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As filed with the Securities and Exchange Commission on May 6, 2013
Registration No. 333-184493

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Amendment No. 2
to

Form S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

INTERNATIONAL STEM CELL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	2834	20-4494098
(State or other jurisdiction of Incorporation or organization)	(Primary Standard Industrial Classification Code number)	(I.R.S. Employer Identification No.)

5950 Priestly Drive
Carlsbad, CA 92008
(760) 940-6383
(Address and telephone number of principal executive offices)

JAY NOVAK
5950 Priestly Drive
Carlsbad, CA 92008
(760) 653-1126
(Name, address and telephone number of agent for service)

Copies to:

DOUGLAS REIN
DLA PIPER LLP (US)
4365 Executive Drive, Suite 1100
San Diego, CA 92121-2133
(858) 677-1443

Approximate date of commencement of proposed sale to the public: As soon as possible 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. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please 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. ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☒

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered(1)			Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Units, consisting of:			$	$
(i) Common Stock, par value $0.001 per share			—	—
(ii) Warrants to purchase common stock (3)			—	—
Common Stock issuable upon exercise of Warrants			—	—
Placement Agent Warrants			—	—
Common Stock issuable upon exercise of Placement Agent Warrants			—	—

Total			$5,000,000	$682.00 (4)

(1) Pursuant to and in accordance with Rule 416 under the Securities Act, this registration statement also covers such indeterminate number of additional shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends, recapitalizations or similar transactions.
(2) Estimated pursuant to Rule 457(o) solely for the purpose of calculating the registration fee.
(3) No registration fee is required pursuant to Rule 457(g).
(4) $2,046 was previously paid, and the excess previously paid may be used to offset the filing fee of a future registration statement.

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, as amended, or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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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 it is not soliciting offers to buy these securities in any state where the offer or sale of these securities is not permitted.

SUBJECT TO COMPLETION, DATED MAY 6, 2013

INTERNATIONAL STEM CELL CORPORATION

PROSPECTUS

Units

Each Unit Consisting of One Share of Common Stock

and

0.5 of a Warrant, Each to Purchase One Share of Common Stock

We are offering up to units, each unit consisting of one share of our common stock and 0.5 of a warrant, each to purchase one share of our common stock at an exercise price of $ per share, subject to adjustment . The warrants will be immediately exercisable and will expire on the anniversary of the date of issuance. The units will not be issued or certificated, however, and purchasers will receive only shares of common stock and warrants. The common stock and the warrants may be transferred separately immediately upon issuance.

We are not required to sell any specific dollar amount or number of securities, but will use our best efforts to sell all of the units being offered.

Our common stock is quoted on the OTC QB and trades under the symbol "ISCO". The last reported sale price of our common stock on May , 2013 on the OTC QB was $ per share. We do not intend to list the warrants on any securities exchange or other trading market and we do not expect that a public trading market will develop for the warrants.

	Per Unit	Total
Public Offering Price per Unit	$	$
Placement Agent's Fees	$	$
Offering Proceeds, before expenses	$	$

has agreed to act as our exclusive placement agent in connection with this offering. The placement agent is not purchasing the units offered by us, and is not required to sell any specific number or dollar amount of units, but will assist us in this offering on a commercially reasonable "best efforts" basis. We have agreed to pay the placement agent a cash fee equal to 7% of the gross proceeds of the offering of units by us (excluding any gross proceeds received by us from the sale of securities to members of our Board of Directors, employees, the Semechkin family or their affiliates) and to issue to the placement agent warrants to purchase a number of shares of our common stock equal to 5% of the aggregate number of shares of common stock sold in the offering. The placement agent warrants will have terms substantially similar to the warrants being offered hereby to purchasers of our common stock. The placement agent warrants will not be exercisable or convertible more than five (5) years from the effective date of the registration statement of which this prospectus is a part and will otherwise comply with FINRA Rule 5110 (g)(1). The registration statement of which this prospectus is a part also covers the placement agent warrants and the shares of common stock issuable upon the exercise thereof. We estimate the total expenses of this offering, excluding the placement agent fees, will be approximately $. Because there is no minimum offering amount required as a condition to closing this offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amount set forth above. See "Plan of Distribution" beginning on page 62 of this prospectus for more information on this offering and the placement agent arrangements.

Investing in the securities involves substantial risks. Before making any investment in the securities, you should read and carefully consider the risks described in this prospectus under See "Risk Factors" beginning on page 5 of this prospectus.

You should rely only on the information contained in this prospectus or any prospectus supplement or amendment thereto. We have not authorized anyone to provide you with different information.

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

Sole Placement Agent

The date of this prospectus is May , 2013.

OFFERS AND SALES WILL ONLY BE MADE BY US OR THE PLACEMENT AGENT IN JURISDICTIONS WHERE THE PLACEMENT AGENT BELIEVES THERE ARE EXEMPTIONS FROM THE REGISTRATION REQUIREMENTS UNDER THE LAWS AND REGULATIONS OF THE STATE IN QUESTION. BROKERS OR DEALERS EFFECTING TRANSACTIONS IN THE SECURITIES SHOULD CONFIRM THAT THE SECURITIES HAVE BEEN REGISTERED UNDER THE SECURITIES LAWS OF THE STATE OR STATES IN WHICH SALES OF THE SECURITIES OCCUR AS OF THE TIME OF SUCH SALES, OR THAT THERE IS AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES LAWS OF SUCH STATES.

THIS PROSPECTUS IS NOT AN OFFER TO SELL ANY SECURITIES OTHER THAN THE SHARES AND WARRANTS. THIS PROSPECTUS IS NOT AN OFFER TO SELL SECURITIES TO ANY PERSON OR IN ANY PARTICULAR JURISDICTION IN ANY CIRCUMSTANCES IN WHICH SUCH AN OFFER OR SALE IS UNLAWFUL.

INTERNATIONAL STEM CELL CORPORATION

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You should read this prospectus, including all documents incorporated herein by reference, together with additional information described under “Where You Can Find More Information”.

You may obtain the information incorporated by reference without charge by following the instructions under “Where You Can Find More Information”.

About This Prospectus

You may rely only on the information contained in this prospectus or that we have referred you to. We have not authorized anyone to provide you with different information. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities other than the securities offered by this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities in any circumstances in which such offer or solicitation is unlawful. Neither the delivery of this prospectus nor any sale made in connection with this prospectus shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or that the information contained by reference to this prospectus is correct as of any time after its date. In this prospectus, references to “International Stem Cell Corporation,” “the Company,” “we,” “us,” and “our,” refer to International Stem Cell Corporation.

PROSPECTUS SUMMARY

This summary provides an overview of selected information contained elsewhere in this prospectus and does not contain all of the information you should consider before investing in our securities. You should carefully read this prospectus and the registration statement of which this prospectus is a part in their entirety before investing in our securities, including the information discussed under "Risk Factors" beginning on page 5 and our financial statements and notes thereto that appear elsewhere in this prospectus.

Business Overview

We are a developmental stage biotechnology company focused on therapeutic and biomedical product development with multiple long-term therapeutic opportunities and two revenue-generating businesses offering potential for increased future revenue.

The Company is a development stage entity with no revenue generated from its principal operations in therapeutic research and development efforts. To date, the Company has generated limited and unpredictable incidental revenues to support its core therapeutic research and development efforts.

Our products are based on multi-decade experience with human cell culture and a proprietary type of pluripotent stem cells, "human parthenogenetic stem cells" ("hpSCs"). Our hpSCs are comparable to human embryonic stem cells ("hESCs") in that they have the potential to be differentiated into many different cells in the human body. However, the derivation of hpSCs does not require the use of fertilized eggs or the destruction of viable human embryos and also offers the potential for the creation of immune-matched cells and tissues that are less likely to be rejected following transplantation. ISCO scientists have created the first parthenogenetic, homozygous stem cell line that can be a source of therapeutic cells for hundreds of millions of individuals of differing genders, ages and racial background with minimal immune rejection after transplantation. ISCO's collection of hpSCs, known as UniStemCell™, currently consists of fifteen stem cell lines. We have facilities and manufacturing protocols that comply with the requirements of Good Manufacturing Practice (GMP) standards as promulgated by the US Code of Federal Regulations and enforced by the Food and Drug Administration ("FDA").

We are developing different cell types from our stem cells that may result in therapeutic products. We focus on applications where cell and tissue therapy is already proven but where there is an insufficient supply of functional cells or tissue. We believe that the most promising potential clinical applications of our technology are:

- Neuronal cells for treatment of Parkinson's disease and potentially other central nervous system disorders, such as traumatic brain injury, stroke and Alzheimer's disease.

- Liver cells ("hepatocytes") that may be used to treat a variety of congenital and acquired liver diseases. Using the same precursor cell that leads to liver cells, it is also possible to create islet cells for potential treatment of diabetes.

- Three-dimensional eye structures to treat degenerative retinal diseases, corneal blindness, and to accelerate corneal healing.

Each of these product candidates will require extensive preclinical and clinical development and may require specific unforeseen licensing rights obtained at substantial cost before regulatory approval may be achieved and the products sold for therapeutic use.

The Offering	
Securities offered	Up to units. Each unit will consist of one share of our common stock and 0.5 of one warrant, each to purchase one share of common stock at an exercise price of $ per share, subject to adjustment. The warrants will be immediately exercisable and will expire on the anniversary of the date of issuance.
Public offering price	$ per unit.
Common stock outstanding prior to offering	112,363,815 shares (1)
Common stock to be outstanding after the offering	shares (2)
Use of proceeds	We expect to use the proceeds received from the offering to fund our research and development activities, including our preclinical non-human primate safety and efficacy and rodent pre-clinical safety studies for the Parkinson's disease program and for general working capital needs.
OTC QB Symbol	ISCO
Listing	Our common stock is quoted on the OTC QB and trades under the symbol "ISCO". There is no established trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants on any national securities exchange or other trading market.
Risk Factors	Investing in the securities involves substantial risks. See "Risk Factors" beginning on page 5 and the other information in this prospectus for a discussion of the factors you should consider before you decide to invest in the securities.

(1) The total number of shares of our common stock outstanding reflected above is as of April 29, 2013. The total number of shares of our common stock outstanding reflected above excludes:

- 24,026,893 shares of common stock issuable upon exercise of outstanding stock options, including those options issued outside our stock option plans, at a weighted average exercise price of $0.99 per share;
- 7,862,500 shares of common stock reserved for issuance under various outstanding warrant agreements, at an exercise price of $0.20 per share, 1,400,000 shares of common stock reserved for issuance an outstanding warrant agreement, at an exercise price of $0.25 per share, and 200,000 shares of common stock reserved for issuance under other warrants, at an average exercise price of $1.75 per share;
- 36,403,812 additional shares of common stock reserved for issuance upon conversion of our outstanding shares of Series B, Series D and Series G Preferred Stock;
- 15,700,280 additional shares of common stock reserved for future issuance under our 2006 and 2010 stock option plans;

- shares of common stock issuable upon the exercise of the warrants offered hereby; and

- shares of common stock issuable upon the exercise of the placement agent warrants.

(2) Assumes the sale of all shares of common stock covered by this prospectus and excludes (i) shares of common stock issuable upon exercise of the warrants offered hereby and (ii) shares of common stock issuable upon the exercise of the placement agent warrants.

Unless otherwise specifically stated, information throughout this prospectus does not assume the exercise of outstanding options or warrants to purchase shares of our common stock or conversion of outstanding shares of preferred stock.

RISK FACTORS

You should carefully consider the risks described below as well as other information provided to you in this document, including information in the section of this document entitled "Forward Looking Statements". If any of the following risks actually occur, our business, financial condition or results of operations could be materially adversely affected, the value of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Business

Our business is at an early stage of development and we may not develop therapeutic products that can be commercialized.

Our business is at an early stage of development. We do not have any products in late stage clinical trials. We are still in the early stages of identifying and conducting research on potential therapeutic products. Our potential therapeutic products will require significant research and development and preclinical and clinical testing prior to regulatory approval in the United States and other countries. We may not be able to obtain regulatory approvals, enter clinical trials for any of our product candidates, or commercialize any products. Our product candidates may prove to have undesirable and unintended side effects or other characteristics adversely affecting their safety, efficacy or cost effectiveness that could prevent or limit their use. Any product using any of our technology may fail to provide the intended therapeutic benefits, or achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing or production.

We have a history of operating losses, do not expect to be profitable in the near future and our independent registered public accounting firm has expressed doubt as to our ability to continue as a going concern.

We have not generated any profits since our entry into the biotechnology business and have incurred significant operating losses. We expect to incur additional operating losses for the foreseeable future and, as we increase our research and development activities, we expect our operating losses to increase significantly. We do not have any sources of significant or sustained revenues and may not have any in the foreseeable future.

We have expended substantial funds to develop our technologies, products and product candidates. Based on our financial condition, recurring losses and projected spending, which raise substantial doubts about our ability to continue as a going concern, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2012 regarding this uncertainty. The inclusion of the going concern statement by our auditors may adversely affect our stock price and our ability to raise needed capital or enter into advantageous contractual relationships with third parties. If we were unable to continue as a going concern, the values we receive for our assets on liquidation or dissolution could be significantly lower than the values reflected in our financial statements.

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

During 2012, we used a significant amount of cash to finance the continued development and testing of our product candidates, and we need to obtain significant additional capital resources in order to develop products going forward. Our burn rate as of the quarter ended December 31, 2012 was approximately $580,000 per month excluding capital expenditures and patent costs averaging $70,000 per month. We may not be successful in maintaining our normal operating cash flow and the timing of our capital expenditures may not result in cash flows sufficient to sustain our operations through 2013. If financing is not sufficient and additional financing is not available or available only on terms that are detrimental to our long-term survival, it could have a major adverse effect on our ability to continue to function. The timing and degree of any future capital requirements will depend on many factors, including:

- the accuracy of the assumptions underlying our estimates for capital needs in 2013 and beyond;
- scientific progress in our research and development programs;

- the magnitude and scope of our research and development programs and our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- our progress with preclinical development and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims; and
- the number and type of product candidates that we pursue.

Additional financing through strategic collaborations, public or private equity or debt financings or other financing sources may not be available on acceptable terms, or at all. Additional equity financing could result in significant dilution to our stockholders, and any debt financings will likely involve covenants restricting our business activities. Additional financing may not be available on acceptable terms, or at all. Further, if we obtain additional funds through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies, product candidates or products that we would otherwise seek to develop and commercialize on our own. If sufficient capital is not available, we may be required to delay, reduce the scope of or eliminate one or more of our research or product development initiatives, any of which could have a material adverse effect on our financial condition or business prospects.

We have limited clinical testing and regulatory capabilities, and human clinical trials are subject to extensive regulatory requirements, very expensive, time-consuming and difficult to design and implement. Our products may fail to achieve necessary safety and efficacy endpoints during clinical trials, which may limit our ability to generate revenues from therapeutic products.

Due to the relatively early stage of our therapeutic products and stem cell therapy-based systems, we have not yet invested significantly in clinical testing and regulatory capabilities, including for human clinical trials. We cannot assure you that we will be able to invest or develop resources for these capabilities successfully or as expediently as necessary. In particular, human clinical trials can be very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is time consuming. We estimate that clinical trials of our product candidates will take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The commencement and completion of clinical trials may be affected by several factors, including:

- unforeseen safety issues;
- determination of dosing issues;
- inability to demonstrate effectiveness during clinical trials;
- slower than expected rates of patient recruitment;
- inability to monitor patients adequately during or after treatment; and
- inability or unwillingness of medical investigators to follow our clinical protocols.

In addition, we or the FDA may suspend our clinical trials at any time if it appears that we are exposing participants to unacceptable health risks or if the FDA finds deficiencies in our IND submissions or the conduct of these trials.

Patents held by other persons may result in infringement claims against us that are costly to defend and which may limit our ability to use the disputed technologies and prevent us from pursuing research and development or commercialization of potential products.

A number of pharmaceutical, biotechnology and other companies, universities and research institutions have filed patent applications or have been issued patents relating to cell therapy, stem cells, and other technologies potentially relevant to or required by our expected products. We cannot predict which, if any, of such applications will issue as patents or the claims that might be allowed. We are aware that a number of companies have filed applications relating to stem cells. We are also aware of a number of patent applications and patents claiming use of stem cells and other modified cells to treat disease, disorder or injury.

If third party patents or patent applications contain claims infringed by either our licensed technology or other technology required to make and use our potential products and such claims are ultimately determined to be valid, we might not be able to obtain licenses to these patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, we may not be able to develop some products commercially. We may be required to defend ourselves in court against allegations of infringement of third party patents. Patent litigation is very expensive and could consume substantial resources and create significant uncertainties. An adverse outcome in such a suit could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties, or require us to cease using such technology.

Our competition includes fully integrated biotechnology, pharmaceutical and cosmetic companies that have significant advantages over us.

The market for therapeutic stem cell products is highly competitive. We expect that our most significant competitors will be fully integrated and more established pharmaceutical, biotechnology and cosmetic companies. These companies are developing stem cell-based products and they have significantly greater capital resources and research and development, manufacturing, testing, regulatory compliance, and marketing capabilities. Many of these potential competitors are further along in the process of product development and also operate large, company-funded research and development programs. As a result, our competitors may develop more competitive or affordable products, or achieve earlier patent protection or product commercialization than we are able to achieve. Competitive products may render any products or product candidates that we develop obsolete.

If competitors develop and market products that are more effective, safer, or less expensive than our product candidates or offer other advantages, our commercial prospects will be limited.

Our cell therapy development programs face, and will continue to face, intense competition from pharmaceutical, biopharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies engaged in drug discovery activities or funding, both in the United States and abroad. Some of these competitors are pursuing the development of drugs and other therapies that target the same diseases and conditions that we are targeting with our product candidates.

As a general matter, we also face competition from many companies that are researching and developing cell therapies. Many of these companies have financial and other resources substantially greater than ours. In addition, many of these competitors have significantly greater experience in testing pharmaceutical and other therapeutic products, obtaining FDA and other regulatory approvals, and marketing and selling. If we ultimately obtain regulatory approval for any of our product candidates, we also will be competing with respect to manufacturing efficiency and marketing capabilities, areas in which we have limited or no commercial-scale experience. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated by our competitors. Competition may increase further as a result of advances made in the commercial applicability of our technologies and greater availability of capital for investment in these fields.

If we fail to meet our obligations under our license agreements, we may lose our rights to key technologies on which our business depends.

Our business depends in part on licenses from third parties. These third party license agreements impose obligations on us, such as payment obligations and obligations to diligently pursue development of commercial products under the licensed patents. If a licensor believes that we have failed to meet our obligations under a license agreement, the licensor could seek to limit or terminate our license rights, which could lead to costly and time consuming litigation and, potentially, a loss of the licensed rights. During the period of any such litigation, our ability to carry out the development and commercialization of potential products could be significantly and negatively affected. If our license rights were restricted or ultimately lost, our ability to continue our business based on the affected technology platform could be severely affected adversely.

Significant delays or reductions in U.S. Government funding may negatively affect our results of operations.

We estimate that governmental funding, either directly or indirectly (through sponsorship of academic research), comprises approximately 40% of the market for basic and applied research in biological sciences, which is the target market for our primary human cell research products. The U.S. Government is considering significant changes in government spending and other governmental programs, with several automatic spending cuts being implemented. There are many variables in how these laws could be implemented that make it difficult to determine specific impacts on our customers, and we are unable to predict the impact that these automatic spending cuts would have on funding our customers receive. Additionally, U.S. Governmental programs are subject to annual congressional budget authorization and appropriation processes. However, whether through the automatic cuts or other decisions, long-term funding for certain programs in which our research product customers participate may be reduced, delayed or cancelled. In the event that governmental funding for any of our research product customers is reduced or delayed, our sales to those customers would likely suffer, which could have a material adverse effect on our results of operations.

Restrictive and extensive government regulation could slow or hinder our production of a cellular product.

The research and development of stem cell therapies is subject to and restricted by extensive regulation by governmental authorities in the United States and other countries. The process of obtaining FDA and other necessary regulatory approvals is lengthy, expensive and uncertain. We may fail to obtain the necessary approvals to continue our research and development, which would hinder our ability to manufacture or market any future product.

The development and commercialization of our product candidates is subject to extensive regulation by the FDA and other regulatory agencies in the United States and abroad, and the failure to receive regulatory approvals for our other product candidates would likely have a material and adverse effect on our business and prospects.

The process of obtaining FDA and other regulatory approvals is expensive, generally takes many years and is subject to numerous risks and uncertainties, particularly with complex and/or novel product candidates such as our product candidates. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application or may make it easier for our competitors to gain regulatory approval to enter the marketplace. Ultimately, the FDA and other regulatory agencies have substantial discretion in the approval process and may refuse to accept any application or may decide that our product candidate data are insufficient for approval without the submission of additional preclinical, clinical or other studies. In addition, varying agency interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

Any of the following factors, among others, could cause regulatory approval for our product candidates to be delayed, limited or denied:

- the product candidates require significant clinical testing to demonstrate safety and effectiveness before applications for marketing approval can be filed with the FDA and other regulatory authorities;
- data obtained from preclinical and nonclinical animal testing and clinical trials can be interpreted in different ways, and regulatory authorities may not agree with our respective interpretations or may require us to conduct additional testing;
- negative or inconclusive results or the occurrence of serious or unexpected adverse events during a clinical trial could cause us to delay or terminate development efforts for a product candidate; and/or
- FDA and other regulatory authorities may require expansion of the size and scope of the clinical trials.

Any difficulties or failures that we encounter in securing regulatory approval for our product candidates would likely have a substantial adverse impact on our ability to generate product sales, and could make any search for a collaborative partner more difficult.

Research in the field of embryonic stem cells is currently subject to strict government regulations, and our operations could be restricted or outlawed by any legislative or administrative efforts impacting the use of nuclear transfer technology or human embryonic material.

Significant portions of our business are focused on human cell therapy, which includes the production of human differentiated cells from stem cells and involves human oocytes. Although our focus is on parthenogenetic stem cells derived from unfertilized oocytes, certain aspects of that work may involve the use of embryonic stem cells. Research utilizing embryonic stem cells is controversial, and currently subject to intense scrutiny, particularly in the area of the use of human embryonic material.

Federal law is not as restrictive regarding the use of federal funds for human embryonic cell research, commonly referred to as hES cell research as it once was. However, federal law does prohibit federal funding for creation of parthenogenetic stem cells. Our operations may also be restricted by future legislative or administrative efforts by politicians or groups opposed to the development of hES cell technology, parthenogenetic cell technology or nuclear transfer technology. Further, future legislative or administrative restrictions could, directly or indirectly, delay, limit or prevent the use of hES technology, parthenogenetic technology, or nuclear transfer technology, the use of human embryonic material, or the sale, manufacture or use of products or services derived from nuclear transfer technology or hES or parthenogenetic technology.

We may be unsuccessful in our efforts to comply with applicable federal, state and international laws and regulations, which could result in loss of licensure, certification or accreditation or other government enforcement actions or impact our ability to secure regulatory approval of our product candidates.

Although we seek to conduct our business in compliance with applicable governmental healthcare laws and regulations, these laws and regulations are exceedingly complex and often subject to varying interpretations. The cell therapy industry is the topic of significant government interest, and thus the laws and regulations applicable to our business are subject to frequent change and/or reinterpretation. As such, there can be no assurance that we will be able, or will have the resources, to maintain compliance with all such healthcare laws and regulations. Failure to comply with such healthcare laws and regulations, as well as the costs associated with such compliance or with enforcement of such healthcare laws and regulations, may have a material adverse effect on our operations or may require restructuring of our operations or impair our ability to operate profitably.

Our manufacture of certain cellular therapy products triggers additional FDA requirements applicable to hESCs which are regulated as a drug, biological product, or medical device. FDA's GMP regulations govern the manufacture, processing, packaging and holding of cell therapy products regulated as drugs. FDA's Quality

System Regulation, or QSR, similarly governs the manufacture, processing, packaging and holding of cell therapy products regulated as medical devices. We must comply with GMP or QSR requirements including quality control, quality assurance and the maintenance of records and documentation for certain products. We may be unable to comply with these GMP or QSR requirements and with other FDA, state and foreign regulatory requirements. These requirements may change over time and we or third-party manufacturers may be unable to comply with the revised requirements.

We will continue to be subject to extensive FDA regulation following any product approvals, and if we fail to comply with these regulations, we may suffer a significant setback in our business.

Even if we are successful in obtaining regulatory approval of our product candidates, we will continue to be subject to the requirements of and review by, the FDA and comparable regulatory authorities in the areas of manufacturing processes, post-approval clinical data, adverse event reporting, labeling, advertising and promotional activities, among other things. In addition, any marketing approval we receive may be limited in terms of the approved product indication or require costly post-marketing testing and surveillance. Discovery after approval of previously unknown problems with a product, manufacturer or manufacturing process, or a failure to comply with regulatory requirements, may result in actions such as:

- warning letters or other actions requiring changes in product manufacturing processes or restrictions on product marketing or distribution;
- product recalls or seizures or the temporary or permanent withdrawal of a product from the market; and
- fines, restitution or disgorgement of profits or revenue, the imposition of civil penalties or criminal prosecution.

The occurrence of any of these actions would likely cause a material adverse effect on our business, financial condition and results of operations.

Health care companies have been the subjects of federal and state investigations, and we could become subject to investigations in the future.

Both federal and state government agencies have heightened civil and criminal enforcement efforts. There are numerous ongoing investigations of health care companies, as well as their executives and managers. In addition, amendments to the Federal False Claims Act, have made it easier for private parties to bring "*qui tam*" (whistleblower) lawsuits against companies under which the whistleblower may be entitled to receive a percentage of any money paid to the government. The Federal False Claims Act provides, in part, that an action can be brought against any person or entity that has knowingly presented, or caused to be presented, a false or fraudulent request for payment from the federal government, or who has made a false statement or used a false record to get a claim approved. The government has taken the position that claims presented in violation of the federal anti-kickback law, Stark Law or other healthcare-related laws, including laws enforced by the FDA, may be considered a violation of the Federal False Claims Act. Penalties include substantial fines for each false claim, plus three times the amount of damages that the federal government sustained because of the act of that person or entity and/or exclusion from the Medicare program. In addition, a majority of states have adopted similar state whistleblower and false claims provision. Any future investigations of our business or executives could cause us to incur substantial costs, and result in significant liabilities or penalties, as well as damage to our reputation.

Restrictions on the use of human stem cells, and the ethical, legal and social implications of that research, could prevent us from developing or gaining acceptance for commercially viable products in these areas.

Although our stem cells are derived from unfertilized human eggs through a process called "parthenogenesis" that can produce cells suitable for therapy, but are believed to be incapable of producing a human being, such cells are nevertheless often incorrectly referred to as "embryonic" stem cells. Because the use of human

embryonic stem cells gives rise to ethical, legal and social issues regarding the appropriate use of these cells, our research related to human parthenogenetic stem cells could become the subject of adverse commentary or publicity and some political and religious groups may still raise opposition to our technology and practices. In addition, many research institutions, including some of our scientific collaborators, have adopted policies regarding the ethical use of human embryonic tissue, which, if applied to our procedures, may have the effect of limiting the scope of research conducted using our stem cells, thereby impairing our ability to conduct research in this field. In some states, use of embryos as a source of stem cells is prohibited.

To the extent we utilize governmental grants in the future, the governmental entities involved may retain certain rights in technology that we develop using such grant money and we may lose the revenues from such technology if we do not commercialize and utilize the technology pursuant to established government guidelines.

Certain of our licensors' research has been or is being funded in part by government grants. Our research may also be government-funded in the future. In connection with certain grants, the governmental entity involved retains various rights in the technology developed with the grant. These rights could restrict our ability to fully capitalize upon the value of this research by reducing total revenues that might otherwise be available since such governmental rights may give the government the right to practice the invention without payment of royalties if we do not comply with applicable requirements.

We rely on parthenogenesis, cell differentiation and other stem cell technologies that we may not be able to successfully develop, which may prevent us from generating revenues, operating profitably or providing investors any return on their investment.

We have concentrated our research on our parthenogenesis, cell differentiation and stem cell technologies, and our ability to operate profitably will depend on being able to successfully implement or develop these technologies for human applications. These are emerging technologies with, as yet, limited human applications. We cannot guarantee that we will be able to successfully implement or develop our nuclear transfer, parthenogenesis, cell differentiation and other stem cell technologies or that these technologies will result in products or services with any significant commercial utility. We anticipate that the commercial sale of such products or services, and royalty/licensing fees related to our technology, would be an additional source of revenues.

The outcome of pre-clinical, clinical and product testing of our products is uncertain, and if we are unable to satisfactorily complete such testing, or if such testing yields unsatisfactory results, we may be unable to commercially produce our proposed products.

Before obtaining regulatory approvals for the commercial sale of any potential human products, our products will be subjected to extensive pre-clinical and clinical testing to demonstrate their safety and efficacy in humans. The clinical trials of our prospective products, or those of our licensees or collaborators, may not demonstrate the safety and efficacy of such products at all, or to the extent necessary to obtain appropriate regulatory approvals. Similarly, the testing of such prospective products may not be completed in a timely manner, if at all, or only after significant increases in costs, program delays or both, all of which could harm our ability to generate revenues. In addition, our prospective products may not prove to be more effective for treating disease or injury than current therapies. Accordingly, we may have to delay or abandon efforts to research, develop or obtain regulatory approval to market our prospective products. The failure to adequately demonstrate the safety and efficacy of a therapeutic product under development could delay or prevent regulatory approval of the product and could harm our ability to generate revenues, operate profitably or produce any return on an investment in us.

Even if we are successful in developing a therapeutic application using our cell technologies, it is unclear whether cell therapy can serve as the foundation for a commercially viable and profitable business.

Stem cell technology is rapidly developing and could undergo significant change in the future. Such rapid technological development could result in our technologies becoming obsolete. While our product candidates appear promising, they may fail to be successfully commercialized for numerous reasons, including, but not limited to, competing technologies for the same indications. There can be no assurance that we will be able to develop a commercially successful therapeutic application for our stem cell technologies.

Moreover, advances in other treatment methods or in disease prevention techniques could significantly reduce or entirely eliminate the need for our cell therapy services, planned products and therapeutic efforts. There is no assurance that cell therapies will achieve the degree of success envisioned by us in the treatment of disease. Additionally, technological or medical developments may materially alter the commercial viability of our technology or services, and require us to incur significant costs to replace or modify equipment in which we have a substantial investment. We are focused on cell therapy, and if this field is substantially unsuccessful, this could jeopardize our success or future results. The occurrence of any of these factors may have a material adverse effect on our business, operating results and financial condition.

If we are unable to keep up with rapid technological changes in our field or compete effectively, we will be unable to operate profitably.

We are engaged in activities in the biotechnology field, which is characterized by extensive research efforts and rapid technological progress. If we fail to anticipate or respond adequately to technological developments, our ability to operate profitably could suffer. Research and discoveries by other biotechnology, agricultural, pharmaceutical or other companies may render our technologies or potential products or services uneconomical or result in products superior to those we develop. Similarly, any technologies, products or services we develop may not be preferred to any existing or newly developed technologies, products or services.

We may not be able to protect our proprietary technology, which could harm our ability to operate profitably.

The biotechnology, cosmeceutical, and pharmaceutical industries place considerable importance on obtaining patent and trade secret protection for new technologies, products and processes. Our success will depend, to a substantial degree, on our ability to obtain and enforce patent protection for our products, preserve any trade secrets and operate without infringing the proprietary rights of others. We cannot assure you that:

- we will succeed in obtaining any patents, obtain them in a timely manner, or that the breadth or degree of protection that any such patents will protect our interests;
- the use of our technology will not infringe on the proprietary rights of others;
- patent applications relating to our potential products or technologies will result in the issuance of any patents or that, if issued, such patents will afford adequate protection to us or will not be challenged, invalidated or infringed; or
- patents will not be issued to other parties, which may be infringed by our potential products or technologies.

We are aware of certain patents that have been granted to others and certain patent applications that have been filed by others with respect to nuclear transfer and other stem cell technologies. The fields in which we operate have been characterized by significant efforts by competitors to establish dominant or blocking patent rights to gain a competitive advantage, and by considerable differences of opinion as to the value and legal legitimacy of competitors' purported patent rights and the technologies they actually utilize in their businesses.

Considerable research in the areas of stem cells, cell therapeutics and regenerative medicine is being performed in countries outside of the United States, and a number of our competitors are located in those countries. The laws protecting intellectual property in some of those countries may not provide adequate protection to prevent our competitors from misappropriating our intellectual property.

Our business is highly dependent upon maintaining licenses with respect to key technology.

Although our primary focus relates to intellectual property we have developed internally, some of the patents we utilize are licensed to us by Advanced Cell Technology, which has licensed some of these from other parties, including the University of Massachusetts. These licenses are subject to termination under certain circumstances (including, for example, our failure to make minimum royalty payments). The loss of any of such licenses, or the conversion of such licenses to non-exclusive licenses, could harm our operations and/or enhance the prospects of our competitors.

Although our licenses with Advanced Cell Technology allow us to cure any defaults under the underlying licenses to them and to take over the patents and patents pending in the event of default by Advanced Cell Technology, the cost of such remedies could be significant and we might be unable to adequately maintain these patent positions. If so, such inability could have a material adverse effect on our business. Some of these licenses also contain restrictions (*e.g.*, limitations on our ability to grant sublicenses) that could materially interfere with our ability to generate revenue through the licensing or sale to third parties of important and valuable technologies that we have, for strategic reasons, elected not to pursue directly. In the future we may require further licenses to complete and/or commercialize our proposed products. We may not be able to acquire any such licenses on a commercially-viable basis.

Cybersecurity breaches could expose us to liability, damage our reputation, compromise our confidential information or otherwise adversely affect our business.

We maintain sensitive company data on our computer networks, including our intellectual property and proprietary business information, as well as certain personal information regarding customers who purchase our skin care products online. We face a number of threats to our networks from unauthorized access, security breaches and other system disruptions. Despite our security measures, our infrastructure may be vulnerable to attacks by hackers or other disruptive problems. Any such security breach may compromise information stored on our networks and may result in significant data losses or theft of our intellectual property, proprietary business information or our customers' personally identifiable information. A cybersecurity breach could hurt our reputation by adversely affecting the perception of customers and potential customers of the security of their orders and personal information. In addition, a cybersecurity attack could result in other negative consequences, including disruption of our internal operations, increased cyber security protection costs, lost revenues or litigation.

Certain of our technology may not be subject to protection through patents, which leaves us vulnerable to theft of our technology.

Certain parts of our know-how and technology are not patentable or are trade secrets. To protect our proprietary position in such know-how and technology, we intend to require all employees, consultants, advisors and collaborators to enter into confidentiality and invention ownership agreements with us. These agreements may not provide meaningful protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure. Further, in the absence of patent protection, competitors who independently develop substantially equivalent technology may harm our business.

We depend on our collaborators to help us develop and test our proposed products, and our ability to develop and commercialize products may be impaired or delayed if collaborations are unsuccessful.

Our strategy for the development, clinical testing and commercialization of our proposed products requires that we enter into collaborations with corporate partners, licensors, licensees and others. We are dependent upon the subsequent success of these other parties in performing their respective responsibilities and the continued cooperation of our partners. Our collaborators may not cooperate with us or perform their obligations under our agreements with them. We cannot control the amount and timing of our collaborators' resources that will be devoted to our research and development activities related to our collaborative agreements with them. Our collaborators may choose to pursue existing or alternative technologies in preference to those being developed in collaboration with us.

Under agreements with collaborators, we may rely significantly on such collaborators to, among other things:

- design and conduct advanced clinical trials in the event that we reach clinical trials;
- fund research and development activities with us;
- pay us fees upon the achievement of milestones; and
- market with us any commercial products that result from our collaborations.

The development and commercialization of potential products will be delayed if collaborators fail to conduct these activities in a timely manner, or at all. In addition, our collaborators could terminate their agreements with us and we may not receive any development or milestone payments. If we do not achieve milestones set forth in the agreements, or if our collaborators breach or terminate their collaborative agreements with us, our business may be materially harmed.

Contractual arrangements with licensors or collaborators may require us to pay royalties or make other payments related to the development of a product candidate, which would adversely affect the level of our future revenues and profits.

Even if we obtain all applicable regulatory approvals and successfully commercialize one or more of our cell therapy candidates, contractual arrangements between us and a licensor, collaborator or other third party in connection with the respective product may require that we make royalty or other payments to the respective third party, and as a result we would not receive all of the revenue derived from commercial sales of such product.

Our reliance on the activities of our non-employee consultants, research institutions, and scientific contractors, whose activities are not wholly within our control, may lead to delays in development of our proposed products.

We rely extensively upon and have relationships with scientific consultants at academic and other institutions, some of whom conduct research at our request, and other consultants with expertise in clinical development strategy or other matters. These consultants are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. We have limited control over the activities of these consultants and, except as otherwise required by our collaboration and consulting agreements to the extent they exist, can expect only limited amounts of their time to be dedicated to our activities. These research facilities may have commitments to other commercial and non-commercial entities. We have limited control over the operations of these laboratories and can expect only limited amounts of time to be dedicated to our research goals.

We may be subject to litigation that will be costly to defend or pursue and uncertain in its outcome.

Our business may bring us into conflict with our licensees, licensors or others with whom we have contractual or other business relationships, or with our competitors or others whose interests differ from ours. If we are unable to resolve those conflicts on terms that are satisfactory to all parties, we may become involved in litigation

brought by or against us. That litigation is likely to be expensive and may require a significant amount of management's time and attention, at the expense of other aspects of our business. The outcome of litigation is always uncertain, and in some cases could include judgments against us that require us to pay damages, enjoin us from certain activities, or otherwise affect our legal or contractual rights, which could have a significant adverse effect on our business.

We may not be able to obtain third party patient reimbursement or favorable product pricing, which would reduce our ability to operate profitably.

Our ability to successfully commercialize certain of our proposed products in the human therapeutic field may depend to a significant degree on patient reimbursement of the costs of such products and related treatments at acceptable levels from government authorities, private health insurers and other organizations, such as health maintenance organizations. Reimbursement in the United States or foreign countries may not be available for any products we may develop, and, if available, may be decreased in the future. Also, reimbursement amounts may reduce the demand for, or the price of, our products with a consequent harm to our business. We cannot predict what additional regulation or legislation relating to the health care industry or third party coverage and reimbursement may be enacted in the future or what effect such regulation or legislation may have on our business. If additional regulations are overly onerous or expensive, or if health care related legislation makes our business more expensive or burdensome than originally anticipated, we may be forced to significantly downsize our business plans or completely abandon our business model.

Our products may be expensive to manufacture, and they may not be profitable if we are unable to control the costs to manufacture them.

Our products may be significantly more expensive to manufacture than other therapeutic products currently on the market today. We hope to substantially reduce manufacturing costs through process improvements, development of new science, increases in manufacturing scale and outsourcing to experienced manufacturers. If we are not able to make these, or other improvements, and depending on the pricing of the product, our profit margins may be significantly less than that of other therapeutic products on the market today. In addition, we may not be able to charge a high enough price for any cell therapy product we develop, even if they are safe and effective, to make a profit. If we are unable to realize significant profits from our potential product candidates, our business would be materially harmed.

We presently lack sufficient manufacturing capabilities to produce our therapeutic product candidates at commercial scale quantities and do not have an alternate manufacturing supply, which could negatively impact our ability to meet any future demand for the product.

We expect that we would need to significantly expand our manufacturing capabilities to meet potential demand for our therapeutic product candidates, if approved. Such expansion would require additional regulatory approvals. Even if we increase our manufacturing capabilities, it is possible that we may still lack sufficient capacity to meet demand.

We do not presently have any alternate supply for our products. If our facilities where our products are currently being manufactured or equipment were significantly damaged or destroyed, or if there were other disruptions, delays or difficulties affecting manufacturing capacity, including if such facilities are deemed not in compliance with current Good Manufacturing Practice ("cGMP") requirements, future clinical studies and commercial production for our products would likely be significantly disrupted and delayed. It would be both time consuming and expensive to replace this capacity with third parties, particularly since any new facility would need to comply with the regulatory requirements.

Ultimately, if we are unable to supply our products to meet commercial demand, whether because of processing constraints or other disruptions, delays or difficulties that we experience, our production costs could dramatically increase and sales of the product and its long-term commercial prospects could be significantly damaged.

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

Our proposed products and those developed by our collaborative partners, if approved for marketing, may not achieve market acceptance since hospitals, physicians, patients or the medical community in general may decide not to accept and utilize these products. The products that we are attempting to develop represent substantial departures from established treatment methods and will compete with a number of more conventional therapies manufactured and marketed by major pharmaceutical companies. The degree of market acceptance of any of our developed products will depend on a number of factors, including:

- our establishment and demonstration to the medical community of the clinical efficacy and safety of our proposed products;
- our ability to create products that are superior to alternatives currently on the market;
- our ability to establish in the medical community the potential advantage of our treatments over alternative treatment methods; and
- reimbursement policies of government and third party payers.

If the healthcare community does not accept our products for any of the foregoing reasons, or for any other reason, our business would be materially harmed.

Our business is based on novel technologies that are inherently expensive, risky and may not be understood by or accepted in the marketplace, which could adversely affect our future value.

The clinical development, commercialization and marketing of cell and tissue-based therapies are at an early-stage, substantially research-oriented, and financially speculative. To date, very few companies have been successful in their efforts to develop and commercialize a stem cell product. In general, stem cell products may be susceptible to various risks, including undesirable and unintended side effects, unintended immune system responses, inadequate therapeutic efficacy, or other characteristics that may prevent or limit their approval or commercial use. Furthermore, the number of people who may use cell or tissue-based therapies is difficult to forecast with accuracy. Our future success is dependent on the establishment of a significant market for cell- and tissue-based therapies and our ability to capture a share of this market with our product candidates.

Our development efforts with our therapeutic product candidates are susceptible to the same risks of failure inherent in the development and commercialization of therapeutic products based on new technologies. The novel nature of cellular therapeutics creates significant challenges in the areas of product development and optimization, manufacturing, government regulation, third-party reimbursement and market acceptance. For example, the United States FDA has relatively limited experience regulating therapies based on cells, and there are few approved treatments utilizing cell therapy.

We depend on key personnel for our continued operations and future success, and a loss of certain key personnel could significantly hinder our ability to move forward with our business plan.

Because of the specialized nature of our business, we are highly dependent on our ability to identify, hire, train and retain highly qualified scientific and technical personnel for the research and development activities we conduct or sponsor. The loss of one or more key executive officers, or scientific officers, would be significantly detrimental to us. In addition, recruiting and retaining qualified scientific personnel to perform research and development work is critical to our success. Our anticipated growth and expansion into areas and activities requiring additional expertise, such as clinical testing, regulatory compliance, manufacturing and marketing, will require the addition of new management personnel and the development of additional expertise by existing

management personnel. In the past year we have had significant turnover in our management personnel, and there is intense competition for qualified personnel in the areas of our present and planned activities. Accordingly, we may not be able to continue to attract and retain the qualified personnel, which would adversely affect the development of our business.

We may not have sufficient product liability insurance, which may leave us vulnerable to future claims we will be unable to satisfy.

The testing, manufacturing, marketing and sale of human therapeutic products entail an inherent risk of product liability claims. We currently have a limited amount of product liability insurance, which may not be adequate to meet potential product liability claims. In the event we are forced to expend significant funds on defending product liability actions, and in the event those funds come from operating capital, we will be required to reduce our business activities, which could lead to significant losses. Adequate insurance coverage may not be available in the future on acceptable terms, if at all. If available, we may not be able to maintain any such insurance at sufficient levels of coverage and any such insurance may not provide adequate protection against potential liabilities. Whether or not a product liability insurance policy is obtained or maintained in the future, any product liability claim could harm our business or financial condition.

Risks Related to the Securities Markets and Our Capital Structure

Stock prices for biotechnology companies have historically tended to be very volatile.

Stock prices and trading volumes for many biotechnology companies fluctuate widely for a number of reasons, including but not limited to the following factors, some of which may be unrelated to their businesses or results of operations:

- clinical trial results;
- the amount of cash resources and such company's ability to obtain additional funding;
- announcements of research activities, business developments, technological innovations or new products by competitors;
- entering into or terminating strategic relationships;
- changes in government regulation;
- disputes concerning patents or proprietary rights;
- changes in our revenues or expense levels;
- public concern regarding the safety, efficacy or other aspects of the products or methodologies we are developing;
- reports by securities analysts;
- activities of various interest groups or organizations;
- media coverage; and
- status of the investment markets.

This market volatility, as well as general domestic or international economic, market and political conditions, could materially and adversely affect the market price of our common stock.

Two of our executive officers and directors can significantly influence our direction and policies, and their interests may be adverse to the interests of our other stockholders.

As of April 29, 2013, Dr. Andrey Semechkin, Chief Executive Officer and Co-Chairman of the Board of Directors, and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director, beneficially own approximately 41% of our outstanding shares of common stock, including shares issuable upon conversion of all the outstanding shares of our Series D and Series G Preferred Stock and shares issuable upon exercise of options and warrants. As a result of their holdings and the rights, preferences and privileges of those series of preferred stock, Dr. Andrey Semechkin and Dr. Ruslan Semechkin may appoint and remove two of our six directors, and propose candidates for nomination of up to two additional directors, and therefore will be able to significantly influence the election of our Board of Directors. They may also prevent corporate transactions (such as a merger, consolidation, a sale of all or substantially all of our assets or a financing transaction) that may be favorable from the standpoint of our other stockholders or they may cause a transaction that our other stockholders may view as unfavorable.

The application of the "penny stock" rules to our common stock could limit the trading and liquidity of our common stock, adversely affect the market price of our common stock and increase stockholder transaction costs to sell those shares.

As long as the trading price of our common stock is below $5.00 per share, the open market trading of our common stock will be subject to the "penny stock" rules, unless we otherwise qualify for an exemption from the "penny stock" definition. The "penny stock" rules impose additional sales practice requirements on certain broker-dealers who sell securities to persons other than established customers and accredited investors (generally those with assets in excess of $1,000,000 or annual income exceeding $200,000 or $300,000 together with their spouse). These regulations, if they apply, require the delivery, prior to any transaction involving a penny stock, of a disclosure schedule explaining the penny stock market and the associated risks. Under these regulations, certain brokers who recommend such securities to persons other than established customers or certain accredited investors must make a special written suitability determination regarding such a purchaser and receive such purchaser's written agreement to a transaction prior to sale. These regulations may have the effect of limiting the trading activity of our common stock, reducing the liquidity of an investment in our common stock and increasing the transaction costs for sales and purchases of our common stock as compared to other securities.

The rights of holders of our common stock are subordinate to significant rights, preferences and privileges of our existing three series of preferred stock, and to any additional series of preferred stock created in the future.

Under the authority granted by our Certificate of Incorporation, our Board of Directors has established three separate series of outstanding preferred stock, including Series B, Series D and Series G Preferred Stock, which have various rights and preferences senior to the shares of common stock. Shares of our existing preferred stock are also entitled to enhanced voting rights and liquidation preferences. As a result of the various voting rights, the holders of our existing preferred stock may be able to block the proposed approval of various corporate actions, which could prevent us from achieving strategic or other goals dependent on such actions. As a result of the liquidation preferences, in the event that we voluntarily or involuntary liquidate, dissolve or windup our affairs (including as a result of a merger), the holders of our preferred stock would be entitled to receive stated amounts per share, including any accrued and unpaid dividends, before any distribution of assets or merger consideration is made to holders of our common stock. Additionally, these shares of preferred stock may be converted, at the option of the holders, into common stock at rates that may be adjusted, for the benefit of holders of preferred stock, if we sell equity securities below the then existing conversion prices. Any such adjustments would compound the potential dilution suffered by holders of common stock if we issue additional securities at prices below the current conversion prices (ranging from $0.20 to $0.38 per share). Additionally, subject to the consent of the holders of our existing preferred stock, our Board of Directors has the power to issue additional series of preferred stock and to designate, as it deems appropriate (subject to the rights of the holders of the current series of preferred stock), the special dividend, liquidation or voting rights of the shares of those additional series. The

creation and designation of any new series of preferred stock could adversely affect the voting power, dividend, liquidation and other rights of holders of our common stock and, possibly, any other class or series of stock that is then in existence.

The market price for our common stock has been and may continue to be particularly volatile given our status as a relatively unknown company with a limited operating history and lack of profits, which could lead to wide fluctuations in our share price. The price at which stockholders purchase shares of our common stock may not be indicative of the price of our common stock that will prevail in the trading market.

The market for our common stock may be characterized by significant price volatility when compared to seasoned issuers, and we expect that our stock price could continue to be more volatile than a seasoned issuer for the indefinite future. The potential volatility in our share price is attributable to a number of factors. First, there has been limited trading in our common stock. As a consequence of this lack of liquidity, any future trading of shares by our stockholders may disproportionately influence the price of those shares in either direction. Second, we are a speculative or "risky" investment due to our limited operating history and lack of profits to date, and uncertainty of future market acceptance for our potential products. As a consequence of this enhanced risk, more risk averse investors may, under the fear of losing all or most of their investment in the event of negative news or lack of progress, be more inclined to sell their shares on the market more quickly and at greater discounts than would be the case with the stock of a seasoned issuer. Many of these factors will be beyond our control and may decrease the market price of our common stock, regardless of our operating performance. We cannot make any predictions or projections as to what the prevailing market price for our common stock will be at any time or as to what effect that the sale of shares or the availability of shares for sale at any time will have on the prevailing market price.

In addition, the market price of our common stock could be subject to wide fluctuations in response to:

- quarterly variations in our revenues and operating expenses;
- announcements of new products or services by us;
- fluctuations in interest rates;
- significant sales of our common stock;
- the operating and stock price performance of other companies that investors may deem comparable to us; and
- news reports relating to trends in our markets or general economic conditions.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144 promulgated under the Securities Act of 1933, as amended, subject to certain limitations. In general, pursuant to Rule 144, a stockholder (or stockholders whose shares are aggregated) who is not an affiliate of our company and who has satisfied a six month holding period may, as long as we are current in our required filings with the SEC, sell securities without further limitation. Rule 144 also permits, under certain circumstances, the sale of securities, without any limitations, by a non-affiliate of our company who has satisfied a one year holding period. Affiliates of our company who have satisfied a six month holding period may sell securities subject to limitations. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus may have an adverse effect on the market price of our securities. Currently, a substantial majority of our securities are either free trading or subject to the release of trading restrictions under the six month or one year holding periods of Rule 144.

Certain provisions of our Certificate of Incorporation and Delaware law may make it more difficult for a third party to affect a change-in-control.

Our Certificate of Incorporation authorizes the Board of Directors to issue up to 20,000,000 shares of preferred stock and our Board of Directors has created and issued shares of three series of preferred stock that remain

outstanding, including Series B, Series D and Series G Preferred Stock. The terms of the Series B, Series D and Series G Preferred Stock include, among other things, voting rights on particular matters (for example, with respect to the Series D Preferred Stock, restricting our ability to undergo a change in control or merge with, or sell assets to, a third party), preferences as to dividends and liquidation, and conversion rights. These preferred stock rights diminish the rights of holders of our common stock, and therefore could reduce the value of such common stock. In addition, as long as shares of our Series B, Series D and Series G Preferred Stock remain outstanding, or if our Board creates and issues additional shares of preferred stock in the future with rights that restrict our ability to merge with, or sell assets to, a third party, it could make it more difficult, delay, discourage, prevent or make it more costly to acquire the Company or affect a change-in-control.

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

The future sale of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could significantly and negatively affect the market price for our common stock. We expect that we will likely issue a substantial number of shares of our capital stock in financing transactions in order to fund our operations and the growth of our business. Under these arrangements, we may agree to register the shares for resale soon after their issuance. We may also continue to pay for certain goods and services with equity, which would dilute our current stockholders. Also, sales of the shares issued in this manner could negatively affect the market price of our stock.

The sale of our common stock to Aspire Capital may cause substantial dilution to our existing stockholders and the sale of the shares of common stock acquired by Aspire Capital could cause the price of our common stock to decline.

On December 9, 2010, we entered into a purchase agreement with Aspire Capital which provided that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $25.0 million of our common stock. As of April 29, 2013, we have sold Aspire Capital 10,533,333 shares of common stock for aggregate proceeds of $6,206,000, and we may sell Aspire Capital up to an additional $18,794,000 of our common stock in the future. Pursuant to the purchase agreement, the number of shares of common stock that we may designate Aspire Capital to purchase is dependent on the closing price of our common stock on the date that we provide Aspire Capital with a purchase notice directing it to purchase shares, and the purchase price per share is the lower of (i) the lowest sale price for the common stock on the date of sale or (ii) the arithmetic average of the three lowest closing sale prices of our common stock during the 12 consecutive business days preceding the date of sale. If we elect to sell additional shares to Aspire Capital under the Common Stock Purchase Agreement, depending upon market liquidity at the time, it may cause the trading price of our common stock to decline.

After Aspire Capital has acquired additional shares of our common stock under the purchase agreement, it may sell all, some or none of such shares. In connection with the purchase agreement, the Company also entered into a registration rights agreement with Aspire Capital, dated December 9, 2010 that provides, among other things, that the Company will register the resale of all shares acquired by Aspire Capital under the purchase agreement. Therefore, sales to Aspire Capital by us pursuant to the purchase agreement may result in substantial dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock to Aspire Capital pursuant to the purchase agreement, or anticipation of such sales, as well as the resale of such shares by Aspire Capital, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital, and we may terminate the purchase agreement at any time at our discretion without any cost to us.

The exercise of outstanding options and warrants to acquire shares of our common stock would cause additional dilution which could cause the price of our common stock to decline.

In the past, we have issued options and warrants to acquire shares of our common stock. At April 29, 2013, there were 9,462,500 warrants, and 16,228,143 vested and 7,798,750 non-vested stock options outstanding, and we may issue additional options, warrants and other types of equity in the future as part of stock-based compensation, capital raising transactions, technology licenses, financings, strategic licenses or other strategic transactions. To the extent these options and warrants are ultimately exercised, existing common stockholders would experience additional dilution which may cause the price of our common stock to decline.

Limitations on director and officer liability and indemnification of our officers and directors by us may discourage stockholders from bringing suit against a director.

Our certificate of incorporation and bylaws provide, with certain exceptions as permitted by governing state law, that a director or officer shall not be personally liable to us or our stockholders for breach of fiduciary duty as a director, except for acts or omissions which involve intentional misconduct, fraud or knowing violation of law, or unlawful payments of dividends. These provisions may discourage stockholders from bringing suit against a director for breach of fiduciary duty and may reduce the likelihood of derivative litigation brought by stockholders on our behalf against a director. In addition, our certificate of incorporation and bylaws may provide for mandatory indemnification of directors and officers to the fullest extent permitted by governing state law.

Compliance with the rules established by the SEC pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 is complex. Failure to comply in a timely manner could adversely affect investor confidence and our stock price.

Rules adopted by the SEC pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 require us to perform an annual assessment of our internal controls over financial reporting and certify the effectiveness of those controls. The standards that must be met for management to assess the internal controls over financial reporting now in effect are complex, costly and require significant documentation, testing and possible remediation to meet the detailed standards. We may encounter problems or delays in completing activities necessary to make an assessment of our internal controls over financial reporting. If we cannot perform the assessment or certify that our internal controls over financial reporting are effective investor confidence and share value may be negatively impacted.

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

We have not historically paid cash dividends on our common stock, and we do not plan to pay cash dividends on our common stock in the foreseeable future.

Risks Related to this Offering

Our management team will have immediate and broad discretion over the use of the net proceeds from this offering.

There is no minimum offering amount required as a condition to closing this offering and therefore net proceeds from this offering will be immediately available to our management to use at their discretion. The decisions made by our management may not result in positive returns on your investment and you will not have an opportunity to evaluate the economic, financial or other information upon which our management bases its decisions.

You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future.

You will incur immediate and substantial dilution as a result of this offering. After giving effect to assumed sale of units in this offering at an assumed public offering price of $ per unit (the closing bid price of our common stock on May , 2013), and after deducting estimated placement agent commissions and estimated offering

expenses payable by us, and attributing no value to the warrants, if you purchase units in this offering, you will suffer immediate and substantial dilution of approximately $ per share in the net tangible book value of the common stock you acquire. In the event that you exercise your warrants, you will experience additional dilution to the extent that the exercise price of those warrants is higher than the book value per share of our common stock. See "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase securities in this offering.

There is no public market for the warrants to purchase common stock in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

The offering may not be fully subscribed, and, even if the offering is fully subscribed, we will need additional capital in the future. If additional capital is not available, we may not be able to continue to operate our business pursuant to our business plan or we may have to discontinue our operations entirely.

The placement agent in this offering will offer the securities on a "best-efforts" basis, meaning that we may raise substantially less than the total maximum offering amounts. We will not provide any refund to investors if less than all of the securities are sold. Further, during 2011 and 2012, we have used a significant amount of cash to finance the continued development and testing of our product candidates. If we continue to use cash at this rate we will need significant additional financing, which we may seek to raise through, among other things, public and private equity offerings and debt financing. Any equity financings will likely be dilutive to existing stockholders, and any debt financings will likely involve covenants restricting our business activities. Additional financing may not be available on acceptable terms, or at all.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Information in this prospectus contains forward-looking statements. These forward-looking statements can be identified by the use of words such as "believes," "estimates," "could," "possibly," "probably," "anticipates," "projects," "expects," "may," or "should" or other variations or similar words. No assurances can be given that the future results anticipated by the forward-looking statements will be achieved. The following matters constitute cautionary statements identifying important factors with respect to those forward-looking statements, including certain risks and uncertainties that could cause actual results to vary materially from the future results anticipated by those forward-looking statements. A description of key factors that have a direct bearing on our results of operations is provided above under "Risk Factors" beginning on page 5 of this Prospectus.

USE OF PROCEEDS

We estimate that the net cash proceeds to us from the sale of the units offered by this prospectus we be approximately $ assuming the sale of units at an assumed public offering price of $ per unit (the closing bid price of our common stock on April , 2013) after deducting estimated placement agent fees and estimated offering expenses payable by us. However, we may not be successful in selling any or all of the securities offered hereby; as a result, we may receive significantly less in net proceeds, and the net proceeds received may not be sufficient to continue to operate our business.

An $ increase (decrease) in the assumed public offering price of $ per unit would increase (decrease) the expected net cash proceeds of the offering to us by approximately $. An increase (decrease) of in the assumed number of units sold in this offering would increase (decrease) the expected net cash proceeds of the offering to us by approximately $.

We currently expect to use the net proceeds from this offering to fund our research and development activities, including pre-clinical studies for the Parkinson's disease and endoderm programs, as well as for general working capital needs.

Even if we sell all of the units offered hereby, we will still need to obtain additional financing in the future in order to fully fund these research and development activities, as well as any resulting product candidates through the regulatory approval process. We may seek such additional financing through public or private equity or debt offerings or other sources, including collaborative or other arrangements with corporate partners, and through government grants and contracts.

We anticipate that the net proceeds obtained from this offering will be used to fund the following initiatives in order of priority (in thousands):

Therapeutic research programs involving preclinical animal studies and new stem cell line derivation	$3,600
General working capital purposes	$1,400
Maximum net proceeds of the offering	$5,000

We will have significant discretion in the use of any net proceeds. We may invest the net proceeds received from this offering temporarily until we use them for their stated purpose.

DIVIDEND POLICY

Our Board of Directors determines any payment of dividends. We have never declared or paid cash dividends on our common stock. We do not expect to authorize the payment of cash dividends on our shares of common stock in the foreseeable future. Any future decision with respect to dividends will depend on our future earnings, operations, capital requirements and availability, restrictions in future financing agreements and other business and financial considerations.

MARKET PRICE OF AND DIVIDENDS ON COMMON STOCK AND RELATED MATTERS

Market Information

Our common stock is approved for quotation on the OTC QB under the trading symbol "ISCO". The OTC QB is a regulated quotation service that displays real-time quotes, last-sale prices and volume information in over-the-counter equity securities. The OTC QB securities are traded by a community of market makers that enter quotes and trade reports. This market is limited in comparison to an exchange and any prices quoted may not be a reliable indication of the value of our common stock.

As of April 29, 2013, we had 112,363,815 shares of common stock outstanding, and approximately 645 holders of record of our common stock, and we had 5,300,043 shares of preferred stock outstanding, and six holders of record of our preferred stock, with 5,300,043 shares of preferred stock being convertible into 36,403,812 shares of common stock.

The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not reflect actual transactions. The high and low closing bid prices per share of our common stock, as reported by OTC QB for each quarter during fiscal years 2013, 2012 and 2011, are reported below:

	Market Price	
	High	Low
Fiscal Year 2013		
First Quarter	$0.41	$0.19
Second Quarter (through April 29, 2013)	$0.33	$0.25
Fiscal Year 2012		
First Quarter	$0.68	$0.38
Second Quarter	$0.55	$0.21
Third Quarter	$0.40	$0.22
Fourth Quarter	$0.29	$0.16
Fiscal Year 2011		
First Quarter	$2.20	$1.24
Second Quarter	$1.34	$0.82
Third Quarter	$1.08	$0.67
Fourth Quarter	$0.84	$0.37

DILUTION

Net tangible book value per share is equal to total assets less intangible assets and total liabilities, divided by the number of shares of our outstanding common stock. Our net tangible book value as of December 31, 2012 was $1,549,000, or $0.02 per share of common stock, (excluding the effect of $4,941 million related to our Series G Preferred Stock that has been classified as mezzanine equity, as opposed to a liability, on the Company's condensed consolidated balance sheet). Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of December 31, 2012.

Dilution in net tangible book value per share represents the difference between the amount per share of common stock paid by new investors who purchase shares of our common stock in this offering and the net tangible book value per share immediately after completion of this offering. After giving effect to assumed sale of units in this offering at an assumed public offering price of $ per unit (the closing bid price of our common stock on , 2013) after deducting estimated placement agent commissions and estimated offering expenses payable by us, and attributing no value to the warrants, our as adjusted net tangible book value as of December 31, 2012 would have been $ million, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net tangible book value of $ per share to new investors purchasing our units in this offering. The following table illustrates this per share dilution:

	Adjusted
Assumed public offering price per share	
Net tangible book value per share as of December 31, 2012	$ 0.02
Increase per share attributable to new investors	
As adjusted net tangible book value per share after this offering	

Dilution per share to new investors

The number of shares of common stock to be outstanding after this offering is based on 87,388,815 shares outstanding as of December 31, 2012 and excludes:

- 23,377,132 shares of common stock issuable upon exercise of outstanding stock options, including those options issued outside our stock option plans, at a weighted average exercise price of $0.99 per share;
- 3,500,000 additional shares of common stock reserved for issuance under various outstanding warrant agreements, at exercise price ranging from $0.25 to $0.80 per share, and 200,000 shares of common stock reserved for issuance under other warrants, at an average exercise price of $1.75 per share;
- 38,973,200 additional shares of common stock reserved for issuance upon conversion of our outstanding shares of Series B, Series C, Series D and Series G Preferred Stock;
- 16,994,980 additional shares of common stock reserved for future issuance under our 2006 and 2010 stock option plans;
- shares of common stock issuable upon the exercise of the warrants offered hereby; and
- shares of common stock issuable upon the exercise of the placement agent warrants.

A $ increase (decrease) in the assumed public offering price of $ per unit would increase (decrease) our pro forma as adjusted net tangible book value by approximately $, our as adjusted net tangible book value per share by approximately $ and dilution per share to new investors by approximately $, assuming that the number of units offered by us, remains the same. A increase (decrease) in the number of units offered by us would increase (decrease) our pro forma as adjusted net tangible book value by approximately $, our as adjusted net tangible book value per share by approximately $ and dilution per share to new investors by approximately $.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes and other financial information included elsewhere in this prospectus. The discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties, such as our plans, expectations and intentions. Our actual results may differ significantly from management's expectations. This discussion should not be construed to imply that the results discussed herein will necessarily continue into the future, or that any conclusion reached herein will necessarily be indicative of actual operating results in the future. Such discussion represents only the best present assessment by our management.

Results of Operations

Year Ended December 31, 2012 Compared to Year Ended December 31, 2011

Revenues

We are considered a development stage company, and as such our revenues are limited and not predictable. Revenue for the year ended December 31, 2012, totaled $4.57 million, compared to $4.53 million in 2011. Lifeline Cell Technology (LCT) contributed $2.38 million or 52% of total revenue in 2012, compared to $2.08 million or 47% of total revenue in 2011. The increase of $296,000 or 14% in LCT's revenue for 2012 was driven primarily by higher sales to OEM customers and international distributors. Lifeline Skin Care's (LSC) revenue of $2.19 million in 2012 accounted for 48% of total revenue, compared to $2.45 million or 53% of total revenue in 2011. Revenue decreased by $261,000 or 11% due to higher discounts granted as part of our strategic efforts to expand and diversify sources of revenue.

Cost of Sales

Cost of sales for the year ended December 31, 2012 was $1.27 million or 28% of revenue, compared to $1.62 million or 36% of revenue in 2011. The favorable reduction in cost of sales as a percentage of revenue in 2012 is primarily attributable to improvements in the manufacturing and supply chain management pertaining to both LSC and LCT.

Cost of sales reflects direct costs including salaries and benefits related to manufacturing, third party manufacturing costs, materials, general laboratory supplies and an allocation of overhead. We aim to continue refining our manufacturing processes and supply chain management to further improve the cost of sales as a percentage of revenue for both LCT and LSC.

Research and Development ("R&D")

Research and development expenses were $3.60 million for the year ended December 31, 2012, compared to $4.43 million in 2011. The decrease of approximately $835,000 or 19% in R&D expense is principally due to reductions in stock-based compensation expense of $434,000, consulting expenses of $368,000 associated with various research projects, laboratory supplies and laboratory facility-related expenses of $197,000, personnel-related spending of $137,000, and travel expenses of $25,000. The decrease was partially offset by higher stem cell line research and testing expenses of $323,000.

R&D is focused on the development of treatments for Parkinson's disease (PD), metabolic liver diseases (such as Crigler-Najjar syndrome, (CNS) and Alpha 1-antitrypsin deficiency (A1AD)), diseases of the eye and the creation of new cGMP grade human parthenogenetic stem cell lines. These projects are long-term investments that involve developing both new stem cell lines and new differentiation techniques that can provide higher purity populations of functional cells. We do not expect these projects to provide near-term revenue, although we have published milestones including the initiation of a non-human primate (NHP) PD study in the fourth quarter of 2012, the release of pre-clinical rodent and NHP PD study data in the first quarter of 2013 and the initiation of a Gunn rat rodent study to look at CNS, a rare but sometimes fatal inherited liver disease.

Research and development expenses are expensed as they are incurred, and are accounted for on a project by project basis. However much of our research has potential applicability to each of our projects.

Selling and Marketing Expense

Marketing expenses for the year ended December 31, 2012 amounted to $2.07 million, reflecting an increase of approximately $589,000 or 40%, as compared to $1.48 million in 2011. The rise in spending was primarily driven by increases in advertising and marketing expense of approximately $287,000, consulting expense of $244,000, logistics and selling-related expenses of $239,000, e-commerce website support expense of $112,000, employee-related spending of $64,000, and commission paid to various sales consultants of $43,000. The increase was partially offset by a reduction of $272,000 in sales commission paid to a consultant who promoted, marketed, and sold skin care products through various proprietary mailings and a reduction in employee stock-based compensation of $116,000.

Regarding the marketing arrangement with the above mentioned consultant who promoted, marketed, and sold skin care products, prior and up to June 30, 2011, we incurred a 40% marketing fee on net profits generated from these proprietary mailings. In June 30, 2011, we renegotiated and formalized this arrangement in a marketing agreement, which specifies a reduced 20% marketing fee on net revenues generated from these proprietary mailings. Subsequently in July 2012, we renegotiated the commission structure to reflect slightly lower rates, 18% on net revenues derived from direct sales and 9% on net revenues derived from referral sales. For the month of December 2012, the commission rate was temporarily increased to 25% on net revenues derived from direct sales on qualifying volume of orders. For the years ended December 31, 2012 and 2011, we recorded $149,000 and $430,000, respectively, as marketing expenses related to this agreement.

General and Administrative Expenses

General and administrative expenses for the year ended December 31, 2012 were $7.44 million, reflecting a decrease of $916,000 or 11%, compared to $8.36 million in 2011. The decrease was largely attributable to a more streamlined operating cost structure including reductions in stock-based compensation expense of $873,000, corporate support expenses of $343,000, personnel-related spending resulting from lower headcount of $266,000, and consulting expense of $123,000. The decrease was partially offset by an increase in legal fees of $343,000 pertaining to capital raising and corporate matters, an increase in impairment of intangible assets totaling $187,000, an increase in professional accounting fees and corporate governance expenses of $92,000, and an increase in rent expense of $71,000.

Other Income/Expense

Other expense was $20,000 for the year ended December 31, 2012. In 2011, we recorded other income of $2.18 million reflecting the substantial decrease in the fair value of our warrant liabilities which expired on February 14, 2012.

Liquidity and Capital Resources

As of December 31, 2012, our cash and cash equivalents totaled $654,000, compared to $1.34 million as of December 31, 2011. Working capital at December 31, 2012, totaled $395,000, compared to $905,000 at December 31, 2011.

Operating Cash Flows

Net cash used in operating activities was $6.69 million for the year ended December 31, 2012, compared to $6.96 million in 2011. The primary factor contributing to the variability in the reported cash flow amounts relates to the lower net loss after non-cash adjustments totaling $6.70 million in 2012, compared to $7.00 million in 2011.

Investing Cash Flows

Net cash used in investing activities was $786,000 for the year ended December 31, 2012, compared to $941,000 in 2011. Patent related spending approximated $596,000 during 2012. In addition, purchases of property and equipment totaling approximately $197,000 in 2012 consisted primarily of laboratory equipment, software, leasehold improvements and computer equipment.

Net cash used in investing activities was $941,000 for the year ended December 31, 2011. Purchases of property and equipment of $565,000 in 2011 consisted primarily of laboratory equipment, furniture, computer equipment and leasehold improvements related to new corporate offices. In addition, we made payments for patent licenses of $376,000 during 2011.

Financing Cash Flows

Net cash provided by financing activities was $6.79 million for the year ended December 31, 2012, compared to $3.46 million in 2011. We received approximately $4.94 million, net of stock issuance costs, from the issuance of five million shares of Series G Preferred Stock in 2012. For further discussion, see Note 6, Capital Stock, Series G Preferred Stock. In addition, we raised $2.09 million from the issuance of 5,000,000 shares of common stock to Aspire Capital Group and paid dividends of $237,000 to our preferred stockholders.

Net cash provided by financing activities was $3.46 million for the year ended December 31, 2011. We issued 4.0 million shares of common stock to Aspire Capital Group for approximately $3.36 million. In addition, we raised $532,000 from warrants and options exercised and paid dividends of $430,000 to our preferred stockholders.

On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into a Waiver Agreement (the "Waiver Agreement") pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after September 30, 2012 on the Series D and Series G Preferred Stock. Accordingly, we reversed all previously accreted and recorded dividends related to Series G Preferred Stock totaling $93,000. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D or Series G Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement.

We will need to obtain significant additional capital from sources including equity and/or debt financings, license arrangements, grants and/or collaborative research arrangements to sustain our operations and develop products. Thereafter, we will need to raise additional working capital. Unless we obtain additional financing, we do not have sufficient cash on hand to operate for 12 months from the consolidated balance sheet date. The timing and degree of any future capital requirements will depend on many factors, including:

- the accuracy of the assumptions underlying our estimates for capital needs in 2013 and beyond;
- the extent that revenues from sales of LSC and LCT products cover the related costs and provide capital;
- scientific progress in our research and development programs;
- the magnitude and scope of our research and development programs and our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- our progress with preclinical development and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims; and
- the number and type of product candidates that we pursue.

Additional financing through strategic collaborations, public or private equity financings or other financing sources may not be available on acceptable terms, or at all. Additional equity financing could result in significant dilution to our stockholders. Additional debt financing may be expensive and require us to pledge all or a substantial portion of our assets. Further, if additional funds are obtained through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies, product candidates or products that we would otherwise seek to develop and commercialize on our own. If sufficient capital is not available, we may be required to delay, reduce the scope of or eliminate one or more of our product initiatives.

We continue to operate as a development stage entity and as such have accumulated losses from inception and expect to incur additional losses in the near future. We need to raise additional working capital. The timing and degree of any future capital requirements will depend on many factors. For the year ended December 31, 2012 our average burn rate was approximately $580,000 per month, excluding capital expenditures and patent costs averaging $70,000 per month. There can be no assurance that we will be successful in maintaining our normal operating cash flow and that the timing of our capital expenditures will result in cash flow sufficient to sustain our operations through 2013. Based on the above, there is substantial doubt about our ability to continue as a going concern. The consolidated financial statements were prepared assuming that we will continue to operate as a going concern. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty. Management's plans in regard to these matters are focused on managing our cash flow, the proper timing of our capital expenditures, and raising additional capital or financing in the future. In March 2012, to obtain funding for working capital purposes, the Company sold 5,000,000 shares of Series G Preferred Stock raising $5 million, and during the first quarter of 2012 sold 5,000,000 shares of common stock to Aspire Capital Fund, LLC, for $2.1 million.

We do not currently have any obligations for milestone payments under any of our licensed patents other than the minimum royalty payment of $75,000 due in two installments per year to Advanced Cell Technology pursuant to the amended UMass IP license agreement. No licenses are terminable at will by the licensor. For further discussion of our patents, see Note 4 to our consolidated financial statements.

Under our Common Stock Purchase Agreement with Aspire Capital Fund, LLC ("Aspire Capital"), we may sell from time to time up to an aggregate of $25.0 million of shares of common stock through approximately January 2014. From commencement through December 31, 2012, we sold a total of 9,333,333 shares of common stock to Aspire Capital for an aggregate of $5,942,000. In addition, in February 2013, we sold an additional 1,200,000 shares to Aspire Capital for an aggregate of $264,000.

In January 2013, to obtain funding for working capital purposes, we entered into a Securities Purchase Agreement (the "January 2013 Purchase Agreement") and raised $2,025,000 through the sale of shares of our common stock and warrants to purchase additional shares of common stock. In March 2013, to obtain further funding for working capital purposes, we entered into another Securities Purchase Agreement (the "March 2013 Purchase Agreement") and raised $1,000,000 through the sale of shares of our common stock and warrants to purchase additional shares of common stock.

Off-Balance Sheet Arrangements

As of December 31, 2012, we did not have any off-balance sheet arrangements.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in

the U.S. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures. On an on-going basis, we evaluate our estimates and assumptions, including those related to revenue recognition, allowances for accounts receivable, inventories, intangible assets, warrant liabilities, stock-based compensation and income taxes. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

We believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Development Stage Company

We are a development stage entity with no revenue generated from our principal operations in therapeutic research and development efforts. To date, we have generated limited and unpredictable incidental revenues to support our core therapeutic research and development efforts.

Inventories

We account for inventory using the first-in, first-out (FIFO) method for our Lifeline Skin Care products, Lifeline Cell Technology cell culture media and reagents, and specific identification method for our Lifeline Cell Technology products. We state our inventory balances at the lower of cost or market. Lab supplies used in the research and development process are expensed as consumed. Inventory is reviewed periodically for product expiration and obsolescence and is adjusted accordingly.

Property and Equipment

We record property and equipment at cost. The provision for depreciation and amortization is computed using the straight-line method over the estimated useful lives of the assets, generally over five years. The costs of major remodeling and leasehold improvements are capitalized and depreciated over the shorter of the remaining term of the lease or the life of the asset.

Intangible Assets

Intangible assets consist of acquired research and development rights used in research and development, and capitalized legal fees related to the acquisition, filing, maintenance, and defense of patents. Patents and patent licenses are recorded at cost and are amortized on a straight-line basis over the shorter of the lives of the underlying patents or the useful life of the intangible asset, generally 15 years. Intangible asset amortization expenses are included in research and development expenses.

Long-Lived Asset Impairment

We review long-lived assets for impairment when events or changes in business conditions indicate that their carrying value may not be recovered, at least annually. We consider assets to be impaired and write them down to fair value if expected associated undiscounted cash flows are less than the carrying amounts. Fair value is the present value of the associated cash flows. Due to the numerous variables associated with our judgments and assumptions relating to the carrying value of our intangible assets and the effects of changes in circumstances affecting these valuations, both the precision and reliability of the resulting estimates are subject to uncertainty. As additional information becomes known, we may change our estimate, in which case the likelihood of a material change in our reported results would increase.

Revenue Recognition

We recognize revenue when all four of the following criteria are met: (i) persuasive evidence that an arrangement exists; (ii) delivery of the products and/or services has occurred; (iii) the selling price is fixed or determinable; and (iv) collectability is reasonably assured. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenues recognized for any reporting period could be adversely impacted.

Cost of Sales

Cost of sales consists primarily of salaries and benefits associated with employee efforts expended directly on the production of the Company's products and include related direct materials, general laboratory supplies and allocation of overhead. Certain of the agreements under which the Company has licensed technology will require the payment of royalties based on the sale of its future products. Such royalties will be recorded as a component of cost of sales. Additionally, the amortization of license fees or milestone payments related to developed technologies used in the Company's products will be classified as a component of cost of sales to the extent such payments become due in the future. Cost of sales included salaries and benefits related to manufacturing, third party manufacturing costs, raw materials, general laboratory supplies and an allocation of overhead.

Research and Development Costs

Research and development costs, which are expensed as incurred, are primarily comprised of salaries and benefits associated with research and development personnel, overhead and occupancy, contract services, and amortization of license costs for technology used in research and development with alternative future uses.

Registration Payment Arrangements

We are required to separately recognize and measure registration payment arrangements, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement. Such payments include penalties for failure to effect a registration of securities.

Stock-Based Compensation

We are required to measure and recognize compensation expense for all stock-based payment awards made to employees and consultants based on estimated fair value. We estimate the fair value of stock options granted using the Black-Scholes option-pricing model.

The determination of fair value of stock-based awards using the Black-Scholes option-pricing model requires the use of certain estimates and highly judgmental assumptions that affect the amount of stock-based compensation expense recognized in our Consolidated Statements of Operations. These include estimates of the expected volatility of our stock price, expected option life, expected dividends and the risk-free interest rate. Estimated volatility is a measure of the amount by which our stock price is expected to fluctuate each year during the expected life of the award. The expected option life is calculated using the mid-point method as prescribed by accounting guidance for stock-based compensation. We determined expected dividend yield to be 0% given that we have never declared or paid any cash dividends on our common stock, and we currently do not anticipate paying such cash dividends. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards. If any of the assumptions used in the Black-Scholes model change significantly, stock-based compensation expense may differ materially from what we have recorded in the current period.

Income Taxes

We account for income taxes in accordance with provisions which set forth an asset and liability approach that requires the recognition of deferred tax assets and deferred tax liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Valuation allowances are established when necessary to reduce deferred tax assets to the amount that is more likely than not expected to be realized. In making such a determination, a review of all available positive and negative evidence must be considered, including scheduled reversal of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance.

Concentration of Credit Risk

We maintain our cash and cash equivalents in banks located primarily in the United States. Beginning December 31, 2010, through December 31, 2012, all noninterest-bearing transaction accounts are fully insured by the Federal Deposit Insurance Corporation ("FDIC"), regardless of the balance of the account, at all FDIC-insured institutions, upon the implementation of section 343 of the Dodd-Frank Wall Street Reform and Consumer Protection Act that provides for unlimited insurance coverage of noninterest-bearing transaction accounts. After December 31, 2012, our accounts are guaranteed by the FDIC up to $250,000 per financial institution.

Income (Loss) Per Common Share

The computation of net loss per common share is based on the weighted average number of shares outstanding during each period. The computation of diluted earnings per common share is based on the weighted average number of shares outstanding during the period plus the common stock equivalents, which would arise from the exercise of stock options and warrants outstanding using the treasury stock method and the average market price per share during the period.

Recent Accounting Pronouncements

There were no new accounting pronouncements during the year ended December 31, 2012, as compared to the recent accounting pronouncements described in the Annual Report on Form 10-K for the fiscal year ended December 31, 2011, that are of significance, or potential significance, to the Company.

BUSINESS

Business Overview

International Stem Cell Corporation (sometimes referred to herein as "ISCO", the "Company", "we", "us", or "our") is a developmental stage biotechnology company focused on therapeutic and biomedical product development with multiple long-term therapeutic opportunities and two revenue-generating businesses offering potential for increased future revenue.

The Company is a development stage entity with no revenue generated from its principal operations in therapeutic research and development efforts. To date, the Company has generated limited and unpredictable incidental revenues to support its core therapeutic research and development efforts.

Our products are based on multi-decade experience with human cell culture and a proprietary type of pluripotent stem cells, "human parthenogenetic stem cells" ("hpSCs"). Our hpSCs are comparable to human embryonic stem cells ("hESCs") in that they have the potential to be differentiated into many different cells in the human body. However, the derivation of hpSCs does not require the use of fertilized eggs or the destruction of viable human embryos and also offers the potential for the creation of immune-matched cells and tissues that are less likely to be rejected following transplantation. ISCO scientists have created the first parthenogenetic, homozygous stem cell line that can be a source of therapeutic cells for hundreds of millions of individuals of differing genders, ages and racial background with minimal immune rejection after transplantation. ISCO's collection of hpSCs, known as UniStemCell™, currently consists of fifteen stem cell lines. We have facilities and manufacturing protocols that comply with the requirements of Good Manufacturing Practice (GMP) standards as promulgated by the US Code of Federal Regulations and enforced by the US Food and Drug Administration ("FDA").

We are developing different cell types from our stem cells that may result in therapeutic products. We focus on applications where cell and tissue therapy is already proven but where there is an insufficient supply of functional cells or tissue. We believe that the most promising potential clinical applications of our technology are:

- Neuronal cells for treatment of Parkinson's disease and potentially other central nervous system disorders, such as traumatic brain injury, stroke and Alzheimer's disease.

- Liver cells ("hepatocytes") that may be used to treat a variety of congenital and acquired liver diseases. Using the same precursor cell that leads to liver cells, it is also possible to create islet cells for potential treatment of diabetes.

- Three-dimensional eye structures to treat degenerative retinal diseases, corneal blindness, and to accelerate corneal healing.

Each of these product candidates will require extensive preclinical and clinical development and may require specific unforeseen licensing rights obtained at substantial cost before regulatory approval may be achieved and the products sold for therapeutic use.

Market Opportunity and Growth Strategy

Therapeutic Market – Clinical Applications of hpSCs for Disease Treatment

Parkinson's disease ("PD") is the second most common neurodegenerative disease and, according to the Parkinson Disease Foundation, there are more than one million sufferers in the United States and more than $2 billion is spent on medication. Currently there is no cure for PD and the improvements in symptoms provided by PD drugs often diminish with time. Using our proprietary technologies and know-how, we are creating neuronal cells from hpSCs as a potential treatment of PD and potentially other central nervous system disorders in order to address this significant market opportunity.

Liver disease affects one in ten persons according to the American Liver Foundation, and is one of the top ten leading causes of death in the United States. There are more than 100 individual diseases of the liver and, for people with liver failure, the only effective treatment is full or partial organ transplantation. However, the demand for liver organs far exceeds the number available. According to the American Liver Foundation, over 16,000 individuals in the United States are waiting for a transplant. Using our proprietary technologies and know-how, we are creating liver cells from hpSCs that may be used to treat a variety of hepatic and metabolic liver diseases to address this significant market opportunity. Importantly, liver cell transplantation has already been used in early stage clinical trials to treat patients with liver failure and has proven especially useful as a "bridge" to keep patients alive until they can receive a whole liver transplant.

Corneal blindness currently affects between seven and eight million people worldwide according to the World Health Organization, with a significant number of those people in India where cultural and other reasons inhibit the donation of corneal tissue. Using our proprietary technologies and know-how, we are creating corneal-like structures from hpSCs. These clear hollow spheres are composed of tissue with a three-dimensional layered structure similar to what is found in normal corneal tissue. Portions or all of these tissue layers may be suitable for cornea transplantation in humans. In addition, corneal cells can be used for coating contact lenses to accelerate corneal healing. We are currently collaborating with a leading eye hospital in India for pre-clinical and clinical development of a cornea product for the Indian market.

Cosmeceutical Market – Skin Care Products

Anti-aging represents a significant portion of the prestige facial skincare market and seems to be resilient to a recessionary economy. In key markets such as the U.S. and Asia, we believe that the prestige facial skincare market is positioned for significant growth.

In order to make claims that products can actually diminish the signs of aging, marketers are constantly looking for new combinations of specialty ingredients. The category of skincare products based on biotechnology such as human stem cells is just beginning to be developed, and therefore we believe that it has significant growth potential. Our goal is to leverage our leadership in human stem cell technology to develop and commercialize advanced anti-aging skincare products for the consumer and professional channels.

Our wholly-owned subsidiary Lifeline Skin Care, Inc. ("LSC") develops, manufactures and markets cosmetic skin care products to address this significant market opportunity. Lifeline Skin Care has three proprietary products, Defensive Day Serum, Recovery Night Serum and an Eye Firming Complex, all of which include our patented stem cell extract.

LSC's products are sold nationally and internationally through a branded website; through professional channels (including dermatologists; plastic surgeons; medical, day and resort spas,) and distributors. Domestically, we plan to increase distribution of our products by increasing brand awareness and resonance through advertising, sales promotion and public relations. Internationally, we are increasing distribution and sales through agreements with specialty distributors in both Latin America and Asia.

Biomedical Market – Primary Human Cell Research Products

The global market for human cell systems for use in basic research is extremely large, with continuing anticipated growth. We believe that the following are the main drivers in the research market:

- The need for experimental human cells which are more predictive of human biology than are non-human cells or genetically-modified cell lines or living non-human animals.

- The emerging field of stem-cell-based regenerative medicine and the increase in associated grant money to study stem cells is driving the market not only for stem cell products but also for cell culture products in general.

- The desire to lower the cost of drug development in the pharmaceutical industry. We believe that human cell systems may provide a platform for screening toxic drugs early in the development process, thus avoiding late stage failures in clinical trials and reducing costs.

- The need to eliminate animal products in research reagents that may contaminate future therapeutic products.

- The need for experimental control. Serum-free defined media provides the benefit of experimental control because there are fewer undefined components.

- The need for consistency in experiments that can be given by quality controlled products.

- The need to eliminate in-house formulation of media, obtain human tissue or perform cell isolation.

- The need to reduce animal testing in the consumer products industry.

Our wholly-owned subsidiary Lifeline Cell Technology, LLC ("LCT") develops, manufactures and commercializes over 130 human cell culture products, including frozen human "primary" cells and the reagents (called "media") needed to grow, maintain and differentiate the cells, in order to address this significant market opportunity. LCT's scientists have used a technology called basal medium optimization to systematically produce optimized products designed to culture specific human cell types and to elicit specific cellular behaviors. These techniques also produce products that do not contain non-human animal proteins, a feature desirable to the research and therapeutic markets.

Each LCT cell product is quality tested for the expression of specific markers (to assure the cells are the correct type), proliferation rate, viability, morphology and absence of pathogens. Each cell system also contains associated donor information and all informed consent requirements are strictly followed. LCT's research products are marketed and sold by its internal sales force, OEM partners and LCT brand distributors in Europe and Asia.

While we have continued to expand our sales and marketing efforts in order to increase revenue, to date we have generated limited revenue to support our core therapeutic research and development efforts.

Underpinning our research into the therapeutic properties of hpSC, we plan to expand its collection of parthenogenetic stem cell lines by creating and banking new clinical-grade hpSC lines at its Oceanside, California facility. We intend to create these new lines according to good tissue practices ("GTP") and current good manufacturing practices ("cGMP") and use them as sources for our own internal development programs and to generate revenue through licensing opportunities. We are actively working with a number of *in vitro* fertility ("IVF") clinics in the southern California region enrolling individuals who are willing to donate oocytes for research purposes in order to create new hpSC lines.

History

ISCO was incorporated in Delaware on June 7, 2005 under the name BTHC III, Inc. to effect the reincorporation of BTHC III, LLC, a Texas limited liability company, mandated by a plan of reorganization. On December 28, 2006, pursuant to a Share Exchange Agreement, BTHC III, Inc. issued 33,156,502 shares of common stock, representing approximately 93.7% of the common stock outstanding immediately after the transaction, to the shareholders of International Stem Cell Corporation, a California corporation ("ISC California"), in exchange for all outstanding stock of ISC California. As a result of this transaction, ISC California became wholly-owned by ISCO. This transaction was accounted for as a reverse merger for accounting purposes. Consequently, the assets and liabilities and the historical operations that are reflected in our financial statements are those of ISC California and its subsidiary. On January 29, 2007, we changed our name to International Stem Cell Corporation.

ISC California was incorporated in California in June 2006 for the purpose of restructuring the business of Lifeline Cell Technology, LLC, ("LCT") which was organized in California in August 2001. As a result of the restructuring, LCT became wholly-owned by ISC California. Lifeline Skin Care, Inc. was formed in the State of California on June 5, 2009 and is a wholly-owned subsidiary of ISCO California.

Our principal executive offices are located at 5950 Priestly Drive, Carlsbad, CA 92008, and our telephone number is (760) 940-6383. Our corporate website address is www.internationalstemcell.com, Lifeline Cell Technology's website address is www.lifelinecelltech.com, and Lifeline Skin Care's website address is www.lifelineskincare.com.

Frequently Asked Questions

What are Stem Cells?

Cells are the basic living units that make up humans, animals, plants and other organisms. Stem cells have two important characteristics that distinguish them from other types of cells. First, they can renew themselves for long periods of time. Second, they are unspecialized and under certain conditions can be induced to become cells with special functions such as metabolically active cells of the liver or transparent and protective cells of the eye. Until recently, scientists have worked with two major kinds of stem cells, *embryonic stem cells* (hESCs) and *adult stem cells* that each has different properties and characteristics. ISCO has developed a third category of stem cells named *parthenogenetic stem cells* (the hpSCs mentioned above) that promise to have significant therapeutic advantages relative to these other types.

What are Pluripotent Stem Cells?

Pluripotent stem cells are able to be differentiated or developed into virtually any other cell made in an organism. Both embryonic and parthenogenetic stem cells are pluripotent. Some scientists are exploring manipulation of adult cells into a potentially pluripotent stage. This type of stem cells is called *induced pluripotent stem cells*.

What are Embryonic Stem Cells?

Embryonic stem cells are derived from embryos at an early stage of development, typically when they are in a structure of a small number of cells called the *blastocyst.* Embryonic stem cells are expanded in a laboratory cell culture process. Once cell lines are established, batches of them can be frozen and shipped to other laboratories for further culture and experimentation.

What are Adult Stem Cells?

An adult stem cell is an undifferentiated cell found among differentiated cells in a tissue or organ. An adult stem cell can renew itself (generally to a lesser degree than can embryonic or parthenogenetic stem cells) and differentiate to a limited number of specialized cell types. These cells can be isolated from different tissues such as the bone marrow, fat tissue, and umbilical cord blood.

Why are Embryonic Stem Cells Important?

Human embryonic stem cells are able to differentiate into virtually any other cell in the body and to reproduce themselves almost indefinitely. In theory, if stem cells can be grown and their development directed in culture, it would be possible to grow cells for the treatment of specific diseases.

An early potential application of human embryonic stem cell technology may be in drug screening and toxicology testing.

The study of human development may also benefit from embryonic stem cell research in that understanding the events that occur at the first stages of development has potential clinical significance for preventing or treating birth defects, infertility and pregnancy loss. The earliest stages of human development have been difficult or impossible to study. Human embryonic stem cells offer insights into developmental events that cannot be studied directly in humans or fully understood through the use of animal models.

What are Parthenogenetic Stem Cells and how are they different?

Parthenogenetic stem cells are pluripotent stem cells created from unfertilized human eggs through a "parthenogenesis" process. Parthenogenesis requires that an unfertilized human egg be "activated" by chemical, physical or other means. Activation results in a non-viable "parthenote" from which pluripotent parthenogenetic stem cell lines can be derived. The cell lines used by ISCO are human parthenogenetic stem cells. Currently International Stem Cell Corporation owns the largest published collection of human parthenogenetic stem cell lines. Our research is based on perfecting proprietary techniques for deriving stem cells through parthenogenesis that result in stem cell lines that have the same capacity to become all cells found in the human body, but do not require use or destruction of a viable human embryo. Furthermore, parthenogenetic stem cells can be produced in a simplified ("homozygous") form that enables each line to be an immunological match for millions of people. We do not obtain stem cells from fetal tissue nor does our technology require the use of discarded frozen human embryos.

Why Not Use Stem Cells Derived from Adults?

There are several approaches now in human clinical trials that utilize adult stem cells. However, these cells have limited availability and limited ability to proliferate in culture as well as risk of genetic manipulation. Therefore, obtaining clinically significant amounts of adult stem cells may prove to be difficult.

Why is Stem Cell Research Controversial?

The sources of some types of stem cells cause social and religious controversy. For example, some scientists obtain stem cells from aborted fetal tissue, causing opposition from those opposed to abortion. Another controversial source of stem cells is residual human embryos (from fertilized human eggs) that remain after vitro fertilization procedures and are used to create embryonic stem cell lines.

Is Stem Cell Research Banned in the US?

Embryonic stem cell research, in general, is not banned in the US. Work by private organizations is not limited except by the restrictions applicable to all human research. In addition, Proposition 71 in California, which voters approved in November 2004, specifically allows state funds to be used for stem cell research.

Why Not Use the Currently "Approved" Embryonic Stem Cells Lines?

Most, if not all, human embryonic stem cell lines in research now have complex ("heterozygous") immune compositions that are likely to cause the differentiated cells to be rejected by most patients.

Why Not use Adult Cells Reprogrammed to become Pluripotent Cells?

Induced pluripotent cells ("iPSs") benefit from not being derived from human embryos but may face a number of other limitations such as uncertainty as to which genes are turned on and off, etc. Furthermore, like embryonic stem cells, iPSs have complex ("heterozygous") immune compositions that are likely to cause the differentiated cells to be rejected by most patients.

Ethical Issues

The use of embryonic stem cells derived from fertilized human eggs has created an ethical debate in the US and around the world. However, since no fertilized human eggs are used in creating our stem cells and no human embryo is being created, used or destroyed, we expect that our parthenogenetic stem cells will be more readily accepted in circumstances where there are ethical concerns with using traditional embryonic stem cells.

We also have licensed worldwide rights to use a technology known as Somatic Cell Nuclear Transfer ("SCNT") to create human stem cells. The President's Council on Bioethics, as reported in the publication "Reproduction and Responsibility—The Regulation of New Biotechnologies 2004", has agreed on a series of recommendations for the use of such technology. Countries such as the United Kingdom have made similar recommendations.

Our Technology

We have developed a proprietary process based on parthenogenesis for the creation of a new type of stem cell that has shown to exhibit the pluripotency and proliferative benefits of embryonic stem cells yet avoid the use or destruction of fertilized human eggs or embryos. Furthermore, since parthenogenetic stem cells can be created with immunogenetically identical ("homozygous") chromosome pairs, each line has potential to be an immune match for tens of millions of patients. If such cells were to be differentiated into functional mature cells they would, theoretically, be universally applicable across a wide range of medical conditions.

We also hold licenses to three other technologies to create human pluripotent stem cells: SCNT technology (as mentioned previously); a technology that may be useful to create induced pluripotent stem cells ("iPS"); and "single blastomere technology" which uses a single cell obtained from a fertilized blastocyst to create an embryonic stem cell line. Each of these technologies has unique cell therapy applications and provides us with a broad base of technologies from which we can operate in the future.

Our Facilities

We have built the capacity to manufacture human cells for use in pre-clinical and clinical trials and ultimately for therapeutic use through the completion of our cGMP manufacturing laboratories in Oceanside, California and Frederick, Maryland, many of which are currently cGMP ready. These laboratories are unique and designed specifically for the derivation of clinical-grade parthenogenetic stem cell lines for our stem cell bank and their differentiated derivatives for future clinical trials.

Our Products

Therapeutic Product Candidates

We are developing different cell types from our stem cells that may result in therapeutic products. We focus on applications where cell and tissue therapy is already proven but where there is an insufficient supply of functional cells or tissue. We believe that the most promising potential clinical applications of our technology are:

- Liver cells ("hepatocytes") that may be used to treat a variety of congenital and acquired liver diseases. Using the same precursor cell that leads to liver cells, it is also possible to create islet cells for potential treatment of diabetes.

- Neuronal cells for treatment of Parkinson's disease and potentially other central nervous system disorders, such as traumatic brain injury, stroke and Alzheimer's disease.

- Three-dimensional eye structures to treat degenerative retinal diseases, corneal blindness, and to accelerate corneal healing.

Each of these product candidates will require extensive preclinical and clinical development and may require specific unforeseen licensing rights obtained at substantial cost before regulatory approval may be achieved and the products sold for therapeutic use.

Skin Care Products

ISCO's research scientists developed three skin care products, including Defensive Day Serum, Recovery Night Serum, and Firming Eye Complex, all using a patented extract derived from human parthenogenic stem cells and regulated as cosmetics. Defensive Serum contains sunscreen, along with unique stem cell-derived ingredients. The day serum not only protects the skin from the aging effects of harsh light, but it continues to nurture the skin's collagen and fibroblasts to give noticeably firmer, smoother, younger-looking skin. The Recovery Night Serum is a nighttime therapy that complements the Defensive Day Serum. The night serum nurtures the skin's collagen and elastin and contains ingredients to defend against damaging free radicals, to help build firmer, smoother, younger and healthier-looking skin. The Firming Eye Complex contains Vitamin C, hyaluronic acid, and matrixyl 3000 to replenish moisture and supply nutrients to the eye area, along with unique stem-cell derived ingredients that are designed to help firm and tighten the more fragile skin around the eyes, become less vulnerable to premature aging and stimulate collagen production.

Research Products

ISCO's LCT subsidiary develops, manufactures and commercializes over 130 human cell culture products. These products include frozen human "primary" cells and stem cells and the reagents (called "media") needed to grow, maintain and differentiate the cells. LCT's scientists have used a technology called basal medium optimization to systematically produce optimized products designed to culture specific human cell types and to elicit specific cellular behaviors. These techniques also produce products that do not contain non-human animal proteins, a feature desirable to research and therapeutic markets. LCT frequently adds more products to its line. These human cell-based products are used domestically and internationally by research scientists in pharmaceutical, academic and government research organizations to study human disease and basic cell biology. LCT's products eliminate the need for scientists to create their own cells, media and reagents or attempt to adapt "off the shelf" products to match specific experimental needs and they are superior to using animals or non-human animal cells as research tools because they are more relevant to the study of human disease. Strict quality assurance provides a high level of consistency and standardization of these products. LCT offers products that contain no animal products ("called "Xeno-free" products), allowing researchers to have better control of their experiments and to conduct research using products that ultimately can be more appropriate for therapeutic applications.

Often LCT's research customers use our cell-based research products in their clinical research, eventually adapting them for therapeutic applications. If one of our research products is adopted by a successful producer of therapeutic cells, ISCO may become a supplier to the much larger therapeutic market through LCT's products. This is based on the fact that once regulatory product submissions are made to the FDA and similar authorities, the media and reagents used during development cannot be changed easily after approval. These uses of LCT's products bring opportunities to ISCO for future therapeutic products. Such is the case with LCT's Fibrolife® media, which CytoGraft (Novato, CA) is using as part of the process of creating its tissue engineered vascular grafts.

LCT products and applications include:

- Human skin cells and associated reagents (DermaLife®) for the study of skin disease, toxicology or wound healing.
- Human cells from the heart and blood vessels and associated reagents (VascuLife®), used by researchers to study cardiovascular disease and cancer.
- Human "pooled" liver cells from many donors appropriate for conducting screening tests on potential drug candidates.

- Human bronchial and tracheal cell lines for the study of toxicity, cystic fibrosis, asthma and pathogenesis.
- Human mammary epithelial cell lines for the study of breast cancer, three dimensional culture and carcinogen screening.
- Adult stem cells (called mesenchymal stem cells) and the reagents necessary to differentiate them into various tissues, including bone, cartilage and fat. These products are valuable for researchers in the emerging field of regenerative medicine.
- Human prostate cells and specialized medium (ProstaLife™) to study prostate disease including cancer.
- Human renal and bladder cells and associated media (RenaLife™) to study renal and bladder diseases.
- Human corneal cells and associated media (OccuLife™) for the study of corneal disease and as a model of toxicology for consumer product testing.
- An assortment of many other cell culture reagents and supplements for the growth, staining and freezing of human cells.

Each LCT cell product is quality tested for the expression of specific markers (to assure the cells are the correct type), proliferation rate, viability, morphology and absence of pathogens. Each cell system also contains associated donor information and all informed consent requirements are strictly followed.

LCT brand products are currently distributed domestically through LCT's direct sales force and in Europe through CellSystems GmbH. LCT has set up distribution contracts with distributors in Japan, China, South Korea, Taiwan, Malaysia, Singapore and India. In addition, LCT manufactures cell culture products under OEM contracts with American Type Culture Collection ("ATCC"), Millipore Corporation and Life Technology (formerly known as Invitrogen Corporation).

Our Markets

Therapeutic Markets

ISCO is currently pursuing a number of scientific development programs designed to lead to the creation of new therapeutic products. We anticipate that, with their superior immune-matching characteristics, our cells will be able to reduce or eliminate the need for immune-suppression drugs and the adverse reactions they trigger in patients.

Parkinson's disease ("PD") is the second most common neurodegenerative disease and, according to the Parkinson Disease Foundation, there are more than one million sufferers in the United States and more than $2 billion is spent on medication. Currently there is no cure for PD and the improvements in symptoms provided by PD drugs often diminish with time. Using our proprietary technologies and know-how, we are creating neuronal cells from hpSCs as a potential treatment of PD and potentially other central nervous system disorders in order to address this significant market opportunity.

Liver disease affects one in ten persons according to the American Liver Foundation, and is one of the top ten leading causes of death in the United States. There are more than 100 individual diseases of the liver and, for people with liver failure, the only effective treatment is full or partial organ transplantation. However, the demand for liver organs far exceeds the number available. According to the American Liver Foundation, over 16,000 individuals in the United States are waiting for a transplant. Using our proprietary technologies and know-how, we are creating liver cells from hpSCs that may be used to treat a variety of hepatic and metabolic liver diseases to address this significant market opportunity. Importantly, liver cell transplantation has already been used in early stage clinical trials to treat patients with liver failure and has proven especially useful as a "bridge" to keep patients alive until they can receive a whole liver transplant.

Corneal blindness currently affects between seven and eight million people worldwide according to the World Health Organization, with a significant number of those people in India where cultural and other reasons inhibit the donation of corneal tissue. Using our proprietary technologies and know-how, we are creating corneal-like structures from hpSCs. These clear hollow spheres are composed of tissue with a three-dimensional layered structure similar to what is found in normal corneal tissue. Portions or all of these tissue layers may be suitable for cornea transplantation in humans. In addition, corneal cells can be used for coating contact lenses to accelerate corneal healing. We are currently collaborating with a leading eye hospital in India for pre-clinical and clinical development of a cornea product for the Indian market.

Skin Care Market

Anti-aging represents a significant portion of the prestige facial skincare market. Despite the recessionary economy, sales of anti-aging products increased in 2011. Because consumers have limited discretionary spending, they are attracted to skincare products that are recommended by a professional whom they know and trust and have increased the frequency of their visits to spas, beauty institutes and doctors' offices.

Innovation is present at all levels of the market. In order to make claims that their products can actually diminish the signs of aging, marketers are constantly looking for new combinations of specialty ingredients—compounds that provide a demonstrable cosmetic or therapeutic effect. The category of "bio-tech" skin care is a whole new opportunity that is just beginning to be developed.

Research Market

The research market for cell systems is made up of scientists performing basic and applied research in the biological sciences. Basic research involves the study of cell biology and biochemical pathways. Applied research involves drug discovery, vaccine development, clinical research and cell transplantation. The domestic market can be broken into three segments: (i) academic researchers in universities and privately-funded research organizations; (ii) government institutions such as the National Institutes of Health, the US Army, the US Environmental Protection Agency and others; and (iii) industrial organizations such as pharmaceutical companies and consumer product companies. It is estimated that the combined academic and government markets comprise approximately 40% of the total market and that the industrial segment comprises approximately 60%. We believe the following are the main drivers in the research market for commercial cell systems:

- The need for experimental human cells which are more predictive of human biology than are non-human cells or genetically-modified cell lines or living non-human animals.
- The emerging field of stem-cell-based regenerative medicine and the increase in associated grant money to study stem cells is driving the market not only for stem cell products but also for cell culture products in general.
- The desire to lower the cost of drug development in the pharmaceutical industry. We believe that human cell systems may provide a platform for screening toxic drugs early in the development process, thus avoiding late stage failures in clinical trials and reducing costs.
- The need to eliminate animal products in research reagents that may contaminate future therapeutic products.
- The need for experimental control. Serum-free defined media provides the benefit of experimental control because there are fewer undefined components.
- The need for consistency in experiments that can be given by quality controlled products.
- The need to eliminate in-house formulation of media, obtain human tissue or perform cell isolation.
- The need to reduce animal testing in the consumer products industry.

The global market for human cell systems for use in basic research exceeds several hundred million dollars annually with continuing anticipated growth.

Intellectual Property

Patents

In 2012 we were granted three patents covering different aspects of our proprietary internally-generated parthenogenetic technology. Two of the 2012 patents, granted in Israel and Russia, cover the process for obtaining human embryonic stem cells using parthenogenetically activated oocytes. We currently have patents for this technology in the United States, Singapore, and South Africa, with additional patent applications pending in other countries. The third patent, granted in the United States, covers the method for deriving endoderm cells using stem cells. Patent applications covering this technology are also pending outside the United States. We have pending patents covering homozygous parthenogenetic stem cells that can be immune matched to millions of persons and methods for deriving them. Other patents and pending patent applications include intellectual property concerning skin care formulations and methods of manufacturing stem-cell based skin care products, methods to differentiate stem cells and methods to produce three dimensional corneal tissue constructs.

In addition, we have obtained exclusive worldwide licenses to patents and patent applications from Advanced Cell Technologies, Inc. (“ACTC”). Our licensed and internally-generated patents provide the intellectual property rights we need to operate in the pluripotent stem cell field and to progress through the stages of creating a therapeutic stem cell product. These stages include the derivation, isolation, expansion and differentiation of stem cells. The intellectual property available to us enables us to create manufacturing methods that eliminate animal proteins in order to satisfy FDA requirements. In addition, we have rights to sell research products derived through our licensed intellectual property in order to generate income.

The majority of the patents and applications have been filed in the US and in foreign countries through the Patent Corporation Treaty or by direct country filings in those jurisdictions deemed significant to our operations. We also have an exclusive license to the only patent issued by the US Patent & Trademark Office for the creation of human Embryonic Stem cells (“hES”) using somatic cell nuclear transfer (“SCNT”) for human therapeutic use. Our currently issued patents will expire at various times commencing in 2026.

We have protected our research products and branding through both patents and trademarks. Lifeline Skin Care has filed patent applications covering its proprietary formulations and methods of using stem cells to create skin care products. ISCO has registered trademarks on its company name, logo and various product names to protect its branding investment. Lifeline Cell Technology’s reagent formulations are protected as trade secrets.

The patentability of human cells in countries throughout the world reflects widely differing governmental attitudes. In the US, hundreds of patents covering human embryonic stem cells have already been granted, including those on which we rely. In certain countries in Europe, the European Patent Office currently appears to take the position that hES cells themselves are not patentable. ISCO believes that such restrictions are not appropriate when considering parthenogenetic stem cells and is working with patent legislators in Europe to create exemptions for human parthenogenetic stem cells. As a result, we plan to file internationally wherever feasible and focus our research strategy on cells that best fit the US and foreign country definitions of patentable cells and technologies.

License Agreements

In May 2005, we entered into three exclusive license agreements (“ACT IP,” “Infigen IP,” and “UMass IP” or collectively “ACTC agreements”) with Advanced Cell Technology (“ACTC “) for the production of therapeutic products in the fields of diabetes, liver disease, retinal disease and the creation of research products in all fields. In February 2013, each of these license agreements was amended and restated, pursuant to which we continue to

have rights to ACTC's human cell patent portfolio and non-exclusive rights to future developments in the area of diabetes and liver disease, as well as certain rights to patents covering Single Blastomere technology. A significant feature of the licensed Single Blastomere technology is a method of ethically obtaining human embryonic stem cells that allows us to isolate and differentiate hES stem cells directly from a "blastocyst" without harming the embryo. Using other licensed technology, the hES cells can be immediately differentiated into stem cells capable of expansion and differentiation into other types of cells. Under the terms of the amendments we have also acquired additional exclusive rights in the area of parthenogenesis and the use of parthenogenetically derived stem cells for treatment of human diseases.

The agreements with ACTC further provide that we are no longer obligated to make milestone payments or to meet any minimum research and development requirements. We will no longer pay any royalties pursuant to ACT IP or Infigen IP and our obligation to pay minimum annual royalties pursuant to UMass IP has been reduced to $75,000, payable semi-annually to ACTC.

The agreements continue until the expiration of the last valid claim within the licensed patent rights. Either party to each amended and restated license agreement may terminate the agreement for an uncured breach or we may terminate the agreements at any time with a 30 days written notice.

Research Agreements

Our scientific founder, Elena Revazova, MD, PhD, has conducted basic research at the Scientific Center for Obstetrics, Gynecology and Perinatology of the Russian Academy of Medical Sciences in Moscow, Russia. Through a research agreement, we have retained all intellectual property rights in the US and other major markets with respect to such research, while the Institute has retained such rights in Russia.

In 2012 and 2011, ISCO spent $3.6 million and $4.4 million on research and development activities, respectively. ISCO actively pursues sponsored research agreements with local and international research organizations and has established research collaborations with: The Scripps Research Institute (La Jolla); the University of Wuerzburg; Wuerzburg Germany; and the Sankara Nethralaya Hospital (Chennai, India). We are in frequent negotiations to develop collaborative research agreements with additional domestic and international research organizations from both the public and private sector. These agreements allow us to team up with nationally and internationally known research scientists to study stem cell technologies developed or licensed by ISC for possible use in therapeutic or research fields. Dr. Jeanne Loring at The Scripps Research Institute is focused on characterizing parthenogenetic stem cells. Dr. Mueller at Wuerzburg University is studying the derivation of human neurons from parthenogenetic stem cells. In addition to the sponsored research agreements and collaborations mentioned above, we provide our stem cell lines to researchers at many universities and other research facilities. Ordinarily, the stem cell lines are provided without charge, but we retain the right to either an exclusive or non-exclusive right to use any technology that may be developed that is necessary in order for us to make therapeutic products based on the research that uses our cells.

Competition

The development of therapeutic and diagnostic agents for human disease is intensely competitive. Pharmaceutical companies currently offer a number of pharmaceutical products to treat diabetes, liver diseases, retinal disease, corneal disease and other diseases for which our technologies may be applicable. Many pharmaceutical and biotechnology companies are investigating new drugs and therapeutic approaches for the same purposes, which may achieve new efficacy profiles, extend the therapeutic window for such products, alter the prognosis of these diseases, or prevent their onset. We believe that our therapeutic products, when and if successfully developed, will compete with these products principally on the basis of improved and extended efficacy and safety and their overall economic benefit to the health care system. We believe that our most significant competitors will be fully integrated pharmaceutical companies and more established biotechnology companies. Smaller companies may also be significant competitors, particularly through collaborative arrangements with large pharmaceutical or biotechnology companies.

Some of our primary competitors in the development of stem cell therapies are Stem Cells Inc., Advanced Cell Technology Inc., Aastrom Biosciences, ReNeuron and ViaCyte. Our primary competitors in the skin care market are Obagi, Skinceuticals, SkinMedica, and Murad. In the field of research products, our primary competitors for stem cells, media and reagents are Lonza, Chemicon, Life Technologies (formerly Invitrogen), StemCell Technologies, Merck (formerly Millipore), BioTime and Specialty Media. In each of these areas many of our competitors have substantially greater resources and experience than we do.

Sales and Marketing

To date, sales of our research products have been derived primarily through our in-house sales force and via OEM contracts with American Tissue Culture Collection ("ATCC"), Millipore, Life Technology (formerly Invitrogen) and distribution contracts with our European distributor CellSystems Biotechnologies Vertrieb GmbH. During 2012, approximately 22% of our sales was from two customers. We anticipate increased sales in 2013 through our newly established distributors in Asia and India.

The skin care line was launched in November 2010 through the company's own website—www.lifelineskincare.com. Since that time distribution has expanded to include destination and resort spas, dermatologists, plastic surgeons and international markets.

Government Regulation

Regulation by governmental authorities in the US and other countries is a significant factor in development, manufacture and marketing of our proposed therapeutic and skin care products and in our ongoing research and product development activities. The nature and extent to which such regulation applies to us will vary depending on the nature of any products that may be developed by us. We anticipate that many, if not all, of our proposed therapeutic products will require regulatory approval by governmental agencies prior to commercialization. In particular, human therapeutic products are subject to rigorous preclinical and clinical testing and other approval procedures of the FDA, and similar regulatory authorities in European and other countries. Various governmental statutes and regulations also govern or influence testing, manufacturing, safety, labeling, storage and recordkeeping related to such products and their marketing. The process of obtaining these approvals and the subsequent compliance with appropriate statutes and regulations require the expenditure of substantial time and money, and there can be no guarantee that approvals will be granted.

We have made extensive progress in obtaining the necessary regulatory approvals of research protocols, informed consent documents and donor protection procedures to obtain oocytes in the US for the production of our parthenogenetic stem cell bank. These approvals include: federally mandated Institutional Review Board (IRB) and State of California required Stem Cell Research Oversight (SCRO) committee.

Currently the US government, though NIH appropriations restrictions, prohibits the use of federal funds in research involving parthenogenetic stem cells. Since we cannot receive federal funds for our stem cell research, we have decided to work with various foundations who are involved with stem cell research.

FDA Approval Process

Prior to commencement of clinical studies involving humans, preclinical testing of new pharmaceutical products is generally conducted on animals in the laboratory to evaluate the potential efficacy and safety of the product candidate. The results of these studies are submitted to the FDA as a part of an Investigational New Drug ("IND") application, which must become effective before clinical testing in humans can begin. Typically, human clinical evaluation involves a time-consuming and costly three-phase process. In Phase I, clinical trials are conducted with a small number of people to establish safety pattern of drug distribution and metabolism within the body. In Phase II, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine preliminary efficacy, possible dosages and expanded evidence of safety. In some cases, an initial

trial is conducted in diseased patients to assess both preliminary efficacy and preliminary safety and patterns of drug metabolism and distribution, in which case it is referred to as a Phase I/II trial. In Phase III, large-scale, multi-center, comparative trials are conducted with patients afflicted with a target disease in order to provide enough data to demonstrate the efficacy and safety required by the FDA. The FDA closely monitors the progress of each of the three phases of clinical testing and may, at its discretion, re-evaluate, alter, suspend or terminate the testing based upon the data which have been accumulated to that point and its assessment of the risk/benefit ratio to the patient. Monitoring of all aspects of the study to minimize risks is a continuing process. All adverse events must be reported to the FDA.

The results of the preclinical and clinical testing on a non-biologic drug and certain diagnostic drugs are submitted to the FDA in the form of a New Drug Application ("NDA") for approval prior to commencement of commercial sales. In the case of vaccines or gene and cell therapies, the results of clinical trials are submitted as a Biologics License Application ("BLA"). In responding to a NDA or BLA, the FDA may grant marketing approval, request additional information or refuse to approve if the FDA determines that the application does not satisfy its regulatory approval criteria. There can be no assurance that approvals will be granted on a timely basis, if at all, for any of our proposed products.

European and Other Regulatory Approval

Whether or not FDA approval has been obtained, approval of a product by comparable regulatory authorities in Europe and other countries will likely be necessary prior to commencement of marketing the product in such countries. The regulatory authorities in each country may impose their own requirements and may refuse to grant an approval, or may require additional data before granting it, even though the relevant product has been approved by the FDA or another authority. As with the FDA, the regulatory authorities in the European Union ("EU") and other developed countries have lengthy approval processes for pharmaceutical products. The process for gaining approval in particular countries varies, but generally follows a similar sequence to that described for FDA approval. In Europe, the European Committee for Proprietary Medicinal Products provides a mechanism for EU-member states to exchange information on all aspects of product licensing. The EU has established a European agency for the evaluation of medical products, with both a centralized community procedure and a decentralized procedure, the latter being based on the principle of licensing within one member country followed by mutual recognition by the other member countries.

Other Regulations

We are also subject to various US federal, state, local and international laws, regulations and recommendations relating to the treatment of oocyte donors, the manufacturing environment under which human cells for therapy are derived, safe working conditions, laboratory and manufacturing practices and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research work. We cannot accurately predict the extent of government regulation which might result from future legislation or administrative action.

Other Regulations for Lifeline Skin Care

The Federal Food, Drug and Cosmetic Act (FD&C Act) and the Fair Packaging and Labeling Act ("FPLA") provide the regulatory framework for selling cosmetics. The FD&C Act ensure that the products are not injurious to users under normal conditions of use. The FPLA insures that the labeling is not false or misleading and includes all relevant information in a prominent and conspicuous manner.

Safety and efficacy testing of the products is performed by independent third party testing organization.

Employees

In addition to our three executive officers, we utilize the services of 41 full-time staff members.

PROPERTIES

We have established our primary research facility in 8,215 square feet of leased office and laboratory space in Oceanside, California. Our lease for this facility expires in August 2016. The base rent as of December 31, 2012 was $8,338 per month. The facility has leasehold improvements which include cGMP (current Good manufacturing Practices) level clean rooms designed for the derivation of clinical-grade stem cells and their differentiated derivatives, research laboratories for our stem cell differentiation studies and segregated rooms for biohazard control and containment of human donor tissue. The cGMP clean rooms and the associated quality systems provide a “pilot manufacturing laboratory” that we believe will be uniquely suited for the creation, culture and differentiation of parthenogenetic stem cells for early stage clinical trials. We believe that this facility is well suited to meet our research, development and pre-clinical and clinical therapeutic production needs. However, we will need larger cGMP manufacturing laboratories should any one of our therapeutic cells move to larger clinical trials or full-scale therapeutic manufacture. The monthly base rent will increase by 3% annually on the anniversary date of the agreement.

In addition to the primary research facility lease, we entered into a lease with S Real Estate Holding LLC to allow the Company to expand into new corporate offices located in Carlsbad, California. The new building is used for administrative purposes, but could also be used for research and development purposes if such space is needed in the future. The lease initially covered approximately 4,653 square feet, starting on March 1, 2011 and was amended to cover approximately 8,199 square feet effective July 1, 2011. The lease expires on February 29, 2016, subject to the Company’s right to extend the term for up to five additional years. The Company began paying rent at an initial rate of $5,118 per month and the rate was amended to $9,018 effective July 1, 2011. The base rent as of December 31, 2012 was $9,289 per month. The monthly base rent will increase by 3% annually on the anniversary date of the agreement. The Company is also obligated to pay a portion of the utilities for the building and increases in property tax and insurance.

During 2010 we utilized a 3,240 square foot laboratory in Walkersville, Maryland. Our lease for this facility expired in March 2011, and we moved into a new manufacturing facility in Frederick, Maryland which we use for laboratory and administration purposes. The base rent as of December 31, 2012 was $11,306. The initial term of the lease ends in December 2015 and there is an option for an additional five years. The laboratory is being used to develop and manufacture our research products and the administration facility will be used for sales and marketing and general administration purposes. Our manufacturing laboratory space has clean rooms and is fitted with the necessary water purification, refrigeration, labeling equipment and standard manufacturing equipment to manufacture, package, store, and distribute media products. There is also a quality control and cell culture laboratory outfitted with the necessary cell isolation equipment, incubators, microscopes and standard cell culture equipment necessary to isolate and culture cells and conduct quality control tests to produce superior cell culture products.

LEGAL PROCEEDINGS

We are not party to any material legal proceedings.

MANAGEMENT

Our executive officers are as follows:

Name	Principal Occupation	Age
Andrey Semechkin	Co-Chairman and Chief Executive Officer	53
Jay Tibor Novak	Interim Chief Financial Officer	47
John Simon Craw	Executive Vice President of Business Development	50

Andrey Semechkin, Ph.D., Co-Chairman and CEO, has been a Director of the Company since December 2008. Dr. Semechkin is a specialist in system analysis, strategic planning and corporate management. He is a member of the Russian Academy of Sciences and has been Deputy Director of Institute of System Analysis since 2004. Professor Semechkin was awarded the Russian Government Award in Science and Technology in 2006 and has written several scientific books. He has over 20 years' experience creating and managing businesses across different industries and scientific sectors.

John Simon Craw, Ph.D., Executive Vice President of Business Development. Dr. Craw obtained his Ph.D. in Chemistry from the University of Manchester and began his career at the University of Rio de Janeiro followed by positions at the University of Sydney and the University of Manchester. He has over 18 years' experience in research and development as well as operations and information technology at Merck, Astra-Zeneca and Novartis and as head of R&D Informatics and Regulatory Operations at ACADIA Pharmaceuticals. Dr. Craw's has numerous scientific publications, has been a guest on numerous radio and television programs including National Public Radio and Fox News, and is a frequent speaker at international conferences.

Jay Tibor Novak, Interim Chief Financial Officer, Mr. Novak has over 18 years of experience in finance and accounting. He joined the Company in July 2011 and had been serving as Director of Finance since May 2012. Prior to joining the Company, Mr. Novak served as Financial Reporting Manager at Volcano Corporation, a medical device company, from April 2010 to June 2011, as a financial consultant from September 2009 until March 2010, and as Associate Director of Finance at Nanogen, Inc. from April 2007 until August 2009. He previously served as Associate Director of Finance at Elan Pharmaceuticals and as Assistant Director of Finance at Isis Pharmaceuticals. He is a certified public accountant, having begun his career with Deloitte & Touche, LLP. He received a B.S. in Accountancy from California State University, Long Beach, and an MBA from University of California, Irvine.

Directors

Andrey Semechkin, Ph.D., Co-Chairman and CEO, has been a director of the Company since December 2008. Dr. Semechkin is a specialist in system analysis, strategic planning and corporate management. He is a member of the Russian Academy of Sciences and has been Deputy Director of Institute of System Analysis from 2004 to 2011. Professor Semechkin was awarded the Russian Government Award in Science and Technology in 2006 and has written several scientific books. He has over 20 years' experience creating and managing businesses across different industries and scientific sectors. Dr. Andrey Semechkin is the father of Dr. Ruslan Semechkin, Vice President of Research and Development and one of our directors. The Governance Committee noted that Dr. Andrey Semechkin has been nominated, as is expected to be elected, by the holders of Series D Preferred Stock.

Paul V. Maier became a director in July 2007 and has over 20 years of experience as a senior executive in biotechnology and pharmaceutical companies. Since November 2009, he has been serving as Chief Financial Officer of Sequenom, Inc., a publicly held company serving the discovery, clinical research, and molecular diagnostics market. From February 2007 until November 2009, he served as an independent financial consultant. Previously, Mr. Maier was Senior Vice President and Chief Financial Officer of Ligand Pharmaceuticals, Inc., a commercial stage biopharmaceutical company, a position he held from 1992 to 2007. From 1990 to 1992, Mr. Maier served as Vice President, Finance of DFS West, a division of DFS Group, LP a private multinational retailer. From 1984 to 1990, Mr. Maier was employed by ICN Pharmaceuticals, a pharmaceutical and biotechnology research products company, where he held various executive positions in finance and general management in ICN as well as SPI Pharmaceuticals, a publicly held subsidiary. Mr. Maier currently serves on the Board of Directors of both Pure Bioscience and Talon Therapeutics. Mr. Maier received an MBA from Harvard Business School and a BS from Pennsylvania State University.

Donald A. Wright became a director in March 2007. Mr. Wright was previously the Chairman and Founder of Everett, Washington-based Confluence Capital Group Inc., which provided consulting services to institutional

investors, debt holders and public and private companies. On January 1, 2010, Mr. Wright became Chief Executive Officer and President of ISIS, Inc. which provides various services under contract to various agencies of the US Government and armed services. From 1995 until 2006, Mr. Wright was Chief Executive Officer and President of Pacific Aerospace & Electronics, Inc., an engineering and manufacturing company that he helped to found and that designs, manufactures and sells components primarily for the aerospace, defense and transportation industries.

Charles J. Casamento has been a director since June 2010. Mr. Casamento is currently Executive Director and Principal of The Sage Group, a healthcare advisory group specializing in mergers, acquisitions, and partnerships between biotechnology companies and pharmaceutical companies. He was the president and CEO of Osteologix, Inc., a public biopharmaceutical company developing products for treating osteoporosis, from 2004 through 2007. From 1999 through 2004, he served as chairman of the board, president and CEO of Questcor Pharmaceuticals, Inc. Mr. Casamento formerly served as RiboGene, Inc.'s president, CEO and chairman of the board from 1993 through 1999 until it merged with Cypros to form Questcor. He was co-founder, president and CEO of Interneuron Pharmaceuticals, Inc. (Indevus), a biopharmaceutical company, from 1989 until 1993. Mr. Casamento has also held senior management positions at Genzyme Corporation, where he was senior vice president, pharmaceuticals and biochemicals; American Hospital Supply, where he was vice president of business development and strategic planning for the Critical Care Division; Johnson & Johnson, Hoffmann-LaRoche, Inc. and Sandoz Inc. Mr. Casamento also serves on the Boards of Directors of CORTEX Pharmaceuticals, SuperGen, Inc. and VIVUS, Inc. He holds a bachelor's degree in Pharmacy from Fordham University and an M.B.A. from Iona College and was originally licensed to practice pharmacy in the states of New York and New Jersey

Ruslan Semechkin, Ph.D, Director, Vice President of Research and Development, became a Director in October 2008. Dr. Semechkin was trained in medical genetics, stem cell biology and international business administration, and holds an M.S. degree from Faculty of Fundamental Medicine of Moscow State University. He earned his Ph.D. degree in Physiology from Anokhin Research Institute of Normal Physiology, Russian Academy of Medical Sciences. Dr. Semechkin is a well-known speaker on stem cell biology, including the use of stem cells for neurology and skin regeneration. He has publications in the field of clinical and molecular biology, and is author of various patent applications. Dr. Ruslan Semechkin is the son of Dr. Andrey Semechkin, our Co-Chairman and Chief Executive Officer. Dr. Ruslan Semechkin was nominated, and is expected to be elected, by the holders of our Series D Preferred Stock.

James H. Berglund became Director in March 2012. He recently retired as a General Partner from Enterprise Partners Venture Capital, which he cofounded in 1985. At Enterprise Partners, Berglund was mainly involved with healthcare and information technology companies. He currently serves on the board of directors of several private companies and manages a private investment portfolio in a wide range of businesses. His current board activity is a continuation of previous work on more than forty for-profit boards of directors and a number of philanthropic and community boards. Dr. Berglund spent the early years of his career in the areas of eye care and eye care products. Prior to Enterprise Partners, Berglund was President and board member of Continuous Curve Contact lenses, Inc., a public San Diego company later acquired by Revlon. Before moving to San Diego, he was President and board member of Central Laboratories, Inc. and subsequently General Manager of the Contact Lens Division of American Optical Corporation after it acquired Central Laboratories. Prior to his involvement in these business activities, Dr. Berglund was in private Optometric practice. He holds a Bachelors of Science degree in Economics, from the University of Wisconsin and a Doctorate in Optometry from Pacific University. He has also served in the United States Army.

Director Independence

The Board of Directors has determined that each of Mr. Maier, Mr. Wright, Mr. Casamento and Dr. Berglund satisfy the independence requirements specified in the listing requirements of Nasdaq Marketplace Rules.

Compensation Committee Interlocks and Insider Participation

No member of our compensation committee is or has at any time during the past year been one of our officers or employees. None of our executive officers currently serves or in the past year has served as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our Board of Directors or compensation committee.

EXECUTIVE COMPENSATION

The following table sets forth information concerning the compensation earned by our most highly compensated executive officers during the fiscal years ended December 31, 2012 and 2011, who are sometimes referred to herein as our named executive officers.

2012 Summary Compensation Table

Name	Year	Salary(1)	Bonus(2)	Option Awards ($) (3)	All Other Comp.	Total
Andrey Semechkin						
	2012	$255,000		$ 176,840		$ 431,840
	2011	$255,385		$ 2,833,650		$3,089,035
Linh T. Nguyen (4)						
	2012	$169,730		$ 39,116		$ 208,846
John S. Craw (4)						
	2012	$215,769		$ 51,632		$ 267,401
Ruslan Semechkin						
	2012	$176,539		$ 59,354		$ 235,893
	2011	$176,539		$ 581,667		$ 758,206
Jeffrey D. Janus(5)						
	2012	$234,924		$ —		$ 234,924
	2011	$224,999		$ 353,259		$ 578,258

(1) Actual amounts paid.
(2) Performance-based bonuses are reported as Non-Equity Incentive Plan Compensation. Except as otherwise noted, amounts reported as bonus represent discretionary bonuses in addition to the amount (if any) earned under the annual compensation guidelines.
(3) Represents the grant date fair value in accordance with ASC 718. These amounts have been calculated in accordance with ASC 718 using the market price of our stock on the respective grant dates. The assumptions used with respect to the valuation of option grants are set forth in the notes in the Consolidated Financial Statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2012.
(4) Ms. Nguyen and Dr. Craw were not named executive officers during 2011, and as such, no 2011 executive compensation data is presented herein. Ms. Nguyen resigned from her position in April 2013.
(5) Effective November 30, 2012, Mr. Janus resigned from his position as the Senior Vice President.

On May 29, 2012 we granted options as follows: Dr. Andrey Semechkin 750,000 shares at an exercise price of $0.32. These options expire on May 29, 2022. All of the shares in this granted were granted under the 2010 Equity Participation Plan. The options issued are subject to plan restrictions and vest at the rate of 2% per month commencing June 29, 2012.

On January 13, 2012 we granted options as follows: Ms. Nguyen 50,000 shares, Dr. Craw 80,000 shares, and Dr. Ruslan Semechkin 100,000 shares at the exercise price of $0.49. These options expire on January 13, 2022. All of the shares in this grant were granted under the 2010 Equity Participation Plan. The options issued are subject to plan restrictions and vest at the rate of 2% per month commencing February 13, 2012.

On June 23, 2012 we granted options as follows: Ms. Nguyen 70,000 shares, Dr. Craw 75,000 shares, and Dr. Ruslan Semechkin 75,000 shares at the exercise price of $0.38. These options expire on June 23, 2022. All of the shares in this grant were granted under the 2010 Equity Participation Plan. The options issued are subject to plan restrictions and vest at the rate of 2% per month commencing July 23, 2012.

Effective November 30, 2012, Mr. Jeffrey Janus resigned from his position as our Senior Vice President. On March 9, 2012 we entered into a consulting agreement with Mr. Janus for a term of five years to allow us to continue to access Mr. Janus' historical knowledge and experience following his departure from the Company. Beginning on December 17, 2012, Mr. Janus began providing consulting services to us pursuant to the terms of the consulting agreement. Under the consulting agreement, Mr. Janus agreed to provide up to 10 hours per calendar month of consulting services as may be requested from time to time by our Board or certain officers. As compensation for Mr. Janus' agreement to make himself available for services, we agreed to pay Mr. Janus a fee of $100 per month. In addition, we agreed to pay Mr. Janus $350 per hour for services specifically requested.

Fair Value Assumptions

The following table sets forth the assumptions used in 2012 and 2011 in the calculation of the option awards presented in our "Summary Compensation Table." For all periods presented, the fair value of share-based awards for options awards was estimated at the date of grant using the Black-Scholes valuation model.

	2012	2011
Significant assumptions (weighted-average):		
Risk-free interest rate at grant date	0.94%	1.81%
Expected stock price volatility	121.90%	81%
Expected dividend payout	0%	0%
Expected option life-years based on management's estimate	5.69 years	6.13 years

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth certain information with respect to the value of all unexercised options previously awarded to our named executive officers as of December 31, 2012:

Outstanding Equity Awards at December 31, 2012

Name	Year Option Granted	Number of Securities Underlying Unexercised Options	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options	Option Exercise Price	Option Expiration Date
Andrey Semechkin					
	2009(2)	23,000	6,000	$ 0.49	2019
	2009(4)	770,000	490,000	$ 0.59	2019
	2011(5)	1,150,000	1,350,000	$ 1.93	2021
	2012(12)	105,000	645,000	$ 0.32	2022
Linh T. Nguyen					
	2011(8)	28,000	72,000	$ 0.66	2021
	2012(10)	11,000	39,000	$ 0.49	2022
	2012(11)	8,400	61,600	$ 0.38	2022
John S. Craw					
	2010(7)	340,000	160,000	$ 1.58	2020
	2011(5)	138,000	162,000	$ 1.93	2021
	2011(9)	38,000	62,000	$ 1.10	2021
	2012(10)	17,600	62,400	$ 0.49	2022
	2012(11)	9,000	66,000	$ 0.38	2022
Ruslan Semechkin					
	2008(6)	49,000	1,000	$ 0.22	2018
	2009(4)	180,000	70,000	$ 0.59	2019
	2011(5)	230,000	270,000	$ 1.93	2021
	2012(10)	22,000	78,000	$ 0.49	2022
	2012(11)	9,000	66,000	$ 0.38	2022
Jeffrey D. Janus					
	2006(1)	150,000	—	$ 1.00	2016
	2006(1)	100,000	—	$ 1.00	2016
	2008(1)	300,000	—	$ 0.45	2018
	2009(3)	740,000	260,000	$ 0.62	2019
	2011(5)	138,000	162,000	$ 1.93	2021

(1) There were no unvested stock awards as of December 31, 2011.

(2) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on January 1, 2007

(3) The stock option vested on December 1, 2006.

(4) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on May 22, 2008.

(5) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on December 4, 2009.

(6) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on February 13, 2011.

(7) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on May 29, 2009.

(8) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on January 10, 2010.

(9) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on December 12, 2008.

(10) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on February 13, 2012.

(11) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on July 23, 2012.

(12) The stock option vested as to 1/50th of the shares subject to the stock option on each month commencing on June 29, 2012.

2006 Equity Participation Plan

The 2006 Equity Participation Plan (also referred to as "2006 Stock Plan") provides for the grant of stock options or restricted stock and other equity based awards to our employees, officers, directors and consultants. Options may be either "incentive stock options" or non-qualified options under the federal tax laws and will have an exercise price equal to at least fair market value as of the grant date. A total of 15,000,000 shares of common stock have been reserved for issuance under the 2006 Stock Plan, subject to adjustments for certain corporate transactions or events. The purpose of the 2006 Stock Plan is to enable us to offer non-employee directors, officers, other key employees and consultants of the Company and our subsidiaries and affiliates, equity-based incentives, thereby attracting, retaining and rewarding these participants and strengthening the mutuality of interests between these participants and our stockholders. The 2006 Stock Plan is administered by the board of directors as a whole. The board of directors has the power to determine the terms of any restricted stock or options granted under the 2006 Stock Plan. Grants under the 2006 Stock Plan are generally not transferable, and each stock option is generally exercisable during the lifetime of the optionee only and can only be exercised by such optionee.

Equity Awards Issued Outside the 2006 Equity Participation Plan

In 2009, options to purchase 10,257,593 shares were issued outside the 2006 Equity Participation Plan. These grants include 8,620,715 shares that were issued with an exercise price of $.62 per share and 1,636,878 that were issued with an exercise price of $.59 per share.

2010 Equity Participation Plan

The 2010 Equity Participation Plan (also referred to as "2010 Stock Plan") provides for the grant of stock options or restricted stock and other equity based awards to our employees, officers, directors and consultants. Options may be either "incentive stock options" or non-qualified options under the federal tax laws and will have an exercise price equal to at least fair market value as of the grant date. A total of 18,000,000 shares of common stock have been reserved for issuance under the 2010 Stock Plan, subject to adjustments for certain corporate transactions or events. The purpose of the 2010 Stock Plan is to enable us to offer non-employee directors, officers, other key employees and consultants of the Company and our subsidiaries and affiliates, equity-based incentives, thereby attracting, retaining and rewarding these participants and strengthening the mutuality of interests between these participants and our stockholders. The 2010 Stock Plan is administered by the board of directors as a whole. The board of directors has the power to determine the terms of any restricted stock or options granted under the 2010 Stock Plan. Grants under the 2010 Stock Plan are generally not transferable, and each stock option is generally exercisable during the lifetime of the optionee only and can only be exercised by such optionee.

Stock Option Grants

The Board may grant options qualifying as incentive stock options under the Internal Revenue Code and nonqualified stock options. The term of an option will be fixed by the Board, but will not exceed ten years (or five years in the case of an incentive stock option granted to a person beneficially owning shares representing 10% or more of the total combined voting power of all classes of our stock, referred to as a 10% stockholder). The option price for any option will not be less than the fair market value of the common stock on the date of grant (or 110% of the fair market value in the case of an incentive stock option granted to a 10% stockholder). Generally, the fair market value will be the closing price of the common stock on the applicable trading market. Payment for shares purchased upon exercise of a stock option must be made in full at the time of purchase. Payment may be made (i) in cash; (ii) in a cash equivalent acceptable to the Board; (iii) by the transfer to us of shares owned by the participant for at least six months on the date of transfer; (iv) if the common stock is traded on an established securities market, the board may approve payment of the exercise price by a broker-dealer or by the option holder with cash advanced by the broker-dealer if the exercise notice is accompanied by the option holder's written irrevocable instructions to deliver the common stock acquired upon exercise of the option to the broker-dealer; or (v) any other method acceptable to the Board and in compliance with applicable laws.

Restricted Stock

The board is authorized to grant restricted stock. Restricted stock is a grant of shares of common stock which may not be sold or disposed of and which shall be subject to such risks of forfeiture and other restrictions as the board may impose. Unless otherwise determined by the board, the purchase price for any restricted stock grant will be not less than 85% of the fair market value of common stock on the date of grant or at the time the purchase is consummated (or 100% of the fair market value in the case of restricted stock granted to a 10% stockholder). Generally, the fair market value will be the closing price of the common stock on the applicable trading market. Payment for shares purchased pursuant to a restricted stock grant may be made in (i) cash at the time of purchase; (ii) at the discretion of the board, according to a deferred payment or other similar arrangement with the participant; or (iii) in any other form of legal consideration that may be acceptable to the board in its discretion. A participant granted restricted stock generally has all of the rights of a stockholder of the Company, unless otherwise determined by the board.

Option Exercises and Stock Vested During Last Fiscal Year

There were no option exercises or stock vested by named executive officers during the fiscal year ended December 31, 2012.

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth information regarding outstanding options and shares reserved for future issuance under our current equity compensation plans as of December 31, 2012:

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders:			
2006 Equity Participation Plan (1)	5,742,050	$ 0.86	8,384,130
Equity compensation plans approved by security holders:			
2010 Equity Participation Plan (2)	9,380,850	$ 1.38	10,131,100
Equity compensation plans not approved by security holders (3)	8,254,232	$ 0.65	—
Total	23,377,132		16,994,980

(1) Represents stock options under the 2006 Equity Participation Plan (the "2006 Plan"). The options granted under the 2006 Plan may be either qualified or non-qualified options. Up to 15,000,000 options may be granted to employees, directors and consultants under the Plan. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant. As of December 31, 2012, the company had 5,742,050 options outstanding granted under the plan with a weighted average exercise price of $0.86. Stockholders approved the Plan effective December 1, 2006.

(2) Represents stock options under the 2010 Equity Participation Plan (the "2010 Plan"). The options granted under the Plan may be either qualified or non-qualified options. Up to 18,000,000 options may be granted to employees, directors and consultants under the 2010 Plan. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant. As of December 31, 2012, the company had 9,380,850 options outstanding granted under the plan with a weighted average exercise price of $1.38 Stockholders approved the Plan effective April 28, 2010.

(3) Represents stock options not under any of the Company's Equity Participation Plans. The options granted to senior management and Board members. The options were granted with different vesting terms but will expire no later than 10 years from the date of grant. These options were granted with a weighted average exercise price of $0.65.

As of December 31, 2010, we had reserved 15,000,000 shares of our Common Stock for issuance under the 2006 Stock Plan. At December 31, 2012, there were 5,742,050 shares issuable upon exercise of outstanding options under the 2006 Stock Plan, at a weighted average exercise price of $ 0.86. Options granted under the 2006 Stock Plan will generally have a 10-year term and vest at the rate of 2% per month commencing the following month of grant. Options granted under our 2006 Stock Plan provide for full acceleration of the unvested portion of an option if the option is not assumed or substituted by an acquiring entity upon a "Change in Control," as defined under the 2006 Stock Plan.

During 2010, we had established and reserved 18,000,000 shares of our Common Stock for issuance under the 2010 Stock Plan. At December 31, 2012, there were 9,380,850 shares issuable upon exercise of outstanding options under the 2010 Stock Plan, at a weighted average exercise price of $ 1.38. Options granted under the 2010 Stock Plan will generally have a 10-year term and vest at the rate of 2% per month commencing the following month of grant. Options granted under our 2010 Stock Plan provide for full acceleration of the unvested portion of an option if the option is not assumed or substituted by an acquiring entity upon a "Change in Control," as defined under the 2010 Stock Plan.

2012 DIRECTOR COMPENSATION

The following table sets forth information concerning the compensation earned during the last fiscal year by each individual who served as a director at any time during the fiscal year, other than directors who are listed in the Summary Compensation Table (directors who are also employees do not receive any additional compensation for service on the Board):

Name	Fees Earned or Paid in Cash (1)	Restricted Stock Awards (2)	Total
Donald A. Wright	$ 77,500	$ 20,800	$98,300
Paul V. Maier	$ 62,919	$ 12,800	$75,719
Charles J. Casamento	$ 71,252	$ 12,800	$84,052
James H. Berglund	$ 51,629	$ 12,800	$64,429

(1) Up to May 2012, Mr. Wright, Mr. Maier and Mr. Casamento were compensated for their service on the Board and for service on any committee of the Board at the annual rate of $60,000, and Mr. Casamento was compensated for serving as Chairman of the Pharmaceutical Business Development Committee at an annual retainer rate of $20,000. Beginning in June of 2012, the rate of annual compensation for Mr. Wright, Mr. Maier, Mr. Casamento and Mr. Berglund was changed to $65,000; while Mr. Wright receives an additional annual compensation of $25,000 for serving as the Co-Chairman of the Board.

(2) On May 29, 2012 Mr. Maier, Mr. Casamento, Mr. Berglund and Mr. Wright each received 40,000 restricted shares in connection with their service on the Board. Mr. Wright received an additional 25,000 restricted

shares in connection with his service as the Co-Chairman of on the Board of Directors. The restricted shares granted are vesting at the earlier of twelve months from grant date or the 2013 Annual Meeting of Stockholders. The restricted stock award amount represents the grant date fair value of the Company's stock.

In January 2013, the Board revised the compensation program for non-employee directors. For 2013, non-employee directors will receive (i) annual cash compensation of $32,500 (with Mr. Wright receiving an additional $25,000 for his service as Co-Chairman), (ii) 162,500 shares of restricted stock, with one quarter vesting at the end of each fiscal quarter, and (iii) 40,000 shares of restricted stock granted on the date of the Annual Meeting and vesting on the earlier of twelve months from the date of grant or the date of the 2014 Annual Meeting.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Pursuant to our Code of Business Conduct and Ethics, our executive officers, directors, and principal stockholders, including their immediate family members and affiliates, are prohibited from entering into transactions which create, or would appear to create, a conflict of interest with us. Our Audit Committee is responsible for reviewing and approving related party transactions. Our Audit Committee shall approve only those agreements that, in light of known circumstances, are in, or are not inconsistent with, our best interests, as our Audit Committee determines in the good faith exercise of its discretion.

Except with respect to the transactions described below, none of our directors or executive officers, nor any person who beneficially owns, directly or indirectly, shares carrying more than 10% of the voting rights attached to our outstanding shares, nor any of our promoters, nor any relative or spouse of any of the foregoing persons has any material interest, direct or indirect, in any transaction for the past two years or in any presently proposed transaction to which we were or are to be party. None of our directors or executive officers is indebted to us.

From time to time, various persons, including certain officers, directors, principal shareholders, and their affiliates, have advanced funds to Lifeline and/or ISC California for operating expenses. As of December 31, 2012, all such advances have been repaid in full.

As part of the Series D Financing Agreement, we have recognized in our 2012 and 2011 financial statements dividends paid of $55,123 and $99,726 in each of those fiscal years to X-Master, Inc. (an entity affiliated with Dr. Andrey Semechkin and Dr. Ruslan Semechkin, both of whom are directors and executive officers). Additionally, in 2012 and 2011, dividends of $181,907 and $329,095, respectively, were paid to Dr. Andrey Semechkin as part of the Series D Financing Agreement.

During the first quarter of 2011, we executed an operating lease for our corporate offices in Carlsbad, California with S Real Estate Holdings LLC. S Real Estate Holdings LLC is owned by Dr. Andrey Semechkin, the Company's Chief Executive Officer and Co-Chairman of the Board of Directors. During fiscal year 2012 and 2011, the Company recorded $113,000 and $106,000 in rent expense related to the facility lease arrangement with related parties.

As previously disclosed, on March 9, 2012, to obtain funding for working capital purposes, we entered into a Series G Preferred Stock Purchase Agreement with AR Partners, LLC to sell 5,000,000 shares of our Series G Preferred Stock ("Series G Preferred") at a price of $1.00 per Series G Preferred share, for a total purchase price of $5,000,000. AR Partners is an affiliate of Dr. Andrey Semechkin, our Co-Chairman and Chief Executive Officer, and Dr. Ruslan Semechkin, our Vice President of Research and director. The sale of the Series G Preferred was completed on March 9, 2012.

On January 22, 2013, to obtain funding for working capital purposes, we entered into a Securities Purchase Agreement with Dr. Andrey Semechkin and Dr. Simon Craw to sell a total of 10,125,000 shares of common stock at a price of $0.20 per share, for a total purchase price of $2,025,000. Dr. Andrey Semechkin is our Co-Chairman and Chief Executive Officer. Dr. Simon Craw is our Executive Vice President Business Development. The sale of the shares of common stock was completed on January 22, 2013. In connection with the sale of these shares we issued to each purchaser a warrant, exercisable for a period of 5 years, to purchase (at an exercise price of $0.20 per share) a number of shares of common stock equal to 50% of the shares purchased by that purchaser, for a total of 5,062,500 shares subject to the warrants.

On March 12, 2013, to obtain funding for working capital purposes, we entered into a Securities Purchase Agreement with certain investors, including Dr. Andrey Semechkin, to sell a total of 5,000,000 shares of common stock at a price of $0.20 per share, for a total purchase price of $1,000,000. Dr. Andrey Semechkin is our Co-Chairman and Chief Executive Officer and purchased $100,000 worth of common stock. Each of the other investors has had a long-standing relationship with us and have closely followed the Company. The sale of the shares of common stock was completed on March 12, 2013. In connection with the sale of these shares we issued to each investor a warrant, exercisable for a period of 5 years, to purchase (at an exercise price of $0.20 per share) a number of shares of common stock equal to 50% of the shares purchased by that investor, for a total of 2,500,000 shares subject to the warrants.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of our common stock and our preferred stock as of March 20, 2013, by (i) each person who is known by us to beneficially own 5% or more of our common stock or 5% or more of our preferred stock, (ii) each of our directors and named executive officers, and (iii) all executive officers and directors as a group. In general, a person is deemed to be a “beneficial owner” of a security if that person has or shares the power to vote or direct the voting of such security, or the power to dispose or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which the person has the right to acquire beneficial ownership within 60 days. To the best of our knowledge, all persons named have sole voting and investment power with respect to such shares, except as otherwise noted.

Other than for matters adversely affecting the rights and preferences of the preferred stock, the shares of our preferred stock vote together with the shares of common stock on most matters, with the shares of preferred stock entitled to cast a number of votes equal to the number of shares of common stock into which the shares of preferred stock could be converted. As of March 31, 2013 there were a total of 5,300,043 shares of preferred stock outstanding that were convertible into a total of 36,403,812 shares of common stock. Dr. Andrey Semechkin and Dr. Ruslan Semechkin, either directly or through entities that they control, beneficially own a total of 5,000,043 shares of preferred stock, that could be converted into a total of 34,903,812 shares of common stock. As such, Dr. Andrey Semechkin and Dr. Ruslan Semechkin control approximately 95.9% of the voting power of the preferred stock. The shares of common stock issuable upon conversion of the preferred stock are reflected in the following table.

In computing the number of shares of Common Stock beneficially owned by a person and the percentage ownership of such person, shares of Common Stock subject to warrants or options held by that person that are currently exercisable or exercisable within 60 days of March 31, 2013 were deemed to be outstanding, and shares of preferred stock owned by such person and convertible into Common Stock were deemed to be converted into Common Stock. Such shares were not deemed to be outstanding, however, for the purpose of computing the percentage ownership of any other person.

Stock Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Name of Beneficial Owner	Actual Beneficial Ownership	Percent of Beneficial Ownership(1)
Andrey Semechkin (2)(3)(5)(6)	63,853,743	41.02%
Linh Nguyen (2)(3)	69,400*	
John Craw (2)(3)	773,100*	
Ruslan Semechkin (2)(3)(5)(6)	63,853,743	41.02%
Jeffrey Janus (2)(3)	3,386,337	2.97%
Paul Maier (2)(3)	297,600*	
Donald Wright (2)(3)	357,600*	
Charles Casamento (2)(3)	352,500*	
James Berglund (2)	352,500*	
All Executive Officers and Directors as a Group (9 Persons)	69,970,347	46.37%
5% Holders		
X-Master, Inc. (5)	13,000,000	11.08%
Kenneth Aldrich (4)	11,011,884	9.24%

* less than 1%

(1) Based on 112,363,815 shares currently outstanding plus shares issuable under derivative securities which are exercisable within 60 days of March 31, 2013.

(2) The business address for each director and officer is 5950 Priestly Drive, Carlsbad, CA 92008.

(3) Includes shares issuable upon conversion of outstanding shares of preferred stock and warrants and options to purchase shares of our common stock exercisable within 60 days of March 31, 2013 in the following amounts:

Dr. Andrey Semechkin, 43,290,313 shares; Ms. Nguyen, 69,400 shares; Mr. Craw, 648,100 shares; Dr. Ruslan Semechkin, 43,290,313 shares; Mr. Janus, 1,558,000 shares; Mr. Casamento, 150,000 shares; Mr. Maier, 260,000 shares; Mr. Wright, 360,000 shares; and All Executive Officers and Directors as a Group, 46,428,580 shares.

(4) Included shares issuance upon exercise of options to purchase shares of our common stock exercisable within 60 days of March 31, 2013 for 5,410,000 shares. Mr. Aldrich's shares are held, in part, through YKA Partners, a California limited partnership. Mr. Aldrich is the investment manager of YKA Partners and controls the disposition of these shares. The business address for Mr. Aldrich and YKA Partners is .

(5) The business address for X-Master, Inc. is 1 Overlook Drive, Unit 11, Amherst, New Hampshire 03031. X-Master Inc. is owned by Dr. Andrey Semechkin. Dr. Ruslan Semechkin is the President of X-Master, Inc. The shares held by X-Master are all issuable upon conversion of outstanding shares of preferred stock and are considered to be beneficially owned by each of Andrey Semechkin and Ruslan Semechkin.

(6) Pursuant to the applicable SEC rules, each of Dr. Andrey Semechkin and Dr. Ruslan Semechkin are considered to be the beneficial owner of shares held by the other.

DESCRIPTION OF CAPITAL STOCK

The following summary describes the material terms of our capital stock. It summarizes material provisions of our certificate of incorporation and by-laws.

General

Our certificate of incorporation authorizes us to issue 320,000,000 shares of capital stock, $0.001 par value per share, of which 300,000,000 shares are designated common stock and 20,000,000 shares are designated preferred

stock. As of December 31, 2012, there were issued and outstanding 87,388,815 shares of common stock, warrants to purchase 3,500,000 shares of common stock, 300,000 shares of Series B preferred stock, 2,000,000 shares of Series C preferred stock, 43 shares of Series D preferred stock and 5,000,000 shares of Series G preferred stock. The total number of shares of our common stock outstanding reflected above excludes 8,000,000 shares of common stock to be issued upon the conversion of all of our outstanding shares of Series C Preferred Stock effective immediately prior to the closing of this offering.

Common Stock

Voting Rights

Holders of our common stock are entitled to one vote per share. Subject to any voting rights granted to holders of any preferred stock, the affirmative vote of a majority of the shares present in person or by proxy and entitled to vote on the subject matter, other than the election of directors, will generally be required to approve matters voted on by our stockholders. Directors will be elected by plurality of the votes of the shares present in person or represented by a proxy at the meeting entitled to vote on the election of directors. Our certificate of incorporation does not provide for cumulative voting.

Dividends

Subject to the rights of holders of any outstanding preferred stock, the holders of outstanding shares of our common stock will share ratably on a per share basis in any dividends declared from time to time by our Board of Directors.

Other Rights

Subject to the rights of holders of any outstanding preferred stock, upon our liquidation, dissolution or winding up, we will distribute any assets legally available for distribution to our stockholders, ratably among the holders of our common stock outstanding at that time.

Warrants

The following summary of certain terms and provisions of warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by the provisions of the warrant, the form of which has been filed as an exhibit to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions of the form of warrant for a complete description of the terms and conditions of the warrants.

Duration and Exercise Price. The warrants offered hereby will entitle the holders thereof to purchase up to an aggregate of [ ] shares of our common stock at an initial exercise price per share of $[ ], at any time and will expire on the [ ] anniversary of the issuance date. The warrants will be issued separately from the common stock included in the units, and may be transferred separately immediately thereafter. Warrants will be issued in certificated form only.

Exercisability. The warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below).

Cashless Exercise. If, at the time a holder exercises its warrant, there is no effective registration statement registering, or the prospectus contained therein is not available for an issuance of the shares underlying the warrant to the holder, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the warrant.

Transferability. Subject to applicable laws, warrants may be transferred at the option of the holder upon surrender of the warrants to us together with the appropriate instruments of transfer.

Exchange Listing. We do not intend to list the warrants on any securities exchange or other trading market.

Fundamental Transactions. In the event of any fundamental transaction, as described in the warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the warrant is exercisable immediately prior to such event. In addition, in the event of a fundamental transaction, that is (1) an all cash transaction, (2) a "Rule 13e-3 transaction" as defined in Rule 13e-3 under the Exchange Act or (3) with certain limited exceptions, a fundamental transaction involving a person or entity not traded on OTC QB, The New York Stock Exchange, Inc., The NYSE MKT, LLC, The NASDAQ Global Select Market, The NASDAQ Global Market or The NASDAQ Capital Market, then we or any successor entity shall pay at the holder's option, exercisable at any time concurrently with or within forty-five (45) days after the consummation of the fundamental transaction, an amount of cash equal to the value of the warrant as determined in accordance with the Black Scholes option pricing model.

Right as a Stockholder. Except as otherwise provided in the warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their warrants.

Waivers and Amendments. Subject to certain exceptions, any term of the warrants may be amended or waived with our written consent and the written consent of the holders of at least 66 2/3% of the then-outstanding warrants.

Preferred Stock

Our board of directors, without stockholder approval, but subject to the rights of our outstanding preferred stock, may issue preferred stock in one or more series from time to time and fix or alter the designations, relative rights, priorities, preferences, qualifications, limitations and restrictions of the shares of each series, to the extent that those are not fixed in our certificate of incorporation. The rights, preferences, limitations and restrictions of different series of preferred stock may differ with respect to dividend rates, amounts payable on liquidation, voting rights, conversion rights, redemption provisions, sinking fund provisions and other matters. Our board of directors may authorize the issuance of preferred stock that ranks senior to our common stock with respect to the payment of dividends and the distribution of assets on liquidation. In addition, our board of directors can fix the limitations and restrictions, if any, upon the payment of dividends on our common stock to be effective while any shares of preferred stock are outstanding. We have outstanding shares of Series B, Series D and Series G Preferred Stock. These classes of preferred stock include voting rights, including the right to vote as a series on particular matters, preferences as to dividends and liquidation, conversion rights, redemption rights and sinking fund provisions.

Series B Preferred Stock

On May 12, 2008, to obtain funding for working capital, we entered into a series of subscription agreements with five accredited investors for the sale of a total of 400,000 Series B Units, each Series B Unit consisting of one share of Series B Preferred Stock ("Series B Preferred") and two Series B Warrants ("Series B Warrants") to purchase common stock for each $1.00 invested.

The total purchase price received by the Company was $400,000. The Series B Preferred is convertible into shares of common stock at the initial conversion ratio of two shares of common stock for each share of Series B Preferred converted (which was established based on an initial conversion price of $0.50 per share), and the Series B Warrants were exercisable at $0.50 per share until five years from the issuance of the Series B Warrants. The Series B Preferred and Series B Warrants contained anti-dilution clauses whereby, (subject to the exceptions contained in those instruments) if the Company issued equity securities or securities convertible into equity at a price below the respective conversion price of the Series B Preferred or the exercise price of the Series B Warrant, such conversion and exercise prices shall be adjusted downward to equal the price of the new securities, which has been triggered and the new price of the warrants was set at $0.25. During the first quarter of 2013, the Company issued additional shares of common stock at $0.20 per share, triggering an adjustment in the current conversion price of the Series B Preferred Stock to $0.20.

The Series B Preferred has a priority (senior to the shares of common stock) on any sale or liquidation of the Company equal to the purchase price of the Series B Units, plus a liquidation premium of 6% per year. If the Company elects to declare a dividend on common stock in any year, it must first pay to the Series B Preferred holders a dividend equal to the amount of the dividend the Series B Preferred holder would receive if the Series B Preferred were converted just prior to the dividend declaration.

Each share of Series B Preferred has the same voting rights as the number of shares of common stock into which it would be convertible on the record date. As of December 31, 2012, the Company had 300,000 shares of the Series B Preferred Stock issued and outstanding.

Series C Preferred Stock

As a result of conversion in January 2013 by the holders of all shares of Series C Preferred Stock to common stock, there were no longer any shares of Series C Preferred Stock outstanding. On April 10, 2013, the Company filed a Certificate of Elimination for the Series C Preferred Stock. The Certificate of Elimination amended the provisions of the Certificate of Incorporation of the Company to eliminate the powers, designations, preferences, privileges and other rights of the Series C Preferred Stock.

Series D Preferred Stock

On December 30, 2008, to obtain funding for both working capital and the eventual repayment of the outstanding obligation under the previous debt financing with a principal amount of $1,000,000 issued in May 2008, the Company entered into a Series D Preferred Stock Purchase Agreement (the "Series D Agreement") with accredited investors (the "Investors") to sell for up to $5,000,000 or up to 50 shares of Series D Preferred Stock ("Series D Preferred") at a price of $100,000 per Series D Preferred share. The sale of the Series D Preferred closed on the following schedule: (1) 10 shares were sold on December 30, 2008; (2) 10 shares were sold on February 5, 2009; and (3) 10 shares were sold on each of March 20, 2009, and June 30, 2009 and 3 shares on September 30, 2009. The Company raised a total of $4,700,000 in the Series D Preferred Stock round. Of the Series D Preferred Stock issued, 10 shares of the Series D Preferred Stock was issued to X-Master Inc., which is a related party and affiliated with our Chief Executive Officer and Co-Chairman of the Board of Directors Dr. Andrey Semechkin and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director and 33 shares of the Series D Preferred Stock was issued to our Chief Executive Officer and Co-Chairman of the Board of Directors Dr. Andrey Semechkin. As of December 31, 2012, we had 43 shares of the Series D Preferred Stock issued and outstanding. Historically, the Series D Preferred Stock earned cumulative dividends at a rate of 10% per annum through December 31, 2011 and 6% per annum effective January 1, 2012, payable 15 days after each quarter end. As of December 31, 2012 and 2011, Series D Preferred Stock dividends of $0 and $108,000 were accrued, respectively. During the years ended December 31, 2012 and 2011, dividends of $237,000 and $429,000 were paid to the holders, respectively.

On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into a Waiver Agreement (the "Waiver Agreement") pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after

September 30, 2012 on the Series D and Series G Preferred Stock. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement.

On December 4, 2012, the holders of all of the outstanding shares of Series D Preferred Stock executed a Waiver of Anti-Dilution Rights (the "Anti-Dilution Waiver") pursuant to which such holders waived all anti-dilution adjustment rights under the Certificate of Designation for the Series D Preferred Stock in connection with the offering of securities pursuant to the registration statement originally filed with the Securities and Exchange Commission on October 18, 2012, including the shares issuable on exercise of all warrants registered hereunder. The Anti-Dilution Waiver does not apply to any future issuances of securities which would otherwise trigger anti-dilution adjustments under the Certificate of Designation for the Series D Preferred Stock.

Series G Preferred Stock

On March 9, 2012, the Company entered into a Series G Preferred Stock Purchase Agreement (the "Series G Agreement") with AR Partners, LLC (the "Purchaser") to sell five million (5,000,000) shares of Series G Preferred Stock ("Series G Preferred") at a price of $1.00 per Series G Preferred share, for a total purchase price of $5,000,000. The Purchaser is an affiliate of Dr. Andrey Semechkin, the Company's Co-Chairman and Chief Executive Officer, and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director.

The Series G Preferred were initially convertible into shares of common stock at $0.40 per share, resulting in conversion ratio of 2.5 shares of common stock for every share of Series G Preferred. The conversion price may be adjusted for stock splits and other combinations, dividends and distributions, recapitalizations and reclassifications, exchanges or substitutions and is subject to a weighted-average adjustment in the event of the issuance of additional shares of common stock below the conversion price. During the first quarter of 2013, the Company issued additional shares of common stock at $0.20 per share, triggering an adjustment in the current conversion price of the Series G Preferred Stock at $0.37, and the conversion ratio to 2.67 shares of common stock for every share of Series G Preferred.

The Series G Preferred shares have priority over the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Common Stock on the proceeds from any sale or liquidation of the Company in an amount equal to the purchase price of the Series G Preferred, but such payment may be made only after payment in full of the liquidation preferences payable to holders of any shares of Series D Preferred Stock then outstanding. Historically, from the date of issuance of the Series G Preferred, cumulative dividends at the rate per annum of six percent (6%) of the Purchase Price per share accrued quarterly on such shares of Series G Preferred. Each share of Series G Preferred has the same voting rights as the number of shares of Common Stock into which it would be convertible on the record date. As long as there are at least 1,000,000 shares of Series G Preferred outstanding, the holders of Series G Preferred have (i) the initial right to propose the nomination of two members of the Board, at least one of which nominees shall be subject to the approval of the Company's independent directors, for election by the stockholder's at the Company next annual meeting of stockholders, or, elected by the full board of directors to fill a vacancy, as the case may be, and (ii) the right to approve any amendment to the certificate of incorporation, certificates of designation or bylaws, in manner adverse to the Series G Preferred, alter the percentage of board seats held by the Series G directors or increase the authorized number of shares of Series G Preferred. At least one of the two directors nominated by holders of the Series G Preferred shares shall be independent based on the NASDAQ listing requirements.

On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into the Waiver Agreement pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after September 30, 2012 on the Series D and Series G Preferred Stock. Accordingly, dividends from inception in the amount of $93,000 accreted to the carrying value of Series G preferred stock have been reversed. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D Preferred Stock or Series G Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement. As of December 31, 2012, there was no dividend accrued on Series G Preferred Stock. No dividend was paid to the holders during the year ended December 31, 2012.

The Company determined that the Series G convertible preferred shares have a contingent redemption feature allowing redemption by the holder under only some very limited circumstances ("deemed liquidation events"). As the event that may trigger the redemption of the convertible preferred stock is not solely within the Company's control, the convertible preferred stock has been classified as mezzanine equity (outside of permanent equity) on the Company's consolidated balance sheet. Additionally, legal costs related to the Series G financing in the amount of $59,000 were recorded in the mezzanine equity as well.

The Company determined that as the initial conversion price at the date of close of the Series G transaction was lower than the closing market price on that day (March 9, 2012) that a beneficial conversion feature existed in the amount of $1,375,000. Such amount was recorded as a discount on the Series G convertible preferred stock with a corresponding increase in additional paid-in capital. Based on the appropriate accounting guidance, the Company is required to recognize the discount over the period of time from the issuance of preferred shares until the convertible preferred shares can be first converted. As the Series G convertible shares are convertible immediately following their issuance, the discount amount of $1,375,000 was recognized in March 2012 as deemed dividend with a corresponding increase in accumulated deficit.

Transfer Agent

The transfer agent for our common stock is Securities Transfer Corporation. The transfer agent address is 2591 Dallas Parkway, Suite 102, Frisco, TX 75034.

PLAN OF DISTRIBUTION

, which we refer to as the placement agent, has agreed to act as the exclusive placement agent in connection with this offering subject to the terms and conditions of a placement agent agreement, dated , 2013. The placement agent may engage selected dealers to assist in the placement of the units. The placement agent is not purchasing or selling any units offered by this prospectus, nor is it required to arrange the purchase or sale of any specific number or dollar amount of the units, but has agreed to use its commercially reasonable "best efforts" to arrange for the sale of all of the units offered hereby. We will enter into subscription agreements directly with investors in connection with this offering and we may not sell the entire amount of units offered pursuant to this prospectus. The price per unit has been determined based upon arm's-length negotiations between the purchasers and us.

The placement agent proposes to arrange for the sale to one or more purchasers of the units offered pursuant to this prospectus through direct subscription agreements between the purchasers and us.

Commissions and Expenses

We have agreed to pay the placement agent an aggregate cash placement fee equal to seven percent of the gross proceeds in this offering.

The following table shows the per unit and total cash placement agent's fees we will pay to the placement agent in connection with the sale of the units offered pursuant to this prospectus assuming the purchase of all of the units offered hereby:

Per Unit	$
Total	$

In addition, we have agreed to issue to the placement agent, or its designees, warrants exercisable for an aggregate of five percent of the unit shares issued in this offering. The placement agent warrants will be exercisable at any time beginning on the date that is six months from the date hereof until 5:00 p.m. (New York time) on the date that is five years following the date hereof at an exercise price of $ per share. This prospectus also covers the sale of the placement agent warrants and the shares of common stock issuable upon the exercise of the placement agent warrants. The placement agent warrants will have terms substantially similar to the terms of the warrants included in the units offered hereby, except that, as required by the Financial Industry Regulatory Authority, Inc., or FINRA, neither the placement agent warrants nor any shares of common stock issued upon exercise of the placement agent warrants may be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of such securities by any person for a period of 180 days immediately following the date hereof, except the transfer of any security:

- by operation of law or by reason of our reorganization;
- to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction described above for the remainder of the time period;
- if the aggregate amount of our securities held by the placement agent or related person do not exceed 1% of the securities being offered;
- that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or
- the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period.

Because there is no minimum offering amount required as a condition to closing in this offering, the actual total offering commissions, if any, are not presently determinable and may be substantially less than the maximum amount set forth above. We have also agreed to reimburse the placement agent for its out-of-pocket expenses in an aggregate amount not to exceed $75,000.

Our obligation to issue and sell units to the purchasers is subject to the conditions set forth in the subscription agreements, which may be waived by us at our discretion. A purchaser's obligation to purchase units is subject to the conditions set forth in his or her subscription agreement as well, which may also be waived.

We currently anticipate that the sale of the units will be completed on or about May , 2013. We estimate the total offering expenses of this offering that will be payable by us, excluding the placement agent's fee, will be approximately $, which includes legal and printing costs, various other fees and reimbursement of the placements agent's expenses. At the closing, The Depository Trust Company will credit the shares of common stock to the respective accounts of the investors. We will mail warrants directly to the investors at the respective addresses set forth in their subscription agreement with us.

Indemnification

We have agreed to indemnify the placement agent against liabilities under the Securities Act of 1933, as amended. We have also agreed to contribute to payments the placement agent may be required to make in respect of such liabilities.

Lock-up Agreements

We and our officers and directors have agreed, subject to certain exceptions, for a period of 30 days after the date of this prospectus, not to offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of, directly or indirectly any common shares or any securities convertible into or exchangeable

for our common shares either owned as of the date hereof or thereafter acquired (in our case only at a price less than the public offering price set forth on the cover page of this prospectus) without the prior written consent of the placement agent. This 30-day period may be extended if (1) during the last 17 days of the 30-day period, we issue an earnings release or material news or a material event regarding us occurs or (2) prior to the expiration of the 30-day period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 30-day period, then the period of such extension will be 18-days, beginning on the issuance of the earnings release or the occurrence of the material news or material event. If after any announcement described in clause (2) of the preceding sentence, we announce that we will not release earnings results during the 16-day period, the lock-up period shall expire the later of the expiration of the 30-day period and the end of any extension of such period made pursuant to clause (1) of the preceding sentence. The placement agent may, in its sole discretion and at any time or from time to time before the termination of the lock-up period, without notice, release all or any portion of the securities subject to lock-up agreements.

Electronic Distribution

This prospectus may be made available in electronic format on websites or through other online services maintained by the placement agent, or by an affiliate. Other than this prospectus in electronic format, the information on the placement agent's website and any information contained in any other website maintained by the placement agent is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the placement agent, and should not be relied upon by investors.

The foregoing does not purport to be a complete statement of the terms and conditions of the placement agent agreement and subscription agreements. A copy of the placement agent agreement and the form of subscription agreement with the investors are included as exhibits to the Registration Statement of which this prospectus supplement forms a part. See "Where You Can Find More Information" on page 66.

Regulation M Restrictions

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the resale of the units sold by it while acting as a principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the placement agent would be required to comply with the requirements of the Securities Act and the Securities Exchange Act of 1934, as amended, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of units by the placement agent acting as a principal. Under these rules and regulations, the placement agent:

- must not engage in any stabilization activity in connection with our securities; and
- must not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

Affiliations

The placement agent and its affiliates may provide various investment banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of their businesses, the placement agent and its affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the placement agent and its affiliates may at any time hold long or short positions in such securities or loans.

NOTICE TO INVESTORS

Notice to Investors in the United Kingdom

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any securities which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any such securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;

(c) by the underwriter to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive); or

(d) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of these securities shall result in a requirement for the publication by the issuer or the underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any such securities to be offered so as to enable an investor to decide to purchase any such securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

The placement agent has represented, warranted and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the FSMA)) received by it in connection with the issue or sale of any of the securities in circumstances in which section 21(1) of the FSMA does not apply to the issuer; and

(b) it has complied with and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

European Economic Area

In particular, this document does not constitute an approved prospectus in accordance with European Commission's Regulation on Prospectuses no. 809/2004 and no such prospectus is to be prepared and approved in connection with this offering. Accordingly, in relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (being the Directive of the European Parliament and of the Council 2003/71/EC and including any relevant implementing measure in each Relevant Member State) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of securities to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to such securities which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of securities to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in the last annual or consolidated accounts; or

- in any other circumstances which do not require the publication by the Issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of securities to the public" in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State. For these purposes the units offered hereby are "securities."

LEGAL MATTERS

The validity of the issuance of securities offered by this prospectus will be passed upon for us by DLA Piper LLP (US), San Diego, California. is acting as counsel for the Placement Agent in connection with this offering.

EXPERTS

The consolidated balance sheets of International Stem Cell Corporation and Subsidiaries as of December 31, 2012 and 2011, and the related consolidated statements of operations, changes in redeemable convertible preferred stock, members' deficit and stockholders' equity (deficit) and cash flows for the years then ended and for the period from inception (August 17, 2001) through December 31, 2012 have been incorporated herein and in the registration statement in reliance upon the reports of Mayer Hoffman McCann P.C. and Vasquez & Company LLP, independent registered public accounting firms, incorporated herein, and given upon the authority of said firms as experts in accounting and auditing.

On October 17, 2012, December 4, 2012 and May 6, 2013, we entered into a letter agreement with Vasquez & Company LLP, our former independent registered public accounting firm. Pursuant to this letter agreement, except for liability resulting from malpractice, gross negligence, willful misconduct or challenges from the Public Company Accounting Oversight Board or SEC, we agreed to indemnify Vasquez & Company, LLP for all liability incurred in connection with any lawsuit brought against it because of its consent to the inclusion of its report on its audit of our 2010 financial statements, as restated, in this registration statement.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC. Copies of our reports, proxy statements and other information may be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials can also be obtained by mail at prescribed rates from the Public Reference Room of the SEC, 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding International Stem Cell Corporation and other issuers that file electronically with the SEC. The address of the SEC internet site is www.sec.gov. In addition, we make available on or through our Internet site copies of these reports as soon as reasonably practicable after we electronically file or furnish them to the SEC. Our Internet site can be found at www.internationalstemcell.com.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements
International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)

Years Ended December 31, 2012 and 2011

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

INTERNATIONAL STEM CELL CORPORATION AND SUBSIDIARIES

We have audited the accompanying consolidated balance sheets of International Stem Cell Corporation and Subsidiaries (a development stage company) ("the Company") as of December 31, 2012 and 2011, and the related consolidated statements of operations, changes in redeemable convertible preferred stock, members' deficit and stockholders' equity (deficit), and cash flows for the years then ended and for the period from inception (August 17, 2001) through December 31, 2012. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We did not audit the consolidated financial statements of International Stem Cell Corporation and Subsidiaries for the period from inception to December 31, 2010. Such statements are included in the cumulative inception to December 31, 2012 totals of the consolidated statements of operations and cash flows and reflect total revenues, total expenses and net loss of 26%, 63% and 70%, respectively, of the related cumulative totals. Those statements were audited by other auditors whose report has been furnished to us and our opinion, insofar as it relates to amounts for the period from inception to December 31, 2010, included in those cumulative totals, is based solely upon the report of the other auditors.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. For the year ended December 31, 2012, the Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, based on our audits and the report of other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of International Stem Cell Corporation and Subsidiaries as of December 31, 2012 and 2011, and the results of their operations and their cash flows for the years then ended, and for the period from inception (August 17, 2001) to December 31, 2012, in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has incurred recurring operating losses and is dependent on additional financing to fund operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are described in Note 1 to the consolidated financial statements. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of International Stem Cell Corporation and Subsidiaries' internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 16, 2012, expressed an unqualified opinion thereon.

/s/ Mayer Hoffman McCann P.C.

MAYER HOFFMAN MCCANN P.C.
San Diego, California
March 25, 2013

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

INTERNATIONAL STEM CELL CORPORATION AND SUBSIDIARIES

We have audited International Stem Cell Corporation and Subsidiaries' (a development stage company) ("the Company") internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, International Stem Cell Corporation and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of International Stem Cell Corporation and Subsidiaries as of December 31, 2011, and the related consolidated statements of operations, members' deficit and stockholders' equity (deficit), and cash flows for the year then ended and for the period from inception (August 17, 2001) to December 31, 2011, and our report dated March 16, 2012 (which includes an explanatory paragraph relating to the uncertainty of the Company's ability to continue as a going concern) expressed an unqualified opinion on those consolidated financial statements.

/s/ Mayer Hoffman McCann P.C.
San Diego, California
March 16, 2012

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
International Stem Cell Corporation
(A Development Stage Company)
Oceanside, California

We have audited the accompanying consolidated statements of operations, members' deficit and stockholders' equity (deficit) and cash flows of International Stem Cell Corporation and subsidiaries (a development stage company) (the "Company") for the period from inception (August 17, 2001) through December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

As discussed in note 2 to the 2010 consolidated financial statements, the consolidated balance sheet, statement of operations, members' deficit and stockholders' equity (deficit) and cash flows for the year ended December 31, 2010 and for the period from inception (August 17, 2001) through December 31, 2010 have been restated.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the results of operations and cash flows of International Stem Cell Corporation and subsidiaries for the period from inception (August 17, 2001) through December 31, 2010, in conformity with accounting principles generally accepted in the United States of America.

/s/ Vasquez & Company LLP

Los Angeles, California
March 24, 2011 (except for notes 1, 2 and 10
to the 2010 consolidated financial statements,
as to which the date is June 22, 2011)

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International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Balance Sheets
(in thousands, except share data)

	December 31, 2012	December 31, 2011
Assets		
Cash and cash equivalents	$ 654	$ 1,337
Accounts receivable, net of allowance for doubtful accounts of $4 and $0 at December 31, 2012 and 2011, respectively	273	140
Inventory, net	1,199	1,268
Prepaid expenses and other current assets	456	274
Total current assets	2,582	3,019
Property and equipment, net	1,134	1,420
Intangible assets, net	1,634	1,282
Deposits and other assets	20	16
Total assets	$ 5,370	$ 5,737
Liabilities, Redeemable Preferred Stock and Stockholders' Equity (Deficit)		
Accounts payable	$ 969	$ 777
Accrued liabilities	730	752
Deferred revenue	233	189
Related party payable	5	108
Advances	250	250
Warrants to purchase common stock	—	38
Total current liabilities	2,187	2,114
Convertible Redeemable Series G Preferred stock, $0.001 par value, 5,000,000 shares and 0 were authorized, issued and outstanding at December 31, 2012 and 2011, respectively, liquidation preferences of $5,000 and $0 at December 31, 2012 and 2011, respectively	4,941	—
Commitments and contingencies		
Stockholders' Equity (Deficit)		
Series D Preferred stock, $0.001 par value, 50 shares authorized, 43 issued and outstanding at December 31, 2012 and 2011, liquidation preference of $4,320 at December 31, 2012 and 2011	—	—
Series A Preferred stock, $0.001 par value, 0 and 5,000,000 shares authorized at December 31, 2012 and 2011, respectively, 0 and 500,000 issued and outstanding at December 31, 2012 and 2011, respectively, liquidation preferences of $0 and $615 at December 31, 2012 and 2011, respectively	—	1
Series B Preferred stock, $0.001 par value, 5,000,000 shares authorized, 300,000 issued and outstanding at December 31, 2012 and 2011, respectively, liquidation preferences of $385 and $367 at December 31, 2012 and 2011, respectively	0	0

Series C Preferred stock, $0.001 par value, 3,000,000 shares authorized, 2,000,000 issued and outstanding at December 31, 2012 and 2011, respectively, liquidation preferences of $2,507 and $2,387 at December 31, 2012 and 2011, respectively	2	2
Common stock, $0.001 par value, 300,000,000 and 200,000,000 shares authorized at December 31, 2012 and 2011, respectively, 87,388,815 and 80,036,315 issued and outstanding at December 31, 2012 and 2011, respectively	87	80
Additional paid-in capital	69,945	63,995
Deficit accumulated during the development stage	(71,792)	(60,455)
Total stockholders' equity (deficit)	(1,758)	3,623
Total liabilities, redeemable preferred stock and stockholders' equity (deficit)	$ 5,370	$ 5,737

See accompanying notes to the consolidated financial statements.

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International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Operations
(in thousands, except per share data)

	Year Ended December 31, 2012	Year Ended December 31, 2011	Inception (August 17, 2001) through December 31, 2012
Revenues			
Product sales	$ 4,567	$ 4,532	$ 12,198
Royalties and license	—	—	135
Total revenue	4,567	4,532	12,333
Development expenses			
Cost of sales	1,272	1,618	4,606
Research and development	3,599	4,434	21,893
Selling and marketing	2,065	1,475	5,939
General and administrative	7,444	8,360	39,128
Total development expenses	14,380	15,887	71,566
Loss from development activities	(9,813)	(11,355)	(59,233)
Other income (expense)			
Settlement with related company	—	—	(93)
Miscellaneous expense	(65)	(163)	(245)
Dividend income	—	1	94
Interest expense	—	—	(2,225)
Sublease income	7	11	316
Change in market value of warrants	38	2,335	(1,357)
Total other income (expense), net	(20)	2,184	(3,510)
Loss before income taxes	(9,833)	(9,171)	(62,743)
Provision for income taxes	—	—	7
Net loss	$ (9,833)	$ (9,171)	$ (62,750)

Deemed dividend on preferred stock	$ (1,375)	$ —	$ (1,375)
Dividends on preferred stock	$ (129)	$ (430)	$ (8,097)
Net loss attributable to common stockholders	$ (11,337)	$ (9,601)	$ (72,222)
Net loss per common share-basic and diluted	$ (0.13)	$ (0.12)	
Weighted average shares-basic and diluted	85,936	77,320	

See accompanying notes to the consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Changes in Redeemable Convertible Preferred Stock, Members' Deficit and Stockholders' Equity (Deficit)
From Inception to December 31, 2012
(in thousands)

	Convertible Redeemable Series G Preferred Stock		Common Stock		Convertible Preferred Stock												Note Subscription on Perpetual Preferred	Subscription Receivable on Common Stock	Additional Paid-in Capital	Deficit accumulated during the Development Stage	Total Stockholders' Equity (Deficit)	Members' Deficit
					Series A		Series B		Series C		Series D		Series E		Series F							
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount						
Balance at August 17, 2001	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Members contribution																						100
Net loss for the period from inception																						(141)
Balance at December 31, 2001																						(41)
Members contributions																						250
Net loss for the year ended																						(391)
Balance at December 31, 2002																						(182)
Members contributions																						195
Net loss for the year ended																						(519)
Balance at December 31, 2003																						(506)
Members contribution																						1,110
Net loss for the year ended																						(854)
Activity through December 31, 2004																						(250)
Members contributions																						780
Net loss for the year ended December 31, 2005																						(1,386)
Balance at December 31, 2005																						(856)
Members contribution																						250
Effect of the Reorganization Transactions			20,000	20															2,665	(3,291)	(606)	606
BTHC transactions			2,210	2															(2)		—	
Offering costs																			(2,778)		(2,778)	
Warrants issued for equity placement services																			1,231		1,231	
Warrants issued for services																			222		222	
Warrants issued with promissory note																			638		638	
Common stock issued for services			1,350	1															1,349		1,350	
Issuance of common stock			10,437	11															10,371		10,382	
Stock-based compensation																			842		842	
Net loss for the year ended December 31, 2006																				(6,584)	(6,584)	

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	Convertible Redeemable Series G Preferred Stock		Common Stock		Convertible Preferred Stock												Note Subscription on Perpetual Preferred	Subscription Receivable on Common Stock	Additional Paid-in Capital	Deficit accumulated during the Development Stage	Total Stockholders' Equity	Members' Deficit
					Series A		Series B		Series C		Series D		Series E		Series F							
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount						
Balance at December 31, 2006			33,997	$ 34	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	$ —	$ —	$14,538	$ (9,875)	$ 4,697	$—
Offering costs																			$ (382)		$ (382)	
Warrants issued for equity placement services																			169		169	
Issuance of common stock			1,370	1															1,369		1,370	
Warrants exercised			3	—															3		3	
Stock-based compensation																			427		427	
Net loss for the year ended December 31, 2007																				(6,072)	(6,072)	
Balance at December 31, 2007			35,370	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16,124	(15,947)	212	—
Issuance of Preferred Stock					1,000	1	550	1	2,000	2									4,546		4,550	
Warrants issued and beneficial conversion feature																			911		911	
Issuance of Common Stock for services			3,041	3															593		596	
Stock-based compensation																			735		735	
Deemed Dividend																			1,582	(1,582)	—	
Net loss for the year ended December 31, 2008																				(6,571)	(6,571)	
Balance at December 31, 2008			38,411	38	1,000	1	550	1	2,000	2	—	—	—	—	—	—	—	—	24,491	(24,100)	433	—
Issuance of Preferred Stock																			3,682		3,682	
Preferred Stock Subscription																					—	
Issuance of Common Stock																					—	
For services			1,208	1															941		942	
From conversion of preferred stock			3,727	4	(400)	—	(150)	(1)											(3)		—	
From conversion of debt			2,000	2															498		500	
From exercise of warrants			4,392	4													(2,700)		3,659		963	
From cashless exercise of warrants			3,510	4															279		283	
For cash			2,787	3															1,397		1,400	
Stock-based compensation																			410		410	
Warrants issued for services																			281		281	
Options issued for services																			106		106	
Deemed Dividend																			3,163	(4,032)	(869)	
Cumulative effect adjustment-warrant liabilities																			(1,704)	430	(1,274)	
Equity placement shares																			(250)		(250)	
Dividend on preferred stock																				(364)	(364)	
Net loss for the year ended December 31, 2009																	(9)			(8,504)	(8,513)	

	Convertible Redeemable Series G Preferred Stock		Common Stock		Convertible Preferred Stock												Note Subscription on Perpetual Preferred	Subscription Receivable on Common Stock	Additional Paid-in Capital	Deficit accumulated during the Development Stage	Total Stockholders' Equity	Members' Deficit
					Series A		Series B		Series C		Series D		Series E		Series F							
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount					(Deficit)	
Balance at December 31, 2009			56,035	56	600	1	400	—	2,000	2	—	—	—	—	—	—	(2,709)	—	36,950	(36,570)	(2,270)	$—
Preferred Stock Subscription															1	0						
Issuance of Common Stock																					—	
For services			749	1															1,084		1,085	
From conversion of preferred stock and options			800	1	(100)	—	(100)	—							(1)	—			(1)		—	
From conversion of debt																					—	
From exercise of warrants			5,063	5													(3,254)	(5)	4,747		1,493	
From cashless exercise of warrants and options			1,531	2															1,536		1,538	
For cash			10,593	10															10,181		10,190	
Stock-based compensation																			2,068		2,068	
Warrants issued for services																					—	
Options issued for services																					—	
Warrants reclassified to equity																			805		805	
Deemed dividend on preferred stock																				(1,037)	(1,037)	
Accrued and paid dividend on preferred stock																				(524)	(524)	
Swap notes Receivable and Perpetual																					—	
Preferred Stock																	5,963		(1,200)		4,763	
Net loss for the year ended December 31, 2010																				(12,723)	— (12,723)	
Balance at December 31, 2010			74,771	75	500	1	300	—	2,000	2	—	—	—	—	—	0	—	(5)	56,170	(50,854)	5,389	—
Issuance of common stock																						
For services			150	—															303		303	
From cashless exercise of warrants			55	—															26		26	
From exercise of options and warrants			1,060	1															526		527	
For cash			4,000	4															3,354		3,358	
Stock-based compensation																			3,541		3,541	
Warrants issued for services																			75		75	
Stock subscription																		5			5	
Accrued dividend on preferred stock																				(430)	(430)	
Net loss for the year ended December 31, 2011																				(9,171)	(9,171)	
Balance at December 31, 2011			80,036	$ 80	500	$ 1	300	$ —	2,000	$ 2	—	$ —	—	$ —	—	$ 0	$ —	$ —	$63,995	$(60,455)	$ 3,623	$—

See accompanying notes to the consolidated financial statements.

International Stem Cell Corporation and Subsidiaries (A Development Stage Company)
Consolidated Statements of Changes in Redeemable Convertible Preferred Stock, Members' Deficit and Stockholders' Equity (Deficit) From Inception to December 31, 2012 (in thousands)

	Convertible Redeemable Series G Preferred Stock		Common Stock		Convertible Preferred Stock												Note Subscription on Perpetual Preferred	Subscription Receivable on Common Stock	Additional Paid-in Capital	Deficit accumulated during the Development Stage	Total Stockholders' Equity (Deficit)	Members' Deficit
					Series A		Series B		Series C		Series D		Series E		Series F							
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount						
Issuance of convertible redeemable Series G preferred stock, net of issuance costs of $59	5,000	4,941																				
Beneficial conversion feature for Series G preferred stock		(1,375)																	1,375		1,375	
Issuance of common stock																						
From conversion of Series A preferred stock			2,000	2	(500)	(1)													(1)		—	
For cash			5,000	5															2,079		2,084	
For services			335	—															59		59	
From exercise of options			18	—															4		4	
Stock-based compensation																			2,361		2,361	
Warrants issued for services																			73		73	
Accrued dividend on preferred stock		93																		(222)	(222)	
Reversal of dividend accreted		(93)																		93	93	
Deemed dividend on preferred stock		1,375																		(1,375)	(1,375)	
Net loss for the period ended December 31, 2012																				(9,833)	(9,833)	
Balance at December 31, 2012	5,000	$ 4,941	87,389	$ 87	—	$ —	300	$ —	2,000	$ 2	—	$ —	—	$ —	—	$ —	$ —	$ —	$ 69,945	$(71,792)	$(1,758)	$ —

See accompanying notes to the consolidated financial statements.

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International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		Inception (August 17, 2001) through December 31,
	2012	2011	2012
Cash flows from operating activities			
Net loss	$(9,833)	$(9,171)	$ (62,750)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	474	494	1,916
Accretion of discount on notes payable	—	—	103
Accretion of discount on bridge loans	—	—	638
Warrants issued for services	73	75	370
Non-cash compensation expense	2,361	3,540	10,771
Common stock issued for services	59	303	4,356
Change in market value of warrants	(38)	(2,335)	1,357
Amortization of discount on convertible debt	—	—	1,081
Allowance for inventory obsolescence	(40)	61	36
Interest on perpetual preferred stock notes receivable	—	—	(35)
Loss on disposal of fixed assets	56	24	80
Impairment of intangible assets	190	3	193
Changes in operating assets and liabilities:			
(Increase) decrease in accounts receivable	(133)	599	(273)
(Increase) decrease in inventory, net	109	(473)	(1,235)
(Increase) decrease in prepaid assets and other assets	(182)	(46)	(456)
(Increase) decrease in deposits	(4)	24	(20)
Increase (decrease) in accounts payable	192	302	1,077
Increase (decrease) in accrued expenses	(22)	207	1,015
Increase (decrease) in deferred revenue	44	(571)	233
Increase (decrease) in related party payable	5	—	(160)
Net cash used in operating activities	(6,689)	(6,964)	(41,703)
Investing activities			

Purchases of property and equipment	(197)	(565)	(2,686)
Proceeds from sale of property and equipment	7	—	7
Payments for patent licenses and trademarks	(596)	(376)	(2,277)
Net cash used in investing activities	(786)	(941)	(4,956)
Financing activities			
Proceeds from Members' contributions	—	—	2,685
Proceeds from issuance of common stock	2,084	3,358	28,882
Proceeds from issuance of preferred stock	4,941	—	17,202
Proceeds from issuance of convertible promissory notes	—	—	2,100
Proceeds from exercise of warrants and options	4	532	992
Payment of preferred stock dividends	(237)	(430)	(1,320)
Payment of promissory notes	—	—	(2,203)
Payment of offering costs	—	—	(1,760)
Proceeds from convertible debt, advances and loan payable	—	—	1,360
Payment of loan payable	—	—	(625)
Net cash provided by financing activities	6,792	3,460	47,313
Net (decrease) increase in cash and cash equivalents	(683)	(4,445)	654
Cash and cash equivalents, beginning of period	1,337	5,782	—
Cash and cash equivalents, end of period	$ 654	$ 1,337	$ 654
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ —	$ —	$ 372
Cash paid for income taxes	$ —	$ —	$ 11

	Year Ended December 31,		Inception (August 17, 2001) through December 31,
	2012	2011	2012
Non-cash financing activities:			
Discount on convertible debt from beneficial conversion feature	$ —	$—	$ 641
Discount on convertible debt from warrants	$ —	$—	$ 270
Accretion of preferred stock dividends	$ 93	$—	$ 93
Deemed dividend on preferred stock	$1,375	$—	$ 8,058
Reversal of preferred dividends accreted	$ (93)	$—	$ (93)
Conversion of debt to common stock	$ —	$—	$ 500
Warrants issued for placement agent services	$ —	$—	$ 1,231
Warrants issued with promissory notes	$ —	$—	$ 638
Non-cash sale of preferred stock	$ —	$—	$ 382
Dividend on preferred stock exchanged for note receivable	$ —	$—	$ 95
Conversion of preferred stock	$ —	$—	$ 2
Cashless exercise of warrants	$ —	$ 26	$ 1,847

See accompanying notes to the consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
(A Development Stage Company)

Notes to Consolidated Financial Statements

1. Organization and Significant Accounting Policies

BUSINESS COMBINATION AND CORPORATE RESTRUCTURE

BTHC III, Inc. ("BTHC III" or the "Company") was organized in Delaware in June 2005 as a shell company to effect the reincorporation of BTHC III, LLC, a Texas limited liability company. On December 28, 2006, the Company effected a Share Exchange pursuant to which it acquired all of the stock of International Stem Cell Corporation, a California corporation ("ISC California"). After giving effect to the Share Exchange, the stockholders of ISC California owned 93.7% of issued and outstanding shares of common stock. As a result of the Share Exchange, ISC California is now the wholly-owned subsidiary, though for accounting purposes it was deemed to have been the acquirer in a "reverse merger." In the reverse merger, BTHC III is considered the legal acquirer and ISC California is considered the accounting acquirer. On January 29, 2007, the Company changed its name from BTHC III, Inc. to International Stem Cell Corporation.

Lifeline Cell Technology, LLC ("LCT") was formed in the State of California on August 17, 2001. LCT is in the business of developing and manufacturing purified primary human cells and optimized reagents for cell culture. LCT's scientists have used a technology, called basal medium optimization, to systematically produce products designed to culture specific human cell types and to elicit specific cellular behaviors. These techniques also produce products that do not contain non-human animal proteins, a feature desirable to the research and therapeutic markets. LCT distinguishes itself in the industry by having in place scientific and manufacturing staff with the experience and knowledge to set up systems and facilities to produce a source of consistent, standardized, non-human animal protein free cell products, some of which are suitable for FDA approval.

On July 1, 2006, LCT entered into an agreement among LCT, ISC California and the holders of membership units and warrants. Pursuant to the terms of the agreement, all the membership units in LCT were exchanged for 20,000,000 shares of ISC California Common Stock and for ISC California's assumption of LCT's obligations under the warrants. LCT became a wholly-owned subsidiary of ISC California.

Lifeline Skin Care, Inc. ("LSC") was formed in the State of California on June 5, 2009 and is a wholly-owned subsidiary of ISC California. LSC develops, manufactures and markets cosmeceutical products, utilizing an extract derived from our human parthenogenetic stem cell technologies.

Going Concern

The Company continues in the development stage and as such has accumulated losses from inception and expects to incur additional losses in the near future. The Company needs to raise additional working capital. The timing and degree of any future capital requirements will depend on many factors. Currently, the Company's burn rate is approximately $580,000 per month, excluding capital expenditures and patent costs averaging $70,000 per month. There can be no assurance that the Company will be successful in maintaining its normal operating cash flow, and that such cash flows will be sufficient to sustain the Company's operations through 2013. Based on the above, there is substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements were prepared assuming that the Company is a going concern. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty. Management's plans in regard to these matters are focused on managing its cash flow, the proper timing of its capital expenditures, and raising additional capital or financing in the future. From January through March 15, 2013, to obtain funding for working capital purposes, the Company sold a total of 16,325,000 shares of common stock raising $3,289,000. For further discussion, see Note 11, Subsequent Events.

In October 2012 we filed a registration statement with the SEC that, following effectiveness, would allow us to raise up to $15 million from the sale of common stock and warrants. However, this is a "best efforts" offering and we cannot predict the timing or amount of any funds that we may actually receive.

Basis of Presentation

International Stem Cell Corporation was formed in June 2006. BTHC III, Inc. was a shell company that had no operations and no net assets. For accounting purposes the acquisition has been treated as a recapitalization of BTHC III with ISC California as the accounting acquirer (reverse acquisition). The historical statements prior to June 2006 are those of Lifeline Cell Technology, a wholly-owned subsidiary of ISC California.

The Company is a development-stage company with no revenue generated from its principal operations in therapeutic and biomedical product development through research and development efforts. To date the Company has generated limited and unpredictable revenue to support our core therapeutic research and development efforts.

Principles of Consolidation

The Company's consolidated financial statements include the accounts of International Stem Cell Corporation and its subsidiaries after intercompany balances and transactions have been eliminated.

The preparation of financial statements requires that management make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses, and related disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less when purchased to be cash equivalents.

Inventories

Inventories are accounted for using the first-in, first-out (FIFO) method for LSC products, and specific identification method for LCT products. Inventory balances are stated at the lower of cost or market. Laboratory supplies used in the research and development process are expensed as consumed. Inventory is reviewed periodically for product expiration and obsolescence and is adjusted accordingly.

Accounts Receivable

Trade accounts receivable are recorded at the net invoice value and are not interest bearing. Accounts receivable primarily consist of trade accounts receivable from the sales of LCT's products, timing of cash receipts by the Company related to LSC credit card sales to customers, as well as LSC trade receivable amounts related to spa and distributor sales. The Company considers receivables past due based on the contractual payment terms. The Company reviews its exposure to accounts receivable and reserves specific amounts if collectability is no longer reasonably assured. As of December 31, 2012, the Company had an allowance for doubtful accounts totaling $4,000. As of December 31, 2011, the Company did not have an allowance for doubtful accounts as all accounts receivable were deemed collectible.

Property and Equipment

Property and equipment are stated at cost. The provision for depreciation and amortization is computed using the straight-line method over the estimated useful lives of the assets, generally over five years. The costs of major remodeling and leasehold improvements are capitalized and amortized over the shorter of the remaining term of the lease or the life of the asset.

Intangible Assets

Intangible assets consist of acquired research and development rights used in research and development, and capitalized legal fees related to the acquisition, filing, maintenance, and defense of patents. Patent or patent license amortization only begins once a patent license is acquired or a patent is issued by the appropriate authoritative bodies. In the period in which a patent application is rejected or efforts to pursue the patent are abandoned, all the related accumulated costs are expensed. Patents and patent licenses are recorded at cost of $2,083,000 and $1,677,000 at December 31, 2012 and 2011, respectively, and are amortized on a straight-line basis over the shorter of the lives of the underlying patents or the useful life of the license. Amortization expense for the years ended December 31, 2012 and 2011 amounted to $54,000 and $77,000, respectively, and is included in research and development expense. Accumulated amortization as of December 31, 2012 and 2011 was $449,000 and $395,000, respectively. Additional information regarding patents and patent licenses is included in Note 4.

Long-Lived Asset Impairment

The Company reviews long-lived assets for impairment when events or changes in business conditions indicate that their carrying value may not be recovered, and at least annually. The Company considers assets to be impaired and writes them down to fair value if expected associated undiscounted cash flows are less than the carrying amounts. Fair value is the present value of the associated cash flows. The Company recognized $190,000 and $3,000 of impairments on its long-lived assets during the years ended December 31, 2012 and 2011, respectively.

Product Sales

The Company recognizes revenue from product sales at the time of shipment to the customer, provided no significant obligations remain and collection of the receivable is reasonably assured. If the customer has a right of return, the Company recognizes product revenues upon shipment, provided that future returns can be reasonably estimated. In the case where returns cannot be reasonably estimated, revenue will be deferred until such estimates can be made or the right of return has expired. LCT contributed 52% and 47% of total revenue in 2012 and 2011, respectively. LSC's revenue accounted for 48% and 53% of total revenue in 2012 and 2011, respectively.

Deferred Revenue

The Company recognizes revenue from LSC products when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price to the buyer is fixed or determinable, and collectability is reasonably assured. However, the LSC products have a 30-day right of return guarantee and therefore, the Company defers all revenue associated with these product sales until the 30-day guarantee has expired. In addition, all costs associated with these product sales are reclassified against the deferred revenue account so that the net deferred revenue balance is presented. At December 31, 2012 and 2011, net deferred revenue totaled $233,000 and $189,000, respectively.

Cost of Sales

Cost of sales consists primarily of salaries and benefits associated with employee efforts expended directly on the production of the Company's products and include related direct materials, general laboratory supplies and allocation of overhead. Certain of the agreements under which the Company has licensed technology will require the payment of royalties based on the sale of its future products. Such royalties will be recorded as a component of cost of sales. Additionally, the amortization of license fees or milestone payments related to developed technologies used in the Company's products will be classified as a component of cost of sales to the extent such payments become due in the future.

Research and Development Costs

Research and development costs, which are expensed as incurred, are primarily comprised of costs and expenses for salaries and benefits associated with research and development personnel, overhead and occupancy, contract services, and amortization of license costs for technology used in research and development with alternative future uses.

Registration Payment Arrangements

In accordance with applicable authoritative guidance, the Company is required to separately recognize and measure registration payment arrangements, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement. Such payments include penalties for failure to effect a registration of securities.

Fair Value Measurements

On January 1, 2008, the Company adopted authoritative guidance for fair value measurements and fair value disclosures. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. Assets and liabilities that are measured at fair value are reported using a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
Level 2	Quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability; and
Level 3	Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (supported by little or no market activity).

Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

The table below sets forth a summary of the fair values of the Company's assets and liabilities as of December 31, 2012 (in thousands).

	Total	Level 1	Level 2	Level 3
ASSETS:				
Cash equivalents	$ 5	$ 5	$ —	$ —

The table below sets forth a summary of the fair values of the Company's assets and liabilities as of December 31, 2011 (in thousands).

	Total	Level 1	Level 2	Level 3
ASSETS:				
Cash equivalents	$470	$ 470	$ —	$ —
LIABILITIES:				
Warrants to purchase common stock	$ 38	$ —	$ —	$ 38

The following table displays the rollforward activity of liabilities with inputs that are both significant to the fair value measurement and unobservable (supported by little or no market activity):

	Warrants to purchase common stock
Beginning balance at December 31, 2010	$ 2,400
Issuances	—
Adjustments to estimated fair value	(2,362)
Ending balance at December 31, 2011	38
Issuances	—
Adjustments to estimated fair value due to expiry	(38)
Ending balance at December 31, 2012	$ —

Income Taxes

The Company accounts for income taxes in accordance with applicable authoritative guidance, which requires the Company to provide a net deferred tax asset/liability equal to the expected future tax benefit/expense of temporary reporting differences between book and tax accounting methods and any available operating loss or tax credit carryforwards.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. Significant estimates include patent life (remaining legal life versus remaining useful life), inventory carrying values, and transactions using the Black-Scholes option pricing model, e.g., warrants and stock options, as well as Monte-Carlo valuation method for certain warrants. Actual results could differ from those estimates.

Fair Value of Financial Instruments

The Company believes that the carrying value of its cash and cash equivalents, receivables, accounts payable and accrued liabilities as of December 31, 2012 and 2011 approximate their fair values because of the short-term nature of those instruments. The fair value of certain warrants was determined at each reporting date in 2011 using the Monte-Carlo valuation methodology; however, all warrants requiring such valuations expired in the first quarter of 2012.

Income (Loss) Per Common Share

The computation of net loss per common share is based on the weighted average number of shares outstanding during each period. The computation of diluted earnings per common share is based on the weighted average number of shares outstanding during the period plus the common stock equivalents, which would arise from the exercise of stock options and warrants outstanding using the treasury stock method and the average market price per share during the period. At December 31, 2012, there were 335,000 non-vested restricted shares, 3,500,000 warrants, and 15,407,902 vested and 7,969,230 non-vested stock options outstanding; and at December 31, 2011, there were 6,569,550 warrants, and 11,842,841 vested and 11,141,598 non-vested stock options outstanding. These restricted shares, options and warrants were not included in the diluted loss per share calculation because the effect would have been anti-dilutive.

Comprehensive Income

Comprehensive income or loss includes all changes in equity except those resulting from investments by owners and distributions to owners. The Company did not have any items of comprehensive income or loss other than net loss from operations for the years ended December 31, 2012 and 2011 or the period from inception through December 31, 2012.

Recent Accounting Pronouncements

There were no new accounting pronouncements during the year ended December 31, 2012, as compared to the recent accounting pronouncements described in the Annual Report on Form 10-K for the fiscal year ended December 31, 2011, that are of significance, or potential significance, to the Company.

2. Inventory

Inventories are accounted for using the first-in, first-out (FIFO) method for Lifeline Skin Care products, and specific identification method for Lifeline Cell Technology products. Lab supplies used in the research and development process are expensed as consumed. Inventory is reviewed periodically for product expiration and obsolete inventory and adjusted accordingly. The components of inventories are as follows (in thousands):

	December 31, 2012	December 31, 2011
Raw materials	$ 276	$ 265
Work in process	211	285
Finished goods	748	794
Total	1,235	1,344
Less: allowance for inventory obsolescence	(36)	(76)
Inventory, net	$ 1,199	$ 1,268

3. Property and Equipment

Property and equipment consists of the following (in thousands):

	December 31, 2012	December 31, 2011
Machinery and equipment	$ 1,072	$ 969
Computer equipment	347	358
Office equipment	225	217
Leasehold improvements	830	816
	2,474	2,360
Less: accumulated depreciation and amortization	(1,340)	(940)
Property and equipment, net	$ 1,134	$ 1,420

Depreciation expense for the years ended December 31, 2012 and 2011 were $420,000 and $417,000, respectively.

4. Patent Licenses

On December 31, 2003, LCT entered into an *Option to License Intellectual Property* agreement with Advanced Cell Technology, Inc. (“ACT”) for patent rights and paid ACT $340,000 in option and license fees. On February 13, 2004, LCT and ACT amended the Option agreement and LCT paid ACT additional option fees of $22,500 for fees related to registering ACT’s patents in selected international countries.

On May 14, 2004, LCT amended the licensing agreement with ACT for the exclusive worldwide patent rights for the following ACT technologies: UMass IP, ACT IP and Infigen IP, which terms are summarized below. The additional license fees aggregate a total of $400,000 and were secured by separate convertible promissory notes. The notes bore no interest unless they were not repaid at maturity, in which event they shall thereafter bear interest at an annual rate equal the lesser of 10% or the maximum non-usurious rate legally allowed.

The notes could be converted at the option of ACT into the first equity financing of LCT with cash proceeds in excess of $5,000,000 under the following conditions: i) Upon the consummation of the First Equity Financing; or ii) Immediately prior to the closing of any merger, sale or other consolidation of the Company or of any sale of all or substantially all assets of the Company which occurs prior to the First Equity Financing (an "Acquisition Event"). Notwithstanding the above, and only in the event that a conversion resulting from such Acquisition Event would result in a security not traded on a national stock exchange (including NASDAQ and NASDAQ small cap), upon written notice to the Company not later than five days after the consummation of the Acquisition Event and notice of the Acquisition Event to the holder of the note, the holder may elect to receive payment in cash of the entire outstanding principal of this Note. On February 7, 2013 the Company and ACT entered into Amended and Restated License Agreements for the purpose of completely amending and restating the terms of the license agreements. For further discussion, see Note 11, Subsequent Events.

On December 21, 2007 ACT elected to receive payment and was paid in cash in-lieu of conversion of the notes. As of December 31, 2012, the Company still maintained an obligation to pay royalties and other fees in accordance with the following schedule (in thousands, except percentages and sales thresholds):

	UMass IP	ACT IP	Infigen IP
License fee	$ 150	$ 225	$ 25
Royalty rates	3% to 12%	3% to 10%	3% to 10%
Minimum royalties			
At 12 months	$ 15	$ 15	$ 8
At 24 months	$ 30	$ 38	$ 8
At 36 months	$ 45	$ 61	$ 7
Annually thereafter	$ 60	$ 75	$ 15
Milestone payments			
First commercial product	$ 250	$ 250	$ 250
Sales reaching $5,000,000	$ 500	$ 500	$ 500
Sales reaching $10,000,000	$ 1,000	$ 1,000	$ 1,000

As of December 31, 2012, the total amounts capitalized related to the acquired ACT licenses were $747,000, and $1,336,000 related to other patent acquisition costs.

At December 31, 2012, future amortization expense related to our intangible assets subject to amortization is expected to be as follows (in thousands):

	Amount
2013	$ 60
2014	60
2015	60
2016	60
2017	61
Thereafter	1,272
Total	$ 1,573

5. Advances

Advance

On June 18, 2008, the Company entered into an agreement with BioTime, Inc. ("BioTime"), where BioTime will pay an advance of $250,000 to Lifeline Cell Technology, a wholly-owned subsidiary of International Stem Cell Corporation, to produce, make, and distribute Joint Products. The $250,000 advance will be paid down with the first $250,000 of net revenues that otherwise would be allocated to LCT under the agreement. As of December 31, 2012, no revenues were realized from this agreement.

	December 31, 2012	December 31, 2011
BioTime, Inc. (in thousands)	$ 250	$ 250

6. Capital Stock

As of December 31, 2006, the Company was authorized to issue 200,000,000 shares of common stock, $0.001 par value per share, and 20,000,000 shares of preferred stock, $0.001 par value per share. In May 2012, the Company amended its Certificate of Incorporation to increase the authorized number of shares of common stock to 300,000,000.

In October 2006, the board of directors of BTHC III approved a stock split of 4.42 shares to 1. As a result of the split, the outstanding common stock of BTHC III increased from 500,000 to 2,209,993 shares. Pursuant to the Share Exchange Agreement, each share of International Stem Cell Corporation common stock was exchanged for one share of BTHC III common stock. All numbers in the financial statements and notes to the financial statements have been adjusted to reflect the stock split for all periods presented.

On December 27, 2006, the Company's Board of Directors and holders of a majority of the outstanding shares approved an increase in the authorized capital stock of the Company to 200,000,000 shares of Common Stock, $0.001 par value per share, and 20,000,000 shares of preferred stock, $0.001 par value per share.

In December 2006, the Company issued 1,350,000 shares of common stock, 350,000 of such shares in consideration for legal consulting services relating to the reverse merger and 1,000,000 shares in consideration for a contract to provide investor relations services which commenced September 1, 2006 for a period of one year.

In January and February 2007, ISC California completed the Brookstreet financing and issued 1,370,000 shares of common stock that was part of a private placement of securities by ISC California during the second half of 2006. The net proceeds from sale finalized in 2007 were $1,157,000 net of cash fees and expenses. In connection with the final settlement in 2007, the selling agent for the private placement received 274,000 additional warrants, which entitled the holder thereof to purchase through February, 2012 that number of shares of common stock for $1.00 each.

Series A Preferred Stock

On January 15, 2008, to raise funds, the Company entered into a subscription agreement with accredited investors for the sale of between 1,000,000 and 5,000,000 of Series A Preferred Stock ("Series A Preferred"). Series A Units consist of one share of Series A Preferred and two Warrants ("Series A Warrants") to purchase common stock for each $1.00 invested. The Series A Preferred was convertible into shares of common stock at market price on the date of the first finance closing, but not to exceed $1 per share and the Series A Warrants are exercisable at $0.50 per share. The Series A Preferred has an anti-dilution clause whereby, if the Company issues $1 million or more of equity securities or securities convertible into equity at a price below the respective

exercise prices of the Series A Preferred or the Series A Warrant shall be adjusted downward to equal the price of the new securities. The Series A Preferred has priority on any sale or liquidation of the Company equal to the purchase price of the Series A Units, plus a liquidation premium of 6% per year. If the Company elects to declare a dividend in any year, it must first pay to the Series A Preferred a dividend of the amount of the dividend the Series A Preferred holder would receive if the shares were converted just prior to the dividend declaration.

Each share of Series A Preferred has the same voting rights as the number of shares of common stock into which it would be convertible on the record date. On March 30, 2012, the holder of the remaining 500,000 shares of Series A Preferred Stock, converted his shares to a total of 2,000,000 shares of common stock. As of December 31, 2012 and 2011, the Company had zero and 500,000 shares of the Series A Preferred Stock issued and outstanding, respectively. In May 2012, the Company filed a Certificate of Elimination for the Series A Preferred Stock to remove the powers, designations, preferences, privileges and other rights of the Series A Preferred Stock.

Series B Preferred Stock

On May 12, 2008, to obtain funding for working capital, the Company entered into a series of subscription agreements with five accredited investors for the sale of a total of 400,000 Series B Units, each Series B Unit consisting of one share of Series B Preferred Stock ("Series B Preferred") and two Series B Warrants ("Series B Warrants") to purchase common stock for each $1.00 invested.

The total purchase price received by the Company was $400,000. The Series B Preferred is convertible into shares of common stock at the initial conversion ratio of two shares of common stock for each share of Series B Preferred converted (which was established based on an initial conversion price of $0.50 per share), and the Series B Warrants were exercisable at $0.50 per share until five years from the issuance of the Series B Warrants. The Series B Preferred and Series B Warrants contained anti-dilution clauses whereby, (subject to the exceptions contained in those instruments) if the Company issues equity securities or securities convertible into equity at a price below the respective conversion price of the Series B Preferred or the exercise price of the Series B Warrant, such conversion and exercise prices shall be adjusted downward to equal the price of the new securities, which has been triggered and the new price of the warrants was set at $0.25. The Series B Preferred has a priority (senior to the shares of common stock, but junior to the shares of Series A Preferred Stock) on any sale or liquidation of the Company equal to the purchase price of the Series B Units, plus a liquidation premium of 6% per year. If the Company elects to declare a dividend in any year, it must first pay to the Series B Preferred holder a dividend equal to the amount of the dividend the Series B Preferred holder would receive if the Series B Preferred were converted just prior to the dividend declaration. Each share of Series B Preferred has the same voting rights as the number of shares of common stock into which it would be convertible on the record date. As of December 31, 2012 and 2011, the Company had 300,000 shares of the Series B Preferred Stock issued and outstanding.

Fair Value of Warrants Issued with Series A and B Preferred Stock

In accordance with the applicable authoritative guidance, the Company allocated the proceeds of the Series A and B preferred stock according to the value of the convertible preferred stock and the warrants based on their relative fair values. Fair value of the warrants issued with the Series A and Series B were determined using the Black-Scholes valuation model using risk-free interest rates of 3% and 3.37%, volatility rate of 65.0% and 57.9%, term of five years, and exercise price of $0.50.

In connection with the Series A and B rounds of financing, each investor received a warrant to purchase up to a number of shares of common stock for $1.00 per share. Subsequently, the exercise price for those warrants was adjusted down to $0.25 per share.

In August 2008, in accordance with the anti-dilution provisions of the securities, the conversion rates and exercise price were reduced to $0.25. Estimated adjusted fair value of the warrants was determined using the Black-Scholes valuation model using risk-free interest rate of 3%, volatility rate of 57.9%, term of five years, and exercise price of $0.25. For Series A and Series B, the beneficial conversion feature and warrants were adjusted to $553,000 and $193,000, and $308,000 and $110,000, respectively.

During the second quarter of 2010, the holders of the warrants issued to the purchasers of Series A and B Preferred Stock signed a waiver to give up their rights to the anti-dilution provisions related to the warrants and the exercise price is now fixed at $0.25. The modification to the warrants resulted in the change in classification from a liability to equity and the warrants were re-valued at the date of modification. The re-valuation of the warrants resulted in a reduction in the warrant value of $5,276,000 which was recorded as a credit to income. The adjusted value of the warrants of $804,971 was reclassified to Additional Paid-in Capital, thus eliminating any fair value of outstanding warrant liability as of June 30, 2010.

Series C Preferred Stock

On August 20, 2008, to obtain funding for working capital, the Company entered into a subscription agreement with an accredited investor (the "Series C Investor") to sell for $3,000,000 up to 3,000,000 shares of Series C Preferred Stock ("Series C Preferred") at a price of $1.00 per Series C Preferred share. The Series C Preferred will be convertible into shares of common stock at $0.25 per share. The Series C Preferred had an anti-dilution clause whereby, if the Company issues 250,000 shares or more of equity securities or securities convertible into equity at a price below the conversion price of the Series C Preferred, the conversion price of the Series C Preferred shall be adjusted downward to equal the price of the new securities. The Series C Preferred shall have priority over the common stock on any sale or liquidation of the Company equal to the purchase price of the Series C Preferred Shares, plus a liquidation premium of 6% per year, but such payment may be made only after payment in full of the liquidation preferences payable to holders of any shares of Series A and Series B preferred stock then outstanding. If the Company elects to declare a dividend in any year, it must first pay to the Series C Preferred a dividend in the amount of the dividend the Series C Preferred holder would receive if converted just prior to the dividend declaration. Each share of Series C Preferred shall have the same voting rights as the number of shares of common stock into which it would be convertible on the record date. 700,000 shares of Series C Preferred Stock were sold on August 20, 2008, and 1,300,000 shares of Series C Preferred Stock were sold on September 23, 2008. The beneficial conversion feature for the Series C preferred stock is $720,000. All the Series C Preferred Stock was issued to X-Master Inc., which is a related party and affiliated with our Chief Executive Officer and Co-Chairman of the Board of Directors Dr. Andrey Semechkin and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director. As of December 31, 2012 and 2011, we had 2,000,000 shares of the Series C Preferred Stock issued and outstanding. On January 22, 2013, the holders of Series C Preferred Stock converted all of the outstanding shares of Series C Preferred Stock into common stock at $0.25 per share, or a total of 8,000,000 shares of common stock. For further discussion, see Note 11, Subsequent Events.

Series D Preferred Stock

On December 30, 2008, to obtain funding for both working capital and the eventual repayment of the outstanding obligation under the OID Senior Secured Convertible Note with a principal amount of $1,000,000 issued in May 2008, the Company entered into a Series D Preferred Stock Purchase Agreement (the "Series D Agreement") with accredited investors (the "Investors") to sell for up to $5,000,000 or up to 50 shares of Series D Preferred Stock ("Series D Preferred") at a price of $100,000 per Series D Preferred share. The sale of the Series D Preferred closed on the following schedule: (1) 10 shares were sold on December 30, 2008; (2) 10 shares were sold on February 5, 2009; and (3) 10 shares were sold on each of March 20, 2009, and June 30, 2009 and 3 shares on September 30, 2009. The Company raised a total of $4,700,000 in the Series D Preferred Stock round. Of the Series D Preferred Stock issued, 10 shares of the Series D Preferred Stock was issued to X-Master Inc., which is

a related party and affiliated with our Chief Executive Officer and Co-Chairman of the Board of Directors Dr. Andrey Semechkin and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director and 33 shares of the Series D Preferred Stock was issued to our Chief Executive Officer and Co-Chairman of the Board of Directors Dr. Andrey Semechkin. As of December 31, 2012 and 2011, we had 43 shares of the Series D Preferred Stock issued and outstanding. Historically, the Series D Preferred Stock earned cumulative dividends at a rate of 10% per annum through December 31, 2011 and 6% per annum effective January 1, 2012, payable 15 days after each quarter end. As of December 31, 2012 and 2011, Series D Preferred Stock dividends of $0 and $108,000 were accrued, respectively. During the years ended December 31, 2012 and 2011, dividends of $237,000 and $429,000 were paid to the holders, respectively.

On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into a Waiver Agreement (the "Waiver Agreement") pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after September 30, 2012 on the Series D and Series G Preferred Stock. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement.

On December 4, 2012, the holders of all of the outstanding shares of Series D Preferred Stock executed a Waiver of Anti-Dilution Rights (the "Anti-Dilution Waiver") pursuant to which such holders waived all anti-dilution adjustment rights under the Certificate of Designation for the Series D Preferred Stock in connection with the offering of securities pursuant to the registration statement originally filed with the Securities and Exchange Commission on October 18, 2012, including the shares issuable on exercise of all warrants registered hereunder. The Anti-Dilution Waiver does not apply to any future issuances of securities which would otherwise trigger anti-dilution adjustments under the Certificate of Designation for the Series D Preferred Stock.

Series E Preferred Stock

On June 30, 2009, the Company entered into a definitive agreement with Optimus Capital Partners, LLC ("Investor") for a $5 million investment commitment. The transaction was structured whereby the Company could draw down funds as needed, but had no obligations to make draws or use these funds if not needed. As funds were drawn down, the Company issued Series E Preferred Stock (the "Preferred Stock"). The Preferred Stock was not convertible into common stock and could be redeemed by the Company after one year. Each issue of Preferred Stock was accompanied by the issuance of five-year warrants to purchase common stock at 100% of the closing price of the company's common stock on the day prior to the date the company gave notice of its election to draw funds. The total exercise value of warrants issued equaled 135% of the drawdown amount. Dividends on the Preferred Stock were payable in additional shares of non-convertible Preferred Stock at the rate of 10% per annum. A commitment fee of $250,000, payable in shares of common stock, was made to the Investor. As part of the agreement, the Company filed a registration statement on July 31, 2009, which was declared effective on September 30, 2009. The investment was used to fund operations and working capital needs of the Company and expand its scientific research.

On July 31, 2009, the Company filed a registration statement with the Securities and Exchange Commission as part of the Preferred Stock Purchase Agreement the Company signed on June 30, 2009, between International Stem Cell Corporation and Optimus Capital Partners. Per the agreement, the Company was required to use its best efforts to promptly file (but in no event later than 30 days after the Effective Date) and cause to become effective as soon as possible a Registration Statement for the sale of all Common Shares. Each Registration Statement was required to comply when it became effective, and, as amended or supplemented, at the time of any Tranche Notice Date, Tranche Closing Date, or issuance of any Common Shares, and at all times during which a prospectus was required by the Act to be delivered in connection with any sale of Common Shares, to comply, in all material respects, with the requirements of the Act. The Company is and has been in compliance with all applicable requirements of that agreement.

To create the Series E Preferred sold to the Investor under the Agreement, on June 30, 2009, the Company amended its Certificate of Incorporation by filing a Certificate of Designation of Preferences, Rights and Limitations of the Series E Preferred. The Series E Preferred has priority over the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and common stock on the proceeds from any sale or liquidation of the Company in an amount equal to the purchase price of the Series E Preferred, plus any accrued but unpaid dividends. From the date of issuance of the Series E Preferred, dividends at the rate per annum of ten percent (10%) of the Purchase Price per share accrued on such shares of Series E Preferred. Following the first anniversary of the issuance date, the Company had the right at its option to redeem the Series E Preferred at an amount equal to the purchase price of the Series E Preferred, plus any accrued but unpaid dividends and plus a redemption premium that declines from 26% (for redemptions between the first and second anniversary of issuance) to zero (for redemptions after the fourth anniversary of issuance).

During 2010, the Company drew $2.4 million of the private equity financing and issued 24 shares of the Series E Preferred Stock, as well as issued 3.7 million warrants which were immediately exercised to purchase 3.7 million shares of the Company's common stock.

Exchange Agreement Series E Preferred Stock

On June 11, 2010, the Company entered into an Exchange Agreement (the "Optimus Exchange Agreement") with Optimus Capital Partners, LLC ("Optimus") under which the Company and Optimus agreed to exchange all of the Series E Preferred Stock previously issued to Optimus pursuant to the Preferred Stock Purchase Agreement dated June 30, 2009 (the "Optimus Preferred Stock Agreement") for all of the promissory notes of Optimus (the "Optimus Notes") issued to the Company in that transaction as payment for shares of the Company's common stock. As part of the exchange transaction, the Company agreed to waive all accrued interest on the Optimus Notes and Optimus agreed to waive all accrued dividends and redemption premiums on the Series E Preferred Stock. The exchange was completed in June 2010 and is discussed in more detail below. Following the return of all shares of Series E Preferred Stock, the Company filed a Certificate of Elimination for the Series E Preferred Stock to remove the powers, preferences, privileges and other rights of the Series E Preferred Stock.

Series F Preferred Stock

On May 4, 2010, International Stem Cell Corporation entered into a Preferred Stock Purchase Agreement with Socius CG II, Ltd., a Bermuda exempted company (the "Investor"), to sell for up to $10,000,000 up to one thousand (1,000) shares of Series F Preferred Stock ("Series F Preferred") at a price of $10,000 per Series F Preferred share. The Company was entitled to determine the time and amount of Series F Preferred to be purchased by the Investor and the Company intended to sell all 1,000 shares of Series F Preferred at a single time. The Series F Preferred could not be converted into common stock and was redeemable by the Company. Under the terms of the Agreement, the Company provided the Investor with a non-refundable fee of 250,000 shares of Company common stock (the "Fee Shares") and issued the Investor a warrant to purchase up to 7,000,000 shares of the Company's common stock, with the exercise price of $1.93 per share, subject to adjustment. The closing of the sale of the Series F Preferred took place in early June 2010.

Exchange Agreement Series F Preferred Stock

On June 11, 2010, the Company, entered into an Exchange Agreement (the "Socius Exchange Agreement") with Socius CG II, Ltd. ("Socius") under which the Company and Socius agreed to exchange all of the Series F Preferred Stock previously issued to Socius pursuant to the Preferred Stock Purchase Agreement dated May 4, 2010 (the "Socius Preferred Stock Agreement") for all of the promissory notes of Socius (the "Socius Notes") issued to the Company in that transaction as payment for shares of the Company's common stock and a $2.5 million note issued in partial payment for the Socius Series F Preferred Stock. As part of the exchange transaction, the Company agreed to waive all accrued interest on the Socius Notes and Socius agreed to waive all

accrued dividends and redemption premiums on the Socius Series F Preferred Stock. The exchange was completed in June 2010 and is discussed in more detail below. Following the return of all shares of Series F Preferred Stock, the Company filed a Certificate of Elimination for the Series F Preferred Stock to remove the powers, preferences, privileges and other rights of the Series F Preferred Stock.

Perpetual Preferred Stock

As part of the Series E financing agreement, the Company recorded a Perpetual Preferred Stock equal to the amount of financing received during the year, plus accrued dividends, and Note Receivable equal to 135% of financing received, which represents the amount of warrant coverage per the agreement, plus accrued interest. In accordance with applicable authoritative guidance on Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, the Company classified the Note Receivable as contra Equity ("Note subscription on Perpetual Preferred Stock") and the Perpetual Preferred Stock as a liability ("Long Term Perpetual Preferred Stock"). The Note Receivable accrued interest at a rate of 2% per year and the Perpetual Preferred Stock accrued a 10% dividend per year. The Company allocated the proceeds of the Series E Preferred Stock according to the value of the preferred stock and the fair value of the warrants. Estimated adjusted fair value of the warrants was determined using the Black-Scholes valuation model using risk-free interest rates ranging from 2.40% to 2.65%, volatility rate ranging from 64.46% to 65.33%, term of five years, and exercise price ranging from $0.56 to $0.74.

As a result of the exchange transactions for the Series E and Series F Preferred stock, all of the Company's obligations under the previously outstanding Series E Preferred Stock and Series F Preferred Stock, which collectively had liquidation preferences of $15 million senior to the shares of the Company's common stock and redemption premiums that started at 26% of the liquidation preference were retired and the Company no longer held any promissory notes of either Socius or Optimus. Because the parties to these exchange transactions determined that the instruments and rights being exchanged were of equivalent value, neither party paid any cash to the other party to the exchange transaction. Therefore, as of June 30, 2010, the Company reversed out all of the Perpetual Preferred Stock and the Notes Receivable related to the Perpetual Preferred Stock.

Series G Preferred Stock

On March 9, 2012, the Company entered into a Series G Preferred Stock Purchase Agreement (the "Series G Agreement") with AR Partners, LLC (the "Purchaser") to sell five million (5,000,000) shares of Series G Preferred Stock ("Series G Preferred") at a price of $1.00 per Series G Preferred share, for a total purchase price of $5,000,000. The Purchaser is an affiliate of Dr. Andrey Semechkin, the Company's Co-Chairman and Chief Executive Officer, and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director.

The Series G Preferred is convertible into shares of common stock at $0.40 per share, resulting in an initial conversion ratio of 2.5 shares of common stock for every share of Series G Preferred. The conversion price may be adjusted for stock splits and other combinations, dividends and distributions, recapitalizations and reclassifications, exchanges or substitutions and is subject to a weighted-average adjustment in the event of the issuance of additional shares of common stock below the conversion price.

The Series G Preferred shares have priority over the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Common Stock on the proceeds from any sale or liquidation of the Company in an amount equal to the purchase price of the Series G Preferred, but such payment may be made only after payment in full of the liquidation preferences payable to holders of any shares of Series D Preferred Stock then outstanding. Historically, from the date of issuance of the Series G Preferred, cumulative dividends at the rate per annum of six percent (6%) of the Purchase Price per share accrued quarterly on such shares of Series G Preferred. Each share of Series G Preferred has the same voting rights as the number of shares of Common Stock into which it would be convertible on the record date. As long as there are at least 1,000,000 shares of Series G Preferred outstanding, the holders of Series G Preferred have (i) the initial right to propose the nomination of two members

of the Board, at least one of which nominees shall be subject to the approval of the Company's independent directors, for election by the stockholder's at the Company next annual meeting of stockholders, or, elected by the full board of directors to fill a vacancy, as the case may be, and (ii) the right to approve any amendment to the certificate of incorporation, certificates of designation or bylaws, in manner adverse to the Series G Preferred, alter the percentage of board seats held by the Series G directors or increase the authorized number of shares of Series G Preferred. At least one of the two directors nominated by holders of the Series G Preferred shares shall be independent based on the NASDAQ listing requirements.

On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into the Waiver Agreement pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after September 30, 2012 on the Series D and Series G Preferred Stock. Accordingly, dividends from inception in the amount of $93,000 accreted to the carrying value of Series G preferred stock have been reversed. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D Preferred Stock or Series G Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement. As of December 31, 2012 and 2011, there was no dividend accrued on Series G Preferred Stock. No dividend was paid to the holders during the years ended December 31, 2012 and 2011.

The Company determined that the Series G convertible preferred shares have a contingent redemption feature allowing redemption by the holder under only some very limited circumstances ("deemed liquidation events"). As the event that may trigger the redemption of the convertible preferred stock is not solely within the Company's control, the convertible preferred stock has been classified as mezzanine equity (outside of permanent equity) on the Company's consolidated balance sheet. Additionally, legal costs related to the Series G financing in the amount of $59,000 were recorded in the mezzanine equity as well.

The Company determined that as the initial conversion price at the date of close of the Series G transaction was lower than the closing market price on that day (March 9, 2012) that a beneficial conversion feature existed in the amount of $1,375,000. Such amount was recorded as a discount on the Series G convertible preferred stock with a corresponding increase in additional paid-in capital. Based on the appropriate accounting guidance, the Company is required to recognize the discount over the period of time from the issuance of preferred shares until the convertible preferred shares can be first converted. As the Series G convertible shares are convertible immediately following their issuance, the discount amount of $1,375,000 was recognized in March 2012 as deemed dividend with a corresponding increase in accumulated deficit.

Common Stock Purchase Agreement

On December 9, 2010, International Stem Cell Corporation ("ISCO" or the "Company") entered into a Common Stock Purchase Agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC ("Aspire Capital") which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $25.0 million of shares of ISCO common stock (the "Purchase Shares") over the term of the Purchase Agreement. In connection with the execution of the Purchase Agreement, ISCO sold Aspire 333,333 shares of common stock for a total of $500,000. Under the Purchase Agreement, the Company also agreed to pay Aspire Capital a commitment fee of 500,000 shares of its common stock. The Company is not obligated to pay any additional expense reimbursement or any placement agent fees in connection with the transaction.

The Purchase Agreement is intended to provide the Company with a source of capital of up to $25 million over a term of up to three years. The sales price of any shares the Company elects to sell will be known by the Company at the time it makes the decision to sell and will be determined by a formula (described below) based on the price of the Company's stock over the preceding 12 days. As a result, the Company will be able to sell shares on whatever schedule it believes best suits its needs and is not required to sell any shares unless it deems such sales to be beneficial to the Company.

Once the Registration Statement (referred to below) is effective, on any day on which the principal market for shares of ISCO common stock is open for trading, over the three-year term of the Purchase Agreement, the Company has the right, in its sole discretion, to provide Aspire Capital with a purchase notice (each, a "Purchase Notice") directing Aspire Capital to purchase the number of shares of ISCO common stock specified in the Purchase Notice. The number of shares the Company may designate in the Purchase Notice varies based on the closing price of the ISCO common stock on the date of the Purchase Notice. The Company may direct Aspire Capital to purchase up to: (1) 100,000 shares of common stock so long as the closing price is above $0.25; (2) 150,000 shares of common stock so long as the closing price is above $1.25; (3) 200,000 shares of common stock so long as the closing price is above $1.75 and (4) 300,000 shares of common stock so long as the closing price is above $2.25. The purchase price per share (the "Purchase Price") for each Purchase Notice is the lower of (i) the lowest sale price for the common stock on the date of sale or (ii) the arithmetic average of the three lowest closing sale prices for the common stock during the 12 consecutive business days ending on the business day immediately preceding the purchase date of those securities.

The timing and the number of shares covered by each Purchase Notice are determined in the Company's sole discretion, and the applicable Purchase Price will be determined prior to delivery of any Purchase Notice. The Company may deliver multiple Purchase Notices to Aspire Capital from time to time during the term of the Purchase Agreement, so long as the most recent purchase has been completed. There are no trading volume requirements or restrictions under the Purchase Agreement. Aspire Capital has no right to require any sales by the Company, but is obligated to make purchases as directed in accordance with the Purchase Agreement.

The Purchase Agreement contains customary representations, warranties, covenants, closing conditions and indemnification and termination provisions. The Purchase Agreement may be terminated by the Company at any time, at its discretion, without any cost or penalty. Aspire Capital has agreed not to cause, or engage in any manner whatsoever, any direct or indirect short selling or hedging of ISCO common stock. The Company did not pay any additional amounts to reimburse or otherwise compensate Aspire Capital in connection with the transaction. There are no limitations on use of proceeds, financial or business covenants, restrictions on future funding, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement.

The Company's net proceeds will depend on the Purchase Price and volume and frequency of the Company's sales of shares to Aspire Capital; provided, however, that the maximum aggregate proceeds from sales of shares to Aspire Capital under the Purchase Agreement is $25 million. The Company anticipates that delivery of Purchase Notices will be made subject to market conditions, in light of the Company's capital needs from time to time and under the limitations contained in the Purchase Agreement. The Company expects to use proceeds from sales of shares to Aspire Capital for funding its research and development activities and for general corporate purposes and working capital requirements.

Registration Rights

In connection with the Purchase Agreement, the Company also entered into a Registration Rights Agreement (the "Registration Rights Agreement") with Aspire Capital, dated December 9, 2010. The Registration Rights Agreement provides, among other things, that the Company will register the resale of the commitment fee shares and the shares that have been or may be sold to Aspire Capital (collectively, the "Securities") by Aspire Capital. The Company further agreed to keep the Registration Statement effective and to indemnify Aspire Capital for certain liabilities in connection with the sale of the Securities under the terms of the Registration Rights Agreement.

During the years ended December 31, 2012 and 2011, the Company issued 5,000,000 and 4,000,000, respectively, shares of common stock to Aspire Capital, raising $2.1 million and $3.4 million, respectively, which was used to fund its research and operational activities.

Reserved Shares

At December 31, 2012, the Company had shares of common stock reserved for future issuance as follows:

Options outstanding	23,377,132
Options available for future grant	16,994,980
Convertible preferred stock	38,973,200
Warrants	3,500,000
	82,845,312

7. Related Party Transactions

Other than with respect to the purchases of Series C, Series D and Series G Preferred Stock discussed above, the Company's related party transactions were for related party dividends and for a facility lease.

Dividend amounts related to Series D and Series G financing, of $0 and $108,000 were accrued at December 31, 2012 and 2011 respectively, to be payable to X-Master, Inc. and AR Partners LLC, entities affiliated with our Chief Executive Officer and Co-Chairman of the Board of Directors, Dr. Andrey Semechkin and Dr. Ruslan Semechkin, Vice President of International Stem Cell and a director. The Series D dividends were payable to both X-Master, Inc. and our Chief Executive Officer and Co-Chairman of the Board of Directors, Dr. Andrey Semechkin, while Series G Preferred Stock dividends were initially cumulative and payable upon conversion of the Series G shares or upon certain Series G deemed liquidation events to AR Partners, LLC. On October 12, 2012, the Company and the holders of all of the outstanding shares of Series D and Series G Preferred Stock entered into the Waiver Agreement pursuant to which such holders irrevocably waived their right to receive any and all accrued but unpaid dividends and interest thereon on or after September 30, 2012 on the Series D and Series G Preferred Stock. Accordingly, the Company reversed all previously accreted and recorded dividends related to Series G Preferred Stock totaling $93,000. Under the Waiver Agreement, the holders of Series D and Series G Preferred Stock are restricted from transferring any shares of Series D Preferred Stock unless the transferee agrees to be bound by the Waiver Agreement.

During the first quarter of 2011, the Company executed an operating lease for our corporate offices with S Real Estate Holdings LLC. S Real Estate Holdings LLC is owned by Dr. Andrey Semechkin, the Company's Chief Executive Officer and Co-Chairman of the Board of Directors. The lease agreement was negotiated at arm's length and was reviewed by the Company's outside legal counsel. The terms of the lease were reviewed by a committee of independent directors, and the Company believes that, in total, those terms are at least as favorable to the Company as could be obtained for comparable facilities from an unaffiliated party. For the years ended December 31, 2012 and 2011, the Company recorded $113,000 and $106,000, respectively, in rent expense that was related to the facility lease arrangement with related parties.

8. Income Taxes

The Company accounts for income taxes in accordance with applicable authoritative guidance, which requires the Company to provide a net deferred tax asset/liability equal to the expected future tax benefit/expense of temporary reporting differences between book and tax accounting methods and any available operating loss or tax credit carryforwards. The Company has available at December 31, 2012, operating loss carryforwards of approximately $43,966,000, which may be applied against future taxable income and will expire in various years through 2032. At December 31, 2011, the Company had operating loss carryforwards of approximately $34,899,000. The increase in carryforwards for the year ended December 31, 2012 is approximately $9,067,000.

The amount of and ultimate realization of the benefits from the operating loss carryforwards for income tax purposes is dependent, in part, upon the tax laws in effect, the future earnings of the Company, and other future events, the effects of which cannot be determined at this time. Because of the uncertainty surrounding the realization of the loss carryforwards, the Company has established a valuation allowance equal to the tax effect

of the loss carryforwards, R&D credits, and accruals; therefore, no net deferred tax asset has been recognized. A reconciliation of the statutory Federal income tax rate and the effective income tax rate for the year ended December 31, 2012 and 2011 follows:

	December 31, 2012	December 31, 2011
Statutory federal income tax rate	35%	35%
Permanent items	(8)%	(4)%
State income taxes, net of federal taxes	4%	7%
Change in valuation allowance	(30)%	(41)%
Tax credits claimed	1%	2%
Other	(2)%	1%
Effective income tax rate	0%	0%

The Company files income tax returns in the U.S. federal jurisdiction, and various states. With few exceptions, the Company is no longer subject to U.S. federal, state and local income tax examinations by tax authorities for years before 2007. The Company does not have any material uncertain tax positions as of December 31, 2012 and 2011. The Company does not believe it is reasonably possible that the total amount of unrecognized tax benefits as of December 31, 2012 will materially change in the next 12 months.

The Company may be subject to IRC code section 382 which could limit the amount of the net operating loss and tax credit carryovers that can be used in future years. The Company has not completed a study to assess whether an ownership change has occurred, as defined by IRC Section 382/383 or whether there have been multiple ownership changes since the Company's formation due to the complexity and cost associated with such a study, and the fact that there may be additional such ownership changes in the future. The Company estimates that if such a change did occur, the federal and state net operating loss carryforwards and research and development credits that can be utilized in the future will be significantly limited. There can be no assurance that the Company will ever be able to realize the benefit of some or all of the federal and state loss carryforwards or the credit carryforwards, either due to ongoing operating losses or due to ownership changes, which limit the usefulness of the loss carryforwards.

Significant components of deferred tax assets and liabilities are as follows (in thousands):

	December 31, 2012	December 31, 2011
Deferred tax assets (liabilities)		
Current deferred tax assets (liabilities)	$ 120	$ 148
Deferred revenues	—	113
Current deferred tax assets	$ 120	$ 261
Valuation allowances	(120)	(261)
Net current deferred tax assets	$ —	$ —
Net operating loss carryforwards	$ 17,150	$ 14,590
Stock based compensation	2,532	1,862
Research and development tax credit	1,206	842
Other	10	—
Non-current deferred tax assets	$ 20,898	$ 17,294

Valuation allowances	(20,898)	(17,294)
Net non-current deferred tax assets	$ —	$ —
Non-current deferred tax liabilities	$ —	$ —
Net deferred tax assets	$ —	$ —

The components of the provisions for income taxes were as follows:

	December 31, 2012	December 31, 2011
Current	$ —	$ —
Deferred	—	—
Total	$ —	$ —

9. Stock Options and Warrants

Stock Options

The Company has adopted the 2006 Equity Participation Plan (the "2006 Plan"). The options granted under the 2006 Plan may be either qualified or non-qualified options. Up to 15,000,000 options may be granted to employees, directors and consultants under this Plan. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant.

In April 2010, the Company adopted the 2010 Equity Participation Plan (the "2010 Plan"). The options granted under the 2010 Plan may be either qualified or non-qualified options. Up to 18,000,000 options may be granted to employees, directors and consultants under the 2010 Plan. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant.

In November and December of 2009, the Company issued outside the 2006 and 2010 option plans non-qualified stock options to purchase 10,257,593 shares of common stock to certain employees and consultants. These options vest over 50 months and expire no later than 10 years from the date of grant.

In accordance applicable authoritative guidance, the Company is required to establish assumptions and estimates of the weighted-average fair value of stock options granted, as well as using a valuation model to calculate the fair value of stock-based awards. The Company uses the Black-Scholes option-pricing model to determine the fair-value of stock-based awards. All options are amortized over the requisite service periods. During the years ended December 31, 2012 and 2011, the Company recognized $2.36 and $3.54 million, as stock-based compensation expense, respectively. Unrecognized compensation expense related to stock options as of December 31, 2012 and 2011 was $3.37 and $7.45 million, respectively, which is expected to be recognized over a weighted average period of approximately 2.2 years and 2.9 years, respectively.

Stock-based compensation for stock options granted to non-employees has been determined using the estimated fair value of the stock options issued, based on the Black-Scholes Option Pricing Model. These options are revalued at each reporting period until fully vested, with any change in fair value recognized in the consolidated statements of operations.

The fair value of options granted is estimated at the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumptions for the years ended December 31, 2012 and 2011:

	Year ended December 31, 2012	Year ended December 31, 2011
Significant assumptions (weighted-average):		
Risk-free interest rate at grant date	0.94%	1.81%
Expected stock price volatility	121.90%	81%
Expected dividend payout	0%	0%
Expected option life-years based on management's estimate	5.69 years	6.13 years

Exercise Prices	Options Outstanding: Number Outstanding	Options Outstanding: Weighted Average Remaining Contractual Life (Years)	Options Outstanding: Weighted Average Exercise Price	Options Exercisable and vested: Number Exercisable	Options Exercisable and vested: Weighted Average Remaining Contractual Life (Years)	Options Exercisable and vested: Weighted Average Exercise Price
$0.22-$0.50	4,080,800	7.41	$ 0.41	2,239,220	5.86	$ 0.43
$0.51-$0.75	9,365,293	6.95	$ 0.62	6,782,943	6.90	$ 0.62
$0.76-$1.00	2,539,939	3.38	$ 0.99	2,399,939	3.07	$ 1.00
$1.01-$1.25	355,000	8.34	$ 1.10	227,900	8.34	$ 1.10
$1.26-$1.50	1,206,100	7.13	$ 1.31	777,100	6.88	$ 1.33
$1.51-$3.20	5,830,000	7.83	$ 1.94	2,980,800	7.69	$ 1.97
	23,377,132	6.89	$ 0.99	15,407,902	6.32	$ 0.95

Transactions involving stock options issued to employees, directors and consultants under the 2006 Plan, the 2010 Plan and outside the plans are summarized below. Options issued have a maximum life of 10 years. The following table summarizes the changes in options outstanding and the related exercise prices for the Company's common stock options issued:

	Number of Shares issued under 2006 Plan and 2010 Plan	Weighted Average Exercise Price Per Share
Outstanding at December 31, 2010	10,009,937	$ 0.92
Granted	6,997,500	$ 1.69
Exercised	(300,820)	$ 0.50
Canceled or expired	(1,976,410)	$ 1.17
Outstanding at December 31, 2011	14,730,207	$ 1.26
Granted	2,398,000	$ 0.38
Exercised	(17,500)	$ 0.22
Canceled or expired	(1,987,807)	$ 0.78
Outstanding at December 31, 2012	15,122,900	$ 1.18

	Number of Shares issued outside the Plan	Weighted Average Exercise Price Per Share
Outstanding at December 31, 2010	10,708,939	$ 0.64
Granted	—	$ —
Exercised	(454,170)	$ 0.59
Canceled or expired	(2,000,537)	$ 0.62

Outstanding at December 31, 2011	8,254,232	$	0.65
Granted	—	$	—
Exercised	—	$	—
Canceled or expired	—	$	—
Outstanding at December 31, 2012	8,254,232	$	0.65

Warrants

Brookstreet Securities Corporation

As of December 31, 2006, Brookstreet Securities Corporation ("Brookstreet") had earned 1,976,190 warrants as partial compensation for its services as placement agent for the raising of equity capital. An additional 274,000 warrants were earned by Brookstreet in the first quarter of 2007, for a total of 2,250,190 warrants related to the

Company's private placement. In addition, 426,767 warrants were granted to a number of individuals as compensation for services rendered to the Company. Each Warrant entitles the holder thereof to purchase the number of shares of common stock that could be purchased by the dollar amount of the Warrant being exercised at $1.00 in the case of the Brookstreet warrants and $0.80 in the case of the individuals' warrants. The Company recognized the value attributable to the individuals' warrants in the amount of $222,000 and applied it to general and administrative expense. The Company recognized the value attributable to the Brookstreet warrants in the amount of $1.2 million. The Company recognized the Brookstreet warrants as a component of additional paid-in capital with a corresponding reduction in additional paid-in capital to reflect this as a non-cash cost of the offering. Proceeds from the private equity placement totaled $9.9 million and are offset by cash offering costs of $1.5 million as well as the non-cash offering cost of $1.2 million related to the fair value of the Brookstreet warrants. The Company valued the Brookstreet warrants and the warrants issued to the individuals using the Black-Scholes pricing model and the following assumptions: contractual terms of 5 years and 3 years, an average risk free interest rate of 4.58% and 5.13%, a dividend yield of 0% and 0%, and volatility of 71% and 63%, respectively.

The number of warrants converted into common stock by Brookstreet was 484,675 for the completion of the Brookstreet financing and issued 1,370,000 shares of common stock that was part of a private placement of securities by ISC California during the second half of 2006. The net proceeds from the shares whose sale was finalized in 2007 was $1.2 million net of cash fees and expenses. In connection with the final settlement in 2007, the selling agent for the private placement received 274,000 additional warrants, which entitle the holder thereof to purchase that number of shares of common stock for $1.00 each.

During 2008, the Company raised additional capital by issuing Preferred Series A, B, C and D stock. This issuance of the Preferred Series C triggered an anti-dilutive clause in the Brookstreet warrant agreement, where Brookstreet would receive an adjustment downward in the price it pays for converting its warrants and resulted in a deemed dividend of $337,000. Brookstreet earned a total of 2,250,190 warrants in 2006 and 2007 in connection with the Company's private placement. Each Warrant entitles the holder thereof to purchase one share of common stock for $1.00, revalued to $0.56 per warrant. The Company recognized the value attributable to the warrants in the amount of $1.2 million in 2006 and $169,000 in 2007 as a component of additional paid-in capital with a corresponding reduction in additional paid-in capital to reflect the issuance as a non-cash cost of the offering. Prior to 2009, the Company valued the Brookstreet warrants using the Black-Scholes pricing model and the following assumptions: contractual terms of 5 years, an average risk free interest rate of 4.58%, a dividend yield of 0%, and volatility of 70.57%. During 2009, the Company issued a total of 3,510,206 shares of common stock which related to warrants originally issued to Brookstreet. Brookstreet converted a total of 612,267 warrants into 484,675 shares of common stock at an average cashless conversion price of $0.56 per share.

Implementation of Accounting Standards Code (ASC) 815-40-15, (formerly known as EITF 07-5 "Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity's Own Stock Price")

The Accounting Standards Code (ASC) 815-40-15, with an effective date of December 15, 2008, should have been implemented as of January 1, 2009, and in future periods. This Issue applies to any freestanding financial instrument or embedded feature that has all the characteristics of a derivative as described in ASC 815-10-15-83, (previously paragraphs 6–9 of Statement 133) for purposes of determining whether that instrument or embedded feature qualifies for the first part of the scope exception in ASC 815-10-74 (previously paragraph 11(a) of Statement 133). This Issue also applies to any freestanding financial instrument that is potentially settled in an entity's own stock, regardless of whether the instrument has all the characteristics of a derivative for purposes of determining whether the instrument is within the scope of ASC 875-40.

During 2008, the Company issued a Series C Preferred round of financing which triggered the anti-dilution clause in the Brookstreet warrant agreement ("Brookstreet Warrants"). From issuing the Series C Preferred Stock, the exercise prices of the Brookstreet Warrants were revalued down to $0.56 per warrant. Based on the anti-dilution clause being triggered and the exercise price of the Brookstreet Warrants being revalued downward to $0.56, ASC 815-40-15 should have caused the Brookstreet Warrants to be treated and accounted for as a liability.

The anti-dilution provisions of the Brookstreet Warrants failed the criteria set by this ASC and therefore required reclassification from equity to liability. The reclassification resulted in the requirement to revaluate the Brookstreet Warrants at each reporting period with a corresponding charge or credit to the statement of operations. Valuation of the warrants was estimated using the Monte-Carlo simulation method using the following assumptions: stock price and warrant price as of the valuation date, the Company's historical stock price, interest rate on U.S. treasury notes, dividend rate derived from the Series D Preferred Stock, warrant expiration; simulated as a daily interval and anti-dilution impact if the Company had to raise capital below $0.25 per share. We recorded warrant liabilities of zero and $38,000 as of March 31, 2012 and 2011, respectively. In addition, in the three months ended March 31, 2012 and 2011, we recorded income of $38,000 and $871,000, respectively, in our consolidated statements of operations related to the change in the fair value of warrants.

The 1,721,629 Brookstreet Warrants outstanding as of December 31, 2011 expired on February 14, 2012, and the Company recorded $38,000 to reduce the fair market value of the warrants to zero as they were no longer outstanding as of December 31, 2012.

Warrants issued with other financings

During 2007 and 2008, the Company entered into various agreements to borrow working capital and as part of these agreements, the Company issued warrants to the holders to purchase common stock. The Company issued 1,629,623 warrants to various investors at an exercise price of $0.80 per share of which zero and 1,317,921 warrants remained outstanding at December 31, 2012 and December 31, 2011, respectively. In addition, 1,400,000 warrants were issued to YKA Partners, an affiliated company of our former Co-Chairman of the Board with an exercise price of $0.25 per share, all of which remained outstanding at December 31, 2012 and 2011.

Warrants issued with Preferred Stock

During 2008, in connection with the Company's fund raising efforts, two warrants to purchase shares of common stock were issued with the purchase of one share of Series A Preferred Stock, where an additional 2,000,000 common stock warrants were outstanding and two warrants to purchase shares of common stock were issued with the purchase of one share of Series B Preferred Stock, where an additional 1,100,000 common stock warrants were outstanding. As of December 31, 2010, 400,000 warrants related to the Series A Preferred Stock were converted into 800,000 common shares.

As of December 31, 2012 and 2011, there were 1,600,000 and 300,000 warrants related to the Series A Preferred Stock and Series B Preferred Stock, respectively, each at an exercise price of $0.25 per share. Warrants related to the Series A Preferred Stock expired in January 2013, and warrants related to the Series B Preferred Stock expire in July 2014.

Warrants issued to BioTime

During June 2008, the Company entered into an agreement with BioTime, Inc. ("BioTime"). Based on the agreement, BioTime agreed to pay the Company an advance of $250,000 to produce, make, and distribute joint products (as defined in that agreement). As part of the agreement, the Company issued warrants for Bio Time to purchase 30,000 shares of the Company's common stock at $0.25 per share. These warrants expired in December 2012.

Warrants issued in connection with SkinCare Marketing Agreement

In September 2011, the Company signed a Marketing Agreement ("agreement") with an effective date of June 30, 2011, with a third party marketing organization. According to the terms of the agreement as described in Note 10 below, Commitments and Contingencies, under Marketing Arrangement and Agreement, the third party

marketing organization would provide assistance to LSC to sell its skin care products through various specific proprietary mailings. The agreement provides for two tranches of common stock warrants to be issued by the Company for the benefit of the third party marketing organization for 100,000 shares each, with strike prices of $1.50 and $2.00, respectively, vesting over four quarters, and a warrant term of five years.

Accordingly, there were warrants for 100,000 shares of common stock at a strike price of $1.50 vested as of December 31, 2011 in connection with the agreement. In addition, as of December 31, 2012, there were 100,000 warrants vested with a strike price of $2.00. The Company valued the warrants issued in connection with the SkinCare Marketing Agreement using the Black-Scholes pricing model and the following assumptions: contractual terms of 5 years, an average risk free interest rate of 0.94%, a dividend yield of 0%, and volatility of 134%.

Share data related to warrant transactions as of December 31, 2012 were as follows:

	Series A	Series B	YKA Loan	BioTime	Bridge Loan & non-cash Grants	Brookstreet	Skin Care Marketing	Total Shares Issuable Upon Exercise of Warrants	Price per Share Range	Weighted average exercise price
Outstanding, December 31, 2010	1,600,000	500,000	1,400,000	30,000	1,380,721	1,760,157	—	6,670,878	$ 0.25-0.80	$ 0.45
2011										
Issued							200,000	200,000	1.50-2.00	1.75
Exercised		(200,000)			(62,800)	(38,528)		(301,328)	0.25-0.80	0.40
Forfeited/Expired								—		
Outstanding, December 31, 2011	1,600,000	300,000	1,400,000	30,000	1,317,921	1,721,629	200,000	6,569,550	$ 0.25-2.00	$ 0.49
2012										
Issued								—		
Exercised								—		
Forfeited/Expired				(30,000)	(1,317,921)	(1,721,629)		(3,069,550)	$ 0.56-0.80	$ 0.66
Outstanding, December 31, 2012	1,600,000	300,000	1,400,000	—	—	—	200,000	3,500,000	$ 0.25-2.00	$ 0.34

10. Commitments and Contingencies

Leases

We have established our primary research facility in 8,215 square feet of leased office and laboratory space in Oceanside, California. Our lease for this facility expires in August 2016. The base rent as of December 31, 2012 was $8,338 per month. The facility has leasehold improvements which include cGMP (current Good Manufacturing Practices) level clean rooms designed for the derivation of clinical-grade stem cells and their differentiated derivatives, research laboratories for our stem cell differentiation studies and segregated rooms for biohazard control and containment of human donor tissue. The monthly base rent will increase by 3% annually on the anniversary date of the agreement.

During 2010 we utilized a 3,240 square foot laboratory in Walkersville, Maryland. Our lease for this facility expired in March 2011, and we moved into a new manufacturing facility in Frederick, Maryland which we use for laboratory and administrative purposes. The base rent as of December 31, 2012 was $11,306. The initial lease term expires December 31, 2015 and there is an option for an additional five years.

On February 25, 2011, the Company entered into a lease agreement (the “Lease Agreement”) with S Real Estate Holdings LLC to allow the Company to expand into new corporate offices located at 5950 Priestly Drive, Carlsbad, California. The new building is used for administrative purposes, but could also be used for research and development purposes if such space is needed in the future. The lease covers approximately 4,653 square feet, which was occupied on or about March 1, 2011. The lease expires on February 29, 2016, subject to the Company’s right to extend the term for up to five additional years. The Company began rent payments in March 2011 once it occupied the facilities, at an initial rate of $5,118 per month. The lease was amended effective July

2011 to account for additional square footage occupied by Company personnel. As such, the initial monthly rate was increased to $9,018 per month. In addition, the monthly base rent will increase by 3% annually on the anniversary date of the agreement. The base rent as of December 31, 2012 was $9,289. The Company is also obligated to pay a portion of the utilities for the building and increases in property tax and insurance. In addition, the Company will pay its proportionate share of the CC&R fees.

S Real Estate Holdings LLC is owned by Dr. Andrey Semechkin, the Company's Chief Executive Officer and Co-Chairman of the Board of Directors. The Lease Agreement was negotiated at arm's length and was reviewed by the Company's outside legal counsel. The terms of the lease were reviewed by a committee of independent directors, and the Company believes that, in total, those terms are consistent with the terms that could be obtained for comparable facilities from an unaffiliated party.

Future minimum lease payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2012, are as follows (in thousands):

	Amount
2013	367
2014	363
2015	372
2016	97
2017	3
Total	$ 1,202

Marketing Arrangement and Agreement

The Company signed a Term Sheet ("arrangement") in late 2010 with a third party marketing organization that would serve as a consultant and assist in marketing for Lifeline Skin Care, Inc., ("LSC") a wholly-owned subsidiary of International Stem Cell, to sell its skin care products through various proprietary mailings. As part of the arrangement, there were various phases and objectives to accomplish, one of which was the potential formation of a joint venture in the future between the parties. Based on the arrangement, LSC paid to the marketing organization 40% of net profits (as defined in the arrangement) generated from the proprietary mailings.

In September 2011, the Company signed a Marketing Agreement ("agreement") with an effective date of June 30, 2011, superseding the terms of the arrangement with the third party marketing organization. According to the agreement, the third party marketing organization will continue to provide assistance to LSC to sell skin care products through various specific proprietary mailings. In exchange for such services, the Company will pay 20% of net revenues for Direct Sales (as defined in the agreement) generated from the proprietary mailings. In addition, the Company agreed to pay 10% of net revenues for Referral Sales. The agreement specifies that the parties do not intend to create a joint venture, and that either party may terminate the agreement upon 30-day written notice. In addition, the agreement provides for two tranches of common stock warrants to be issued by the Company for the benefit of the third party marketing organization for 100,000 shares each, with strike prices of $1.50 and $2.00, respectively, with vesting over four quarters, and warrant term of five years. Subsequently in July 2012, we renegotiated the commission structure to reflect slightly lower rates, 18% on net revenues derived from direct sales and 9% on net revenues derived from referral sales. For the month of December 2012, the commission rate was temporarily increased to 25% on net revenues derived from direct sales on qualifying volume of orders. The Company recognized $73,000, and $75,000 in stock-based compensation from warrants issued for services during the years ended December 31, 2012 and 2011, respectively.

LSC incurred $149,000 and $430,000 as marketing expenses during the years ended December 31, 2012 and 2011, respectively, under the terms of this arrangement and agreement.

Customer Concentration

During the year ended December 31, 2012, one major customer accounted for 13% of our consolidated revenues. During the year ended December 31, 2011, one major customer accounted for approximately 13% of our consolidated revenues, and another major customer accounted for approximately 11% of our consolidated revenues. No other single customer accounted for more than 10% of our revenues for any period presented.

11. Subsequent Events

Amended License Agreements

On February 7, 2013 the Company and Advanced Cell Technology, Inc. ("ACT") entered into Amended and Restated License Agreements (the "Amendment") for the purpose of completely amending and restating the terms of the three Exclusive License Agreements ("ACT IP," "Infigen IP," and "UMass IP" or collectively "Exclusive License Agreement"), as amended on August 25, 2005. Under the terms of the Amendment the Company acquired exclusive world-wide rights to all human therapeutic uses and cosmetic uses from ACT and Infigen's early work on parthenogenic-derived embryonic stem cells, as well as certain rights to patents covering Single Blastomere technology. Pursuant to the Amendment all minimum R&D requirements and all milestone payments due to ACT under the Exclusive License Agreement have been eliminated. The Company will no longer pay any royalties under the ACT IP Agreement and Infigen IP Agreement, and its obligation to pay royalties that ranged from 6%-12% under the UMass IP Agreement has been reduced to 0.25% of the net sales of products using technology covered by the UMass IP Agreement.

Securities Purchase Agreements and Related Transactions

On January 22, 2013, to obtain funding for working capital purposes, the Company entered into a Securities Purchase Agreement (the "January 2013 Purchase Agreement") with Dr. Andrey Semechkin and Dr. Simon Craw to sell a total of 10,125,000 shares of common stock at a price of $0.20 per share, for a total purchase price of $2,025,000. Dr. Andrey Semechkin is the Company's Co-Chairman and Chief Executive Officer. Dr. Simon Craw is the Company's Executive Vice President Business Development. The sale of the shares of common stock was completed on January 22, 2013. In connection with the sale of these shares the Company issued to each purchaser a warrant, exercisable for a period of 5 years, to purchase (at an exercise price of $0.20 per share) a number of shares of common stock equal to 50% of the shares purchased by that purchaser, for a total of 5,062,500 shares subject to the warrants.

Immediately before the sale of the shares and warrants under the January 2013 Purchase Agreement described above, the Company issued an additional 8,000,000 shares of common stock upon conversion of all outstanding shares of Series C Preferred Stock held by one investor.

On March 12, 2013, to obtain funding for working capital purposes, the Company entered into a Securities Purchase Agreement (the "March 2013 Purchase Agreement") with certain investors, including Dr. Andrey Semechkin, to sell a total of 5,000,000 shares of common stock at a price of $0.20 per share, for a total purchase price of $1,000,000. Dr. Andrey Semechkin is the Company's Co-Chairman and Chief Executive Officer and purchased $100,000 worth of common stock. Each of the other investors has had a long-standing relationship with the Company and has closely followed the Company. The sale of the shares of common stock was completed on March 12, 2013. In connection with the sale of these shares the Company issued to each investor a warrant, exercisable for a period of five years, to purchase (at an exercise price of $0.20 per share) a number of shares of common stock equal to 50% of the shares purchased by that investor, for a total of 2,500,000 shares subject to the warrants.

Additional Financing from Aspire Capital Fund, LLC

Under our Common Stock Purchase Agreement with Aspire Capital Fund, LLC ("Aspire Capital"), we may sell from time to time up to an aggregate of $25.0 million of shares of common stock through approximately January 2014. From commencement through December 31, 2012, we sold a total of 9,333,333 shares of common stock to Aspire Capital for an aggregate of $5,942,000. In addition, from January 1, 2013 through March 15, 2013, we sold an additional 1,200,000 shares to Aspire Capital for an aggregate of $264,000.

PART II
INFORMATION NOT REQUIRED IN THE PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the fees and expenses incurred or expected to be incurred by International Stem Cell Corporation in connection with the issuance and distribution of the securities being registered hereby, other than underwriting discounts and commissions. All of the amounts shown are estimated except the SEC registration fee. Estimated fees and expenses can only reflect information that is known at the time of filing this registration statement and are subject to future contingencies, including additional expenses for future offerings.

Securities and Exchange Commission registration fee	$ 2,046
Transfer agent's fees and expenses	$ 2,500
Printing and engraving expenses	$ 5,000
Legal fees and expenses including Blue Sky fees	$275,000
Accounting fees and expenses	$ 55,000
Miscellaneous expenses	$ 25,454
Total	$365,000

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Company's certificate of incorporation includes a provision to indemnify any and all persons it has power to indemnify under such law from and against any and all of the expenses, liabilities or other matters referred to in or covered by such law. In addition, the Company's certificate of incorporation includes a provision whereby the Company shall indemnify each of the Company's directors and officer in each and every situation where, under the Delaware General Corporation law the Company is not obligated, but is permitted or empowered to make such indemnification, except as otherwise set forth in the Company's bylaws. The Company's certificate of incorporation also includes a provision which eliminates the personal liabilities of its directors for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the Company or its stockholders, (2) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (3) under Section 174 of the Delaware General Corporation Law or (4) for any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Company's bylaws provide that (1) it is required to indemnify its directors to the fullest extent permitted by the Delaware General Corporation Law and may, if and to the extent authorized by the Board of Directors, indemnify its officers, employees or agents and any other person whom it has the power to indemnify against liability, reasonable expense or other matters and (2) the Company shall advance expenses to its directors and officer who are entitled to indemnification, as incurred, to its directors and officers in connection with a legal proceeding, subject to limited exceptions.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

During the three-year period preceding the date of the filing of this registration statement, we have issued securities in the transactions described below without registration under the Securities Act.

(a) Issuance of stock for cash or services.

These securities were offered and sold by us in reliance upon exemptions from the registration statement requirements provided by Section 4(2) of the Securities Act or Regulation D under the Securities Act as transactions by an issuer not involving a public offering.

From January 1, 2010 through December 31, 2010, the Company issued 1,978,353 shares of common stock to eleven accredited investors for an aggregate of $1,730,000.

From January 1, 2010 through December 31, 2010, as consideration for consulting services, the Company issued 749,167 shares of common stock to eleven consultants.

From May 1, 2010 through December 31, 2010, as part of a Series F Preferred Stock Purchase Agreement, the Company issued shares of Series F Preferred Stock and warrants to purchase a total of 7,000,000 shares of common stock (all of which warrants were exercised) for an aggregate of $7,500,000.

From December 17, 2010 through March 15, 2013, as part of the Common Stock Purchase Agreement with Aspire, the Company issued 10,533,333 shares of common stock for an aggregate of $6,206,460.

On January 14, 2011, as consideration for consulting services, the Company issued 150,000 shares of common stock to a consultant.

On March 9, 2012, the Company issued 5,000,000 shares of Series G Preferred Stock to an accredited investor for an aggregate of $5,000,000.

On January 22, 2013, the Company issued 10,125,000 shares of common stock and warrants to purchase 5,062,500 shares of common stock to two accredited investors, each of whom was an executive officer of the Company, for an aggregate of $2,025,000.

On March 12, 2013, the Company issued 5,000,000 shares of common stock and warrants to purchase 2,500,000 shares of common stock to accredited investors, each of whom was a prior stockolder, for an aggregate of $1,000,000.

(b) Issuance of stock on conversion of preferred stock.

From the beginning of 2010 through April 29, 2013 the holders of a total of 1,251,445 shares of Series B Preferred Stock and Series D Preferred Stock converted their shares to a total of 12,936,800 shares of common stock. These issuances were exempt pursuant to Section 3(a)(9) of the Securities Act. On January 22, 2013, 8,000,000 shares of common stock were issued for the conversion of all of our outstanding shares of Series C Preferred Stock which was an exempt issuance pursuant to Section 3(a)(9) of the Securities Act.

(c) Issuances upon conversion or exercise of warrants.

From the beginning of 2010 through April 29, 2013, we issued a total of 6,608,269 shares of common stock upon exercise or conversion of previously issued warrants. The issuances upon conversion were exempt from registration pursuant to Section 3(a)(9) of the Securities Act and the issuance upon exercise were exempt from registration pursuant to Section 4(2) of the Securities Act.

ITEM 16. EXHIBITS

A list of exhibits filed herewith is contained in the exhibit index that immediately precedes such exhibits. These exhibits are included with this filing.

ITEM 17. UNDERTAKINGS

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;

(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;

(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;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment 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.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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.

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 foregoing provisions, 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.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) or under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Carlsbad, California on May 6, 2013.

INTERNATIONAL STEM CELL CORPORATION

By: /s/ Andrey Semechkin
Andrey Semechkin
Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature:	Capacity:	Date:
/s/ Andrey Semechkin Andrey Semechkin	Chief Executive Officer and Director (Principal Executive Officer)	May 6, 2013
/s/ Jay Novak Jay Novak	Interim Chief Financial Officer (Principal Financial and Accounting Officer)	May 6, 2013
/s/ James Berglund James Berglund*	Director	May 6, 2013
/s/ Charles J. Casamento Charles J. Casamento*	Director	May 6, 2013
/s/ Paul V. Maier Paul V. Maier*	Director	May 6, 2013
/s/ Ruslan Semechkin Ruslan Semechkin*	Director	May 6, 2013
/s/ Donald A. Wright Donald A. Wright*	Co-Chairman and Director	May 6, 2013

*By: /s/ Andrey Semechkin
Andrey Semechkin
Attorney-in-fact

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EXHIBIT INDEX

Exhibit Number	Description
3.1	Certificate of Incorporation (incorporated by reference to Exhibit 3.4 of the Registrant's Form 10-SB filed on April 4, 2006, File No. 000-51891).
3.2	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Preliminary Information Statement on Form 14C filed on December 29, 2006, File No. 000-51891).
3.3	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on June 4, 2012, File No. 000-51891).
3.4	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on May 6, 2011, File No. 000-51891).
4.1	Form of Specimen Common Stock Certificate. (incorporated by reference to Exhibit 4.1 of the Registrant's Form 10-KSB filed on April 9, 2007, File No. 000-51891).
4.2	Certification of Designation of Series B Preferred Stock (incorporated by reference to Exhibit 4.1 of the Registrant's Form 8-K filed on May 12, 2008, File No. 000-51891).
4.3	Certification of Designation of Series D Preferred Stock (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on January 5, 2009, File No. 000-51891).
4.4	Certificate of Designation of Series G Preferred Stock (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on March 14, 2012, File No. 000-51891).
4.5	Warrant Certificate for warrants in connection with Series B Preferred Stock (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on May 12, 2008, File No. 000-51891).
4.6	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.9 of the Registrant's Form S-1 filed on December 7, 2012, File No. 333-184493).
4.7	Form of Common Stock Purchase Warrant for Investors in the Units.**
4.8	Form of Common Stock Purchase Warrant for Placement Agents of the Units.**
5.1	Opinion of DLA Piper LLP (US) (incorporated by reference to Exhibit 5.1 of the Registrant's Form S-1 filed on December 7, 2012, File No. 333-184493).
10.9*	International Stem Cell Corporation 2006 Equity Participation Plan (incorporated by reference to Exhibit 10.15 of the Registrant's Form 8-K filed on December 29, 2006, File No. 000-51891).
10.12	Common Stock Purchase Warrant issued with Multiple Advance Convertible Note (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on August 18, 2008, File No. 000-51891).
10.13*	Employment Agreement with Andrey Semechkin (incorporated by reference to Exhibit 10.4 of the Registrant's Form 8-K filed on January 5, 2009, File No. 000-51891).
10.14*	Employment Agreement with Ruslan Semechkin (incorporated by reference to Exhibit 10.5 of the Registrant's Form 8-K filed on January 5, 2009, File No. 000-51891).
10.16*	Amended and Restated Employment Agreement with Brian Lundstrom dated May 11, 2011 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on May 13, 2011, File No. 000-51891).
10.17*	Employment offer letter with Kurt May dated June 9, 2011 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q filed on November 14, 2011, File No. 000-51891).
10.18*	Employment Offer Letter with Linh Nguyen dated September 20, 2011 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on September 27, 2011, File No. 000-51891).

Exhibit Number	Description
10.19*	Form of Stock Option Agreement for stock options granted outside of the 2006 Equity Participation Plan (incorporated by reference to Exhibit 10.19 of the Registrant's Form 10-K filed on March 30, 2010, File No. 000-51891).
10.21	Common Stock Purchase Agreement, dated as of December 9, 2010, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on December 13, 2010, File No. 000-51891).
10.22	Registration Rights Agreement, dated as of December 9, 2010, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on December 13, 2010, File No. 000-51891).
10.23	Cell Culture Automation Agreement dated May 13, 2010 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on May 19, 2010, File No. 000-51891).
10.26*	2010 Equity Participation Plan (incorporated by reference to Appendix A of the Registrant's Schedule 14A filed March 30, 2010, File No. 000-51891).
10.27	Standard Multi-Tenant Office Lease – Gross Agreement, dated as of February 19, 2011, by and between the Company and S Real Estate Holdings, LLC (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed February 28, 2011, File No. 000-51891).
10.28	Series G Preferred Stock Purchase Agreement dated March 9, 2012 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.29	Amended and Restated Investors Rights Agreement dated March 9, 2012 (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.30	Management Rights Letter dated March 9, 2012 (incorporated by reference to Exhibit 10.3 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.31*	Consulting Contract dated March 9, 2012, with Kenneth C. Aldrich (incorporated by reference to Exhibit 10.4 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.32*	Agreement to Provide Consulting Services dated March 9, 2012, with Kenneth C. Aldrich (incorporated by reference to Exhibit 10.5 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.33*	Agreement to Provide Consulting Services dated March 9, 2012, with Jeffrey D. Janus (incorporated by reference to Exhibit 10.6 of the Registrant's Form 8-K filed on March 15, 2012, File No. 000-51891).
10.34*	Consulting Agreement with James Berglund dated July 24, 2012 (incorporated by referenced to Exhibit 4.8 of the Registrant's Form 10-Q filed on November 8, 2012, File No. 000-51891).
10.35	Dividend Waiver Agreement dated October 12, 2012 (incorporated by reference to Exhibit 10.29 of the Registrant's Form S-1 filed on October 18, 2012, File No. 333-184493).
10.36	Securities Purchase Agreement dated January 22, 2013 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed on January 24, 2013, File No. 000-51891).
10.37	Form of Warrant Agreement for January 22, 2013 Purchase (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on January 24, 2013, File No. 000-51891).

Exhibit Number	Description
10.38	Amended and Restated License Agreement with Advanced Cell Technology, Inc. dated February 7, 2013 (ACT IP) (incorporated by reference to Exhibit 10.1 of the Registrant's Amendment to Form 8-K filed on February 14, 2013, File No. 000-51891).
10.39	Amended and Restated License Agreement with Advanced Cell Technology, Inc. (UMass IP) (incorporated by reference to Exhibit 10.3 of the Registrant's Amendment to Form 8-K filed on February 14, 2013, File No. 000-51891).
10.40	Amended and Restated License Agreement dated February 7, 2013 with Advanced Cell Technology, Inc. (Infigen IP) (incorporated by reference to Exhibit 10.2 of the Registrant's Amendment to Form 8-K filed on February 14, 2013, File No. 000-51891).
10.41	Securities Purchase Agreement dated March 12, 2013 (incorporated by reference by Exhibit 10.1 of the Registrant's Form 8-K filed March 14, 2013, File No. 000-51891).
10.42	Form of Common Stock Warrant Agreement for March 2013 Securities Purchase (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed March 14, 2013, File No. 000-51891).
10.43	Amendment, effective July 1, 2011, to Standard Multi-Tenant Office Lease with S Real Estate Holdings LLC. (incorporated by reference to Exhibit 10.43 of the Registrant's Form 10-K filed on March 26, 2013, File No. 000-51891).
10.44	Form of Placement Agent Agreement.**
10.45	Form of Subscription Agreement for U.S. Investors.**
21.1	Subsidiaries of the Registrant (incorporated by reference to Exhibit 21.1 of the Registrant's Form S-1 filed on December 17, 2010, File No. 333-171233).
23.1	Consent of Mayer Hoffman McCann P.C.
23.2	Consent of Vasquez & Company LLP.
23.3	Consent of DLA Piper LLP (US) (included in exhibit 5.1).
24.1	Power of Attorney (included on the signature page of the Registrant's Form S-1 filed on October 18, 2012, File No. 333-184493).

* Indicates management contract or compensatory plan.
** To be filed by amendment.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the use of our report dated March 25, 2013, relating to the consolidated financial statements of **International Stem Cell Corporation and Subsidiaries**, a development stage company, (which report includes an explanatory paragraph relating to the uncertainty of the Company's ability to continue as a going concern) as of and for the years ended December 31, 2012 and 2011 and cumulatively for the period from January 1, 2011 to December 31, 2012, included in or made a part of this Amendment No. 2 to Registration Statement No. 333-184493 on Form S-1/A, and to all references to our Firm included in this Registration Statement.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
May 6, 2013

Exhibit 23.2

VASQUEZ & COMPANY LLP
CERTIFIED PUBLIC ACCOUNTANTS AND BUSINESS CONSULTANTS
801 South Grand Avenue, Suite 400 • Los Angeles, CA 90017-4646 • Ph. (213) 873-1700 • Fax (213) 873-1777 • www.vasquezcpa.com

Consent of Independent Registered Public Accounting Firm

International Stem Cell Corporation
Carlsbad, California

We hereby consent to the use in this Amendment No. 2 to Registration Statement No. 333-184493 on Form S-1 of our report dated March 24, 2011 (except for notes 1, 2 and 10, as to which the date is June 22, 2011) relating to the consolidated financial statements of International Stem Cell Corporation and Subsidiaries (the Company), which appears on Page F-4 of the Registration Statement.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ Vasquez & Company LLP
Los Angeles, California
May 6, 2013