed or on terms acceptable to us. Our ability to complete any such arrangements successfully will depend upon market conditions and, more specifically, on continued progress in our research and development efforts. We are prohibited from entering into other stand-by equity based credit facilities during the term of the common stock purchase agreement that governs our existing equity line.

IF OUR COMMON STOCK PRICE DROPS SIGNIFICANTLY, WE MAY BE DELISTED FROM THE NASDAQ NATIONAL MARKET, WHICH COULD ELIMINATE THE TRADING MARKET FOR OUR COMMON STOCK.

Our common stock is quoted on the Nasdaq National Market. In order to continue to be included in the Nasdaq National Market, a company must meet Nasdaq's maintenance criteria. The maintenance criteria most applicable to us requires a minimum bid price of $1.00 per share and $5,000,000 market value of publicly held shares. Additionally, we must maintain either $10 million in stockholders' equity or $4 million in net tangible assets. After November 1, 2002, the net tangible asset maintenance criterion will no longer apply and we

must satisfy the stockholders' equity maintenance criterion. Stockholders' equity is composed of three fundamental sources: capital stock, additional paid-in-capital, and retained earnings. Capital stock represents ownership interest in the corporation. Additional paid-in-capital represents additional monies paid into the corporation by investors above the par value of shares issued. Retained earnings represents income (loss) that the corporation has accumulated as a result of its day-to-day operating activities. Our stockholders' equity at the end of 2001 was $13,207,807 and our stockholders' equity at June 30, 2002 was $7,041,835. Failure to meet these maintenance criteria may result in the delisting of our common stock from the Nasdaq National Market. If our common stock were delisted, in order to have our common stock relisted on the Nasdaq National Market we would be required to meet the criteria for initial listing, which are more stringent than the maintenance criteria. Accordingly, we cannot assure you that if we were delisted we would be able to have our common stock relisted on the Nasdaq National Market.

If our common stock were delisted from the Nasdaq National Market, we would not be able to draw down any additional funds on our existing equity line, and we also may be required to pay damages to holders of our common stock under agreements we previously entered into with them in connection with equity financings. Finally, if our common stock were removed from listing on the Nasdaq National Market, it might become more difficult for us to raise funds through the sale of our common stock or securities convertible into our common stock.

THE SALE AND ISSUANCE OF THE 3% AND 6% CUMULATIVE CONVERTIBLE REDEEMABLE PREFERRED STOCK WILL HAVE AN IMPACT TO EARNINGS AVAILABLE TO COMMON STOCKHOLDERS.

Of the proceeds from our sale of the 3% and 6% cumulative convertible redeemable preferred stock, approximately $3.1 million was allocated to the common stock warrants and the conversion feature included with the subscription agreement, and will be reflected as an increase to additional paid-in capital and a decrease to the 3% and 6% cumulative convertible redeemable preferred stock. This $3.1 million will be accreted to the preferred stock over the term of the redemption period. This accretion, along with the preferred stock dividend, will increase the net loss (reduce the net income) available to common stockholders. The conversion price for the 6% cumulative convertible preferred stock is subject to adjustment based on certain equity transactions.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus 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. You can identify these statements by forward-looking words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," and "would" or similar words. You should carefully read statements that contain these words because they discuss our future expectations, contain projections of our future results of operations or of our financial position or state other "forward-looking" information. We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control. The factors listed above in the section captioned "Risk Factors," as well as any cautionary language in this prospectus, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest, you should be aware that the occurrence of the events described in these risk factors and elsewhere in this prospectus could have a material adverse effect on our business, results of operations and financial position.

RATIO OF COMBINED FIXED CHARGES AND PREFERENCE DIVIDENDS TO EARNINGS

The Company's earnings were insufficient to cover fixed charges in each of the years in the five year period ended December 31, 2001 and for the six-month period ended June 30, 2002 and accordingly, ratios are not presented. See Exhibit 12.1 for calculations.

USE OF PROCEEDS

Unless we inform you otherwise in a prospectus supplement or any pricing

supplement, we expect to use the net proceeds from any and all offerings of the securities registered hereunder for general corporate purposes, including working capital, product development and capital expenditures. A portion of the net proceeds may also be used for the acquisition of businesses, products and technologies that are complementary to ours. There are currently no commitments or agreements with respect to any such material acquisition.

DESCRIPTION OF CAPITAL STOCK

GENERAL

Our authorized capital stock consists of 75,000,000 shares of common stock, par value $0.01 per share and 1,000,000 shares of preferred stock, par value $0.01 per share. As of September 12, 2002, 25,767,704 shares of our common stock and 4,750 shares of our preferred stock were issued and outstanding.

COMMON STOCK

VOTING RIGHTS

The holders of our common stock are entitled to one vote per share on all matters to be voted on by stockholders. Holders of shares of our common stock are not entitled to cumulate their votes in the election of directors.

Generally, all matters to be voted on by our stockholders must be approved by a majority, or, in the case of the election of directors, by a plurality, of the votes cast, subject to state law and any voting rights granted to any of the holders of our preferred stock.

DIVIDENDS

Holders of our common stock will share in an equal amount per share in any dividend declared by our board of directors, subject to any preferential rights of any of our outstanding preferred stock. This right is not cumulative, and no right shall accrue to holders of common stock by reason of the fact that dividends on said shares were not declared in any prior period. The shares of common stock are not convertible and the holders thereof have no preemptive or subscription rights to purchase any of our securities.

OTHER RIGHTS

On our liquidation, dissolution or winding up, after payment in full of any amounts we must pay to any creditors and any holders of our preferred stock, all of our common stockholders are entitled to share ratably in any assets available for distribution to our common stockholders.

The transfer agent for our common stock is EquiServe.

PREFERRED STOCK

Our board of directors is authorized, without further vote or action by the

holders of our common stock, to issue by resolution an aggregate of 1,000,000 shares of preferred stock. These shares of preferred stock may be issued in one or more series as established from time to time by our board of directors and our board may determine, with respect to any series, the designations, powers, preferences and rights of that series, and the qualifications, limitations and restrictions of that series, including:

- the designation of the series;

- the number of shares of the series, which number may thereafter be increased or decreased by our board of directors (but not below the number of shares of that series then outstanding);

- whether dividends, if any, will be cumulative or noncumulative and the dividend rate of the series;

- the conditions under which and the dates upon which dividends will be payable, and the relation which those dividends will bear to the dividends payable on any other class or classes of stock;

- the redemption rights and price or prices, if any, for shares of the series;

- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;

- the amounts payable on and the preferences of shares of the series, in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of our company;

- whether the shares of the series will be convertible into shares of any other class or series, or any other security, of our company or any other corporation, and, if so, the specification of that other class or series or that other security, the conversion price or prices or rate or rates, any adjustments to that price or those prices or that rate or those rates, the date or dates as of which those shares will be convertible and all other terms and conditions upon which the conversion may be made;

- restrictions on the issuance of shares of the same series or of any other class or series; and

- the voting rights, if any, of the holders of shares of that series.

If we issue preferred stock, the applicable prospectus supplement will describe the particular terms of any series of preferred stock including a summary of U.S. Federal income tax consequences. It is not

possible to state the effect of the authorization and issuance of any series of preferred stock upon the rights of the holders of common stock until our board of directors determine the specific terms, rights and preferences of a series of preferred stock. However, possible effects might include restricting dividends on the common stock, diluting the voting power of the common stock or impairing the liquidation rights of the common stock without further action by holders of common stock. In addition, under some circumstances, the issuance of preferred stock may render more difficult or tend to discourage a merger, tender offer or

proxy contest, the assumption of control by a holder of a large block of our securities or the removal of incumbent management, which could thereby depress the market price of our common stock. These shares of preferred stock may or may not be listed on a securities exchange, a liquid trading market may or may not develop and the shares may be subject to restrictions on transfer.

As of September 12, we had 4,750 shares of preferred stock outstanding, divided into two series as follows:

- 4,000 shares of 3% cumulative convertible preferred stock, currently convertible at the option of the holder into common stock at a conversion price of $2 per share.

- 750 shares of 6% cumulative convertible preferred stock, currently convertible at the option of the holder into common stock at a conversion price of $1.07 per share.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus. While the terms summarized below will apply generally to any warrants that may be offered under this prospectus, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below.

We may issue warrants, evidenced by warrant certificates independently or together with any preferred stock or common stock. The warrants may be transferable with or separate from such securities. If we offer warrants, the applicable prospectus supplement will describe the terms of the warrants, including, if applicable, the following:

(i) the offering price, if any;

(ii) the terms of the securities purchasable upon exercise of the warrants;

(iii) the number of shares of preferred stock or common stock purchasable upon exercise of one warrant, and the price or prices at which such shares may be purchased upon exercise;

(iv) the date on which the right to exercise the warrants will commence and the date on which such right expires;

(v) a summary of U.S. Federal income tax consequences;

(vi) whether the warrants represented by the warrant certificate will be issued in registered or bearer form or both;

(vii) whether the warrants or the underlying preferred stock or common stock will be listed on any national securities exchange; and

(viii) any other material terms of the warrants.

Warrant certificates, if any, may be exchanged for new warrant certificates of different denominations and may (if in registered form) be presented for registration of transfer at the corporate trust office of the warrant agent, which will be listed in the applicable prospectus supplement, or at such other office as may be set forth therein.

Warrants may be exercised by surrendering the warrant certificate, if any, at the corporate trust office or other designated office of the warrant agent, or the Company, as the case may be, with (i) the form of election to purchase on the reverse side of the warrant certificate, if any, properly completed and executed, and (ii) payment in full of the exercise price, as set forth in the applicable prospectus supplement. Upon exercise of warrants, the warrant agent or the Company, as the case may be, will, as soon as practicable, deliver the preferred stock or common stock issuable upon the exercise of the warrants in authorized denominations in accordance with instructions of the exercising holder and at the sole cost and risk of such holder. If less than all of the warrants evidenced by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining amount of unexercised warrants, if sufficient time exists prior to the expiration date.

PLAN OF DISTRIBUTION

We may offer the securities covered by this prospectus in and outside the United States by one or more of, or a combination of, the following methods:

- through agents to the public or to investors;
- to underwriters for resale to the public or to investors;
- directly to investors;
- in payment of all or a portion of the purchase price from one or more acquisitions of companies, businesses or assets complementary to our existing business; or
- as consideration for rights for us to use third party technologies pursuant to one or more license, development or other similar agreements.

We will set forth in a prospectus supplement the terms of the offering of securities, including:

- the name or names of any agents or underwriters;
- the purchase price of the securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which such securities may be listed.

SALE THROUGH AGENTS

We may designate agents to solicit purchases for the period of the agent's appointment or to sell the securities on a continuing basis. Unless we inform you otherwise in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of the agent's appointment.

SALE THROUGH UNDERWRITERS OR DEALERS

If we use underwriters for a sale of the securities, the underwriters will acquire the securities for their own account. The underwriters may resell the securities in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreements. The underwriters will be obligated to purchase all the offered securities if they purchase any of the offered securities. The underwriters may from time to time change any public offering price and any discounts or concessions allowed or reallowed or paid to dealers. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement which names the underwriter the nature of any such relationship.

If we use dealers in the sale of securities, we will sell the securities to the dealers as principals. They may then resell the securities to the public at varying prices determined by the dealers at the time of resale. The dealers participating in any sale of our securities may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of the securities.

COMPENSATION OF UNDERWRITERS, DEALERS AND AGENTS

Underwriters, dealers and agents that participate in the distribution of the securities may be underwriters as defined in the Securities Act and any discounts or commissions they receive from us, as well as any profit on their resale of the securities, may be treated as underwriting discounts and commissions under the Securities Act. We will identify in the applicable prospectus supplement any underwriters, dealers or agents and will describe their compensation. We may have agreements with the underwriters, dealers or agents to indemnify them against specified civil liabilities, including liabilities under the Securities Act. Underwriters, dealers and agents may engage in transactions with or perform services for us or our subsidiaries in the ordinary course of their businesses.

DIRECT SALES

We may sell the securities directly. In that event, no underwriters or agents would be involved. We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities.

DELAYED DELIVERY CONTRACTS

If we so indicate in a prospectus supplement, we may authorize underwriters, dealers or agents to solicit offers from selected types of institutions to purchase securities from us at the public offering price under delayed delivery requirements. These contracts would provide for payment and delivery on a specified date in the future. Institutions with which such contracts may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement relating to such contracts will set forth the price to be paid for securities under the contracts, the commission payable for solicitation of the contracts and the date or dates in the future for delivery of the securities under the contracts.

STABILIZATION ACTIVITIES

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include overallotment and stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. The underwriters may also impose a penalty bid, in which selling concessions allowed to syndicate members or other broker-dealers for the offered securities sold for their account may be reclaimed by the syndicate if the offered securities is repurchased by the syndicate in stabilizing or covering transactions. These

activities may stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market. If commenced, these activities may be discontinued at any time.

PASSIVE MARKET MAKING

Any underwriters who are qualified market makers on the NASDAQ National Market may engage in passive market making transactions in the securities on the Nasdaq National Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of highest independent bid for the security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid then must be lowered when certain purchase limits are exceeded.

ACQUISITIONS

We may offer the securities in payment of all or a portion of the purchase price from one or more acquisitions of companies, businesses or assets complementary to our existing business. We expect that the terms of acquisitions in which the securities would be issued by us would be determined by negotiations between us and the owners of the companies, businesses or assets we intend to acquire. It is anticipated that the securities issued in any such acquisition would be valued for purposes of the acquisition at a price reasonably related to the market value of the securities either at the time of the execution of the definitive acquisition agreement or at the time of the consummation of the acquisition.

LICENSE, DEVELOPMENT OR OTHER SIMILAR AGREEMENTS

We may offer the securities as consideration for rights for us to use third party technologies pursuant to one or more license, development or other similar agreements. We expect that the terms of those agreements would be determined by negotiations between us and the other party or parties to a particular agreement. The securities issued as part of any such agreement would be valued for purposes of the agreement at a price reasonably related to the market value of the securities either at the time of the signing of the agreement, or such other date as the agreement stipulates.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Ropes & Gray, Boston, Massachusetts.

EXPERTS

Ernst & Young LLP, independent auditors, have audited our consolidated financial statements included in our Annual Report on Form 10-K/A for the year ended December 31, 2001, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the common stock to be sold in this offering. This prospectus does not contain all the information included in the registration statement and the related exhibits and schedules. You will find additional information about us and our common stock in the registration statement. The registration statement and the related exhibits and schedules may be inspected and copied at the public reference facilities maintained by the SEC at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549,

and at the public reference facilities of the SEC's Regional Offices: New York Regional Office, Seven World Trade Center, Suite 1300, New York, New York 10048; and Chicago Regional Office, Citicorp Center, 500 West Madison Street, Chicago, Illinois 60661. Copies of this material may also be obtained from the Public Reference Section of the SEC at 450 Fifth Street, N.W., Washington, D.C. 20549 at prescribed rates. You can obtain information on the operation of the public reference facilities by calling 1-800-SEC-0330. The SEC also maintains a site on the World Wide Web (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding registrants, including us, that file electronically with the SEC. Statements made in this prospectus about legal documents may not necessarily be complete and you should read the documents which are filed as exhibits or schedules to the registration statement or otherwise filed with the SEC.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose information important to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we later file with the SEC will automatically update and supersede this information. Accordingly, we incorporate by reference the following documents we filed with the SEC pursuant to Section 12, 13 or 15 of the Securities Exchange Act of 1934:

- our Annual Report on Form 10-K for the year ended December 31, 2001 (filed March 7, 2002), as amended on Form 10-K/A on August 2, 2002;

- our Quarterly Report on Form 10-Q for the quarters ended March 31, 2002 (filed May 3, 2002), as amended on Form 10-Q/A on August 2, 2002 and June 30, 2002 (filed August 2, 2002);

- current report on Form 8-K dated August 28, 2002;

- the description of our common stock contained in the registration statement on Form 8-A filed with the SEC pursuant to Section 12 of the Securities Exchange Act of 1934 and all amendments thereto and reports filed for the purpose of updating such description; and

- all documents filed by us with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) the Securities Exchange Act of 1934 after the date of this prospectus and before the offering of

common stock is completed (other than portions of such documents described in paragraphs (i), (k) and (l) of Item 402 of Regulation S-K promulgated by the SEC).

These documents are or will be available for inspection or copying at the locations identified above under the caption "Where You Can Find More Information." We will provide without charge to each person to whom this prospectus is delivered, upon written or oral request, a copy of any and all of the documents that have been incorporated by reference in this prospectus (other than exhibits to those documents). You should direct requests for documents to:

StemCells, Inc.
3155 Porter Drive
Palo Alto, CA 94304
Attention: Investor Relations
Telephone number: (650) 475-3100

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the costs and expenses payable by the

Registrant in connection with the sale of the securities being registered. All amounts shown are estimates except the SEC registration fee.

SEC registration fee	$ 3,478
Printing and engraving expenses	$13,000
Legal fees and expenses	$30,000
Accounting fees and expenses	$17,500
Miscellaneous	$ 5,000
Total	$68,978

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, by reason of the fact that the person is or was a director, officer, employee or agent of the corporation or is or was serving at the corporation's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with the action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. The power to indemnify applies to actions brought by or in the right of the corporation as well, but only to the extent of expenses, including attorneys' fees but excluding judgments, fines and amounts paid in settlement, actually and reasonably incurred by the person in connection with the defense or settlement of the action or suit and with the further limitation that in these actions no indemnification shall be made in the event of any adjudication of negligence or misconduct in the performance of his duties to the corporation, unless a court believes that in light of all the circumstances indemnification should apply.

Section Ten of our Restated Certificate of Incorporation provides that we shall, to the maximum extent legally permitted, indemnify and upon request advance expenses to each person who is or was a party or is threatened to be made a party to any threatened, pending or completed action, suit proceeding, or claim (civil, criminal, administrative or investigative) by reason of the fact that he is or was, or has agreed to become, a director or officer of the Company, or is or was serving, or has agreed to serve, at the request of the Company, as a director, officer, partner, employee, agent or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprises, provided, however, that the Company is not required to indemnify or advance expenses to any person in connection with any action, suit, proceeding, claim or counterclaim initiated by or on behalf of such person. The indemnification provided for in Section Ten is expressly not exclusive of any other rights to which those seeking indemnification may be entitled under any by-law, agreement or vote of directors or stockholders or otherwise, and shall inure to the benefit of the heirs and legal representatives of such persons.

Section 145(g) of the Delaware General Corporation Law provides that the Company shall have the power to purchase and maintain insurance on behalf of its officers, directors, employees and agents, against any liability asserted against and incurred by such persons in any such capacity.

We have obtained insurance covering our directors and officers against certain liabilities.

Section 102(b)(7) of the General Corporation Law of the State of Delaware provides that a corporation may eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provisions shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the General Corporation Law of the State of Delaware, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision becomes effective.

Pursuant to the Delaware General Corporation Law, Section Nine of the Company's Restated Certificate of Incorporation eliminates a director's personal liability for monetary damages for breach of fiduciary duty as a director, except in circumstances involving a breach of the director's duty of loyalty to StemCells, Inc. or its shareholders, acts or omissions not in good faith, intentional misconduct, knowing violations of the law, self-dealing or the unlawful payment of dividends or repurchase of stock.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) EXHIBITS. The following exhibits are filed as part of this registration statement:

NUMBER
DESCRIPTION - -

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3.1* Restated Certificate of Incorporation of the Registrant
3.2++ Amended and Restated By-Laws of the Registrant. 3.3 Certificate of Amendment of the Restated Certificate of Incorporation.
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, dated July 31, 2000, issued to Millennium Partners, L.P.
4.10XXX

Registration Rights Agreement dated as of May 10, 2001 between the Company 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, L.L.C. 4.18XXXX Warrant to Purchase Common Stock--Cantor Fitzgerald &

Co. 5.1 Opinion of Ropes & Gray. 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.

NUMBER DESCRIPTION - -- ---------------- ---------------- -------- ------- ---------------- ---------------- ---------------- ----- 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!!! 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.

NUMBER DESCRIPTION
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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.
10.42%** 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 StemCells, Inc. and investors.

10.49X Subscription Agreement, dated as of July 31, 2000, between StemCells, Inc. and Millennium Partners, L.P.

10.50XXX Common Stock Purchase Agreement, dated as of May 10, 2001, between the Company and Sativum Investments Limited.

10.51XXX Esrow Agreement, dated as of May 10, 2001, among the Company, Sativum Investments Limited and Epstein, Becker & Green, P.C.

10.52XX License Agreement, dated as of October 30, 2000, between the Company and Neuro Spheres

Ltd.
10.53XX
Letter
Agreement,
dated
January 2,
2001,
between the
Company and
Martin
McGlynn.
10.54XX
Lease,
dated
February 1,
2001,
between the
Board of
Trustees of
Stanford
University
and the
Company.
10.55XXX
Registration
Rights
Agreement,
dated as of
June 21,
2001, by
and between
the Company
and
Millennium
Partners,
L.P.
10.56XXX
Subscription
Agreement,
dated as of
June 21,
2001, by
and between
the Company
and
Millennium
Partners,
L.P.
10.57%%%
2001 Equity
Incentive
Plan.
10.58[**]
Subscription
Agreement
dated as of
December 4,
2001
between
StemCells,
Inc. and
Riverview
Group,
L.L.C.
10.59[**]
Registration
Rights
Agreement
dated as of
December 4,
2001
between
StemCells,
Inc. and
Riverview
Group,
L.L.C.
10.60[**]
Agreement
dated as of
December 4,

2001 between StemCells, Inc. and Millennium Partners, L.P.

NUMBER DESCRIPTION
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10.61[**] Agreement dated as of December 4, 2001 among StemCells, Inc., Millennium Partners, L.P. and Riverview Group, L.L.C.
10.62[****] Purchase Agreement, dated as of August 23, 2002 between StemCells, Inc. and Triton West Group, Inc.
10.63[****] Escrow Agreement, dated as of August 23, 2002, between StemCells, Inc., Triton West Group, Inc. and Feldman Weinstein, LLP.
12.1 Calculation of Ratio of Combined Fixed Charges and Preference Dividends to Earnings.
21.1X Subsidiaries of the Registrant.
23.1 Consent of Ernst & Young LLP, Independent

Auditors.
23.2 Consent of Ropes & Gray (included in the form of opinion filed as Exhibit 5.1).
24.1[***] Power of Attorney pursuant to which amendments to this registration statement may be filed.
99.2XX Side Letter, dated March 17, 2001, between the Company and Oleh S. Hnatiuk regarding NeuroSpheres License Agreement, dated October 30, 2000.

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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-1, File No. 333-85494.

+++ 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. 333-97272.

++++ 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. 333-91228.

* Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, Registration Statement on Form S-1, File No. 333-45739.

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.

** 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.

+ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993 and filed on March 30, 1994.

! Previously filed with the Commission as an Exhibit to and incorporated by reference to, the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1996.

!! Previously filed with the Commission as an Exhibit to and incorporated by reference to, the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.

!!! 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, 1996 and filed on March 31, 1997.

!!!! 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, 1995.

*** 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 September 30, 1997 and filed on November 14, 1997.

**** Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-8, File No. 333-37313.

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, 1997 and filed on March 30, 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 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.

%%% 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.

[***] 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. 333-83992.

[****] 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 28, 2002.

ITEM 17. UNDERTAKINGS.

(a) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the

Registrant pursuant to the provisions described under Item 14 above, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by

controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(b) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial BONA FIDE offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) To file a post-effective amendment to the Registration Statement to include any financial statements required by section 10(a)(3) of the Securities Act.

(c) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial BONA FIDE offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Palo Alto, State of

California, on the 17th day of September, 2002.

STEMCELLS, INC.

BY: /S/ MARTIN M. MCGLYNN

Martin M. McGlynn
CHIEF EXECUTIVE OFFICER

POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated below on September 17, 2002. Each person whose signature appears below hereby constitutes and appoints Martin M. McGlynn and Iris Brest, and either of them, each with full power of substitution, his true and lawful attorney-in-fact and agent with full power to him or her to sign for him and in his name in the capacities indicated below any and all amendments (including post-effective amendments) to this Registration Statement and to file the same with exhibits thereto, and other documents in connection therewith, and he hereby ratifies and confirms his signature as it may be signed by said attorney to any and all such amendments.

SIGNATURE TITLE ---- ----- ---- - Martin M. McGlynn, President, Chief Executive Officer /s/ MARTIN M. MCGLYNN (Principal Executive Officer), Director - ---------- ---------- ---------- ---------- -- George Koshy, Controller and Acting Chief Financial Officer (Principal Financial Officer and /s/ GEORGE KOSHY Principal Accounting Officer) - ---------- ---------- ---------- ---------- -- Jean-Jacques Bienaime /s/ JEAN-JACQUES BIENAIME Director - ---------- ----------

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-- Roger M. Perlmutter, M.D., Ph.D. /s/ ROGER M. PERLMUTTER, M.D., PH.D. Director -
----

-- John J. Schwartz, Ph.D. /s/ JOHN J. SCHWARTZ, PH.D. Director -
----

-- Irving L. Weissman, M.D. /s/ IRVING L. WEISSMAN, M.D. Director -
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-- Ricardo B. Levy, Ph.D. /s/ RICARDO B. LEVY, PH.D. Director -
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EXHIBIT INDEX

NUMBER DESCRIPTION - -

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------ 3.1* Restated Certificate of Incorporation of the Registrant 3.2++ Amended and Restated By-Laws of the Registrant. 3.3 Certificate of Amendment of the Restated Certificate of Incorporation. 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, dated July 31, 2000, issued to Millennium Partners, L.P.
4.10XXX Registration Rights Agreement dated as of May 10, 2001 between the Company 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, L.L.C. 4.18XXXX Warrant to Purchase Common Stock--Cantor Fitzgerald & Co. 5.1 Opinion of Ropes & Gray. 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* Master Lease and Warrant Agreement dated

April 23, 1991 between the Registrant and PacifiCorp Credit, Inc.

NUMBER DESCRIPTION - -- ---------------- --- ------------ ---------------- ---------------- ----------------

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!!! 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.
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.

NUMBER DESCRIPTION
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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
StemCells,
Inc. and
investors.
10.49X
Subscription
Agreement,
dated as of
July 31,
2000,
between
StemCells,
Inc. and
Millennium
Partners,
L.P.
10.50XXX
Common
Stock
Purchase
Agreement,
dated as of
May 10,
2001,
between the
Company and
Sativum
Investments

Limited.
10.51XXX
Esrow
Agreement,
dated as of
May 10,
2001, among
the
Company,
Sativum
Investments
Limited and
Epstein,
Becker &
Green, P.C.
10.52XX
License
Agreement,
dated as of
October 30,
2000,
between the
Company and
Neuro
Spheres
Ltd.
10.53XX
Letter
Agreement,
dated
January 2,
2001,
between the
Company and
Martin
McGlynn.
10.54XX
Lease,
dated
February 1,
2001,
between the
Board of
Trustees of
Stanford
University
and the
Company.
10.55XXX
Registration
Rights
Agreement,
dated as of
June 21,
2001, by
and between
the Company
and
Millennium
Partners,
L.P.
10.56XXX
Subscription
Agreement,
dated as of
June 21,
2001, by
and between
the Company
and
Millennium
Partners,
L.P.
10.57%%%
2001 Equity
Incentive
Plan.
10.58[**]
Subscription
Agreement
dated as of

December 4, 2001 between StemCells, Inc. and Riverview Group, L.L.C.
10.59[**] Registration Rights Agreement dated as of December 4, 2001 between StemCells, Inc. and Riverview Group, L.L.C.
10.60[**] Agreement dated as of December 4, 2001 between StemCells, Inc. and Millennium Partners, L.P.
10.61[**] Agreement dated as of December 4, 2001 among StemCells, Inc., Millennium Partners, L.P. and Riverview Group, L.L.C.
10.62[****] Purchase Agreement, dated as of August 23, 2002 between StemCells, Inc. and Triton West Group, Inc.
10.63[****] Escrow Agreement, dated as of August 23, 2002, between StemCells, Inc., Triton West Group, Inc. and Feldman Weinstein, LLP.
12.1 Calculation of Ratio of Combined Fixed Charges and Preference Dividends to Earnings.

NUMBER	DESCRIPTION
21.1X	Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
23.2	Consent of Ropes & Gray (included in the form of opinion filed as Exhibit 5.1).
24.1[***]	Power of Attorney pursuant to which amendments to this registration statement may be filed.
99.2XX	Side Letter, dated March 17, 2001, between the Company and Oleh S. Hnatiuk regarding NeuroSpheres License Agreement, dated October 30, 2000.

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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-1, File No. 333-85494.

+++ 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. 333-97272.

++++ 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. 333-91228.

* Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, Registration Statement on Form S-1, File No. 333-45739.

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.

** 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.

+ Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993 and filed on March 30, 1994.

! Previously filed with the Commission as an Exhibit to and incorporated by reference to, the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1996.

!! Previously filed with the Commission as an Exhibit to and incorporated by reference to, the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.

!!! 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, 1996 and filed on March 31, 1997.

!!!! 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, 1995.

*** 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 September 30, 1997 and filed on November 14, 1997.

**** Previously filed with the Commission as Exhibits to, and incorporated herein by reference to, the Registrant's Registration Statement on Form S-8, File No. 333-37313.

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, 1997 and filed on March 30, 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 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.

%%% 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.

[***] 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. 333-83992.

[****] 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 28, 2002.

EXHIBIT 5.1

[ROPES & GRAY LETTERHEAD]

September 17, 2002

StemCells, Inc.
3155 Porter Drive
Palo Alto, CA 94304

Ladies and Gentlemen:

We have acted as counsel to StemCells Inc., a Delaware corporation (the "Company"), in connection with the Post-Effective Amendment No. 1 to the Registration Statement on Form S-3, Registration No. 333-88992 (the "Registration Statement") filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), with respect to (i) shares of preferred stock, par value $0.01 per share, of the Company (the "Preferred Stock"); (ii) shares of common stock, par value $0.01 per share, of the Company (the "Common Stock"); and (iii) warrants for the purchase of Preferred Stock or Common Stock ("Warrants"). The Preferred Stock, Common Stock and Warrants are referred to herein collectively as the "Securities." The Securities being registered under the Registration Statement will have an aggregate offering price of up to $37,800,000 and may be issued from time to time on a delayed or continuous basis pursuant to Rule 415 under the 1933 Act.

We have acted as counsel for the Company in connection with its proposed issuance and sale of the Securities. For purposes of this opinion, we have examined and relied upon such documents, records, certificates and other instruments as we have deemed necessary.

The opinions expressed below are limited to the Delaware General Corporation Law and the federal laws of the United States.

For purposes of this opinion, we have assumed with respect to the issuance and sale of any particular class of Securities under the Registration Statement:

- the Registration Statement and all post-effective amendments thereto have become effective and comply with all applicable laws;

- a prospectus supplement with respect to the particular class of Securities has been filed in compliance with the Securities Act and the applicable rules thereunder;

- all Shares will be issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement and the appropriate prospectus supplement;

- if the Securities are to be sold pursuant to a purchase agreement, such purchase agreement has been duly authorized, executed and delivered by the Company and the other parties thereto; and

- the Board of Directors (or a committee authorized to act on its behalf) and appropriate officers of the Company have taken all necessary corporate action to approve the terms of the Securities and the terms of the offering.

Subject to the foregoing, we are of the opinion that:

1. With respect to an offering of any of the shares of Common Stock, when certificates representing the shares of the Common Stock in the form of the specimen certificates examined by us are duly executed, countersigned, registered and delivered upon payment of the agreed-upon consideration, the shares of Common Stock, when issued and sold in accordance with the applicable purchase agreement, will be duly authorized, validly issued, fully paid and nonassessable, assuming that

a sufficient number of shares of Common Stock are authorized and available for issuance and that the consideration therefor is not less than the par value of the shares of Common Stock.

2. With respect to an offering of any of the shares of Preferred Stock, when a certificate of designations has been filed with the Delaware Secretary of State establishing the terms of the series of Preferred Stock and certificates representing the shares of the Preferred Stock in the form of the specimen certificates examined by us are duly executed, countersigned, registered and delivered upon payment of the agreed-upon consideration, the shares of Preferred

Stock, when issued and sold in accordance with the purchase agreement, will be duly authorized, validly issued, fully paid and nonassessable, assuming that a sufficient number of shares of Preferred Stock are authorized and available for issuance and that the consideration therefor is not less than the par value of the shares of Preferred Stock.

3. With respect to an offering of any of the Warrants, when warrant certificates representing the Warrants in the form examined by us are duly executed, countersigned, registered and delivered upon payment of the agreed-upon consideration therefor, (1) the Warrants, when issued and sold in accordance with the purchase agreement, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as may be limited by bankruptcy, insolvency and other similar laws affecting the rights and remedies of creditors generally and general principles of equity; and (2) shares of the Company's capital stock issuable upon exercise of the Warrants will be validly issued, fully paid and nonassessable, assuming that the exercise of the Warrants is in accordance with the terms of the Warrants and that sufficient shares of capital stock are authorized or reserved and available for issuance and that the consideration for such shares is not less than the par value of such capital stock.

We hereby consent to your filing a form of this opinion as an exhibit to the Registration Statement and to the use of our name therein and in the related prospectus and prospectus supplement under the caption "Legal Matters."

This opinion may be used only in connection with the offer and sale of the Securities while the Registration Statement is in effect.

Very truly yours,

/s/ ROPES & GRAY

Ropes & Gray

EXHIBIT 12.1

RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS
AMOUNTS IN $'000

	YEAR ENDED DECEMBER 31,					SIX MONTHS ENDED JUNE 30,
	1997	1998	1999	2000	2001	2002
Loss from continuing operations..............	$(18,114)	$(12,628)	$(15,709)	$(11,125)	$(3,446)	$(5,868)
Combined fixed charges and preferred stock dividends..................................	490	577	435	859	1,228	1,029
Earnings (as defined)........................	$(17,624)	$(12,051)	$(15,274)	$(10,266)	$(2,218)	$(4,839)
COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS:						
Interest expense............................	$ 438	$ 472	$ 335	$ 273	$ 246	$ 118
Estimated interest within rent expense.......	52	105	100	105	238	106
Preferred stock dividends **.................	0	0	0	481	744	805
Total combined fixed charges and preferred stock dividends...........................	490	577	435	859	1,228	1,029
Deficiency of earnings available to cover combined fixed charges and preferred stock dividends..................................	$(18,114)	$(12,628)	$(15,709)	$(11,125)	$(3,446)	$(5,868)
Ratio of earnings to combined fixed charges and preferred stock dividends *............	N/A	N/A	N/A	N/A	N/A	N/A

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* Our earnings were insufficient to cover fixed charges in each of the years in the five-year period ended December 31, 2001 and for the six-month period ended June 30, 2002 and accordingly ratios are not presented.

** The preferred stock dividend amount includes the amount relating to accretion relative to convertible preferred stock which is madatorily redeemable and dividends on preferred stock.

EXHIBIT 23.1

CONSENT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

We consent to the reference to our firm under the caption "Experts" in the Post-Effective Amendment No. 1 to the registration statement on Form S-3 (No. 333-83992) and to the incorporation by reference therein of our report dated February 12, 2002, with respect to the consolidated financial statements of StemCells, Inc. included in its Annual Report (Form 10-K/A) for the year ended December 31, 2001, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Palo Alto, California
September 13, 2002