ADVANCED CELL TECHNOLOGY, INC.
Form S-3
February 21, 2013

Registration No. 333-_____

As filed with the Securities and Exchange Commission on February 21, 2013

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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FORM S-3

REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

_____

ADVANCED CELL TECHNOLOGY, INC.
(Exact name of registrant as specified in its charter)

Delaware	**33 Locke Drive**	**87-0656515**
(State or other jurisdiction of incorporation or organization)	**Marlborough, Massachusetts 01752**	(I.R.S. Employer Identification Number)
	(508) 756-1212	
	(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)	

Gary Rabin

Chief Executive Officer

Advanced Cell Technology, Inc.

33 Locke Drive

Marlborough, Massachusetts 01752

(508) 756-1212

(Name, address, including zip code, and telephone number,

including area code, of agent for service)

Copies To:

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333 South Hope Street, 43rd Floor

Los Angeles, CA 90071
(213) 620-1780

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. £

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. S

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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. £

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. £

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per unit(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common Stock, par value $0.001 per share, underlying debentures	96,401,028	$0.0769	$7,413,239.06	$1,011.17

(1) All shares registered pursuant to this registration statement are to be offered by the selling stockholders, which shares are issuable upon conversion of the debentures. In accordance with our agreement with the selling stockholders, we are registering our estimate of the shares of common stock that may be issuable upon conversion of the debentures, assuming all principal payments are made in shares of common stock and the debentures are held until maturity. Should the conversion price of the debentures be adjusted in accordance with the terms and

conditions thereof resulting in our having insufficient shares, we will not rely on Rule 415, but we will file a new registration statement to cover the resale of such additional shares should that become necessary.

(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) promulgated under the Securities Act, based upon average of the bid and asked price as reported on the OTCQB on February 15, 2013.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with section 8(a) of the Securities Act of 1933 or until this registration statement shall become effective on such date as the Commission acting pursuant to said section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling stockholders 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 an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS
SUBJECT TO COMPLETION, DATED FEBRUARY 21, 2013

Advanced Cell Technology, Inc.

96,401,028 SHARES
COMMON STOCK

_____

This prospectus may be used only for the sale or other disposition of up to 96,401,028 shares of our common stock, par value $0.001 per share, underlying convertible debentures held by the selling stockholders identified beginning on page 20 of this prospectus, in the aggregate original principal amount of $6,000,000. See “Issuance of Securities to Selling Stockholders” for a description of the debentures.

The selling stockholders will receive all of the proceeds from the sale or other disposition of the shares of common stock that may be sold under this prospectus. We have agreed with the selling stockholders to pay the expenses incurred in registering the shares, including legal and accounting fees.

The selling stockholders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. The selling stockholders may sell shares directly to purchasers or through brokers or dealers. Brokers or dealers may receive compensation in the form of discounts, concessions or commissions from the selling stockholders. See the section entitled “Plan of Distribution” beginning on page 24 of this prospectus.

Our common stock is currently quoted on the OTCQB, under the symbol "ACTC." On February 15, 2013, the last reported sales price per share of our common stock on the OTCQB was $0.0757.

An investment in our common stock involves a high degree of risk. See the heading "Risk Factors" commencing on page 4 of this prospectus for a discussion of these risks and in the sections entitled "Risk Factors" in our most recent annual report on Form 10-K and in any quarterly report on Form 10-Q, as well as in any prospectus supplement related to these specific offerings.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

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.

The date of this prospectus is , 2013

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement we filed with the Securities and Exchange Commission, or the SEC, using a "shelf" registration process. Specific information about the terms of an offering will be included in a prospectus supplement relating to any specific offering of shares. The prospectus supplement may also add, update or change information included in this prospectus.

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. Neither we nor the selling stockholders have authorized anyone to provide you with additional or different information. If anyone provides you with different or inconsistent information, you should not rely on it. The selling stockholders are not making an offer of these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of that document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

In this prospectus, unless otherwise indicated, "our company," "we," "us" or "our" refer to Advanced Cell Technology, Inc., a Delaware corporation, and its consolidated subsidiaries.

PROSPECTUS SUMMARY

This prospectus summary highlights certain information about our company and other information contained elsewhere in this prospectus or in documents incorporated by reference. This summary does not contain all of the information that you should consider before making an investment decision. You should carefully read the entire prospectus, any prospectus supplement, including the section entitled "Risk Factors" and the documents incorporated by reference into this prospectus, before making an investment decision.

Our Business

We are a biotechnology company focused on developing and commercializing therapies derived from pluripotent stem cells, such as human embryonic stem cells and adult-derived induced pluripotent stem ("iPS") cells, in the emerging field of regenerative medicine.

We have acquired, developed and maintain a portfolio of patents and patent applications which, along with know-how and trade secrets, form the proprietary base for our research and development efforts in the area of stem cell research and development.

Regenerative medicine is a new and emerging field of study involving development of medical therapies based on advances in stem cell and the creation of differentiated cells and tissues in culture for use in transplantations. We have developed and maintain a broad intellectual property (IP) portfolio, with ownership or exclusive licensing of 38 issued patents and over 190 pending patent applications in the field of regenerative medicine and related areas. Our intellectual property includes patent rights and applications for specific applications of stem cell technology in producing retinal pigment epithelium (RPE) cells, hemangioblasts, and blood components such as red blood cells and platelets, mesenchymal stem cells (MSC), photoreceptor progenitor cells and numerous methods and compositions for the use of these technologies and derived cells in treating retinal and other eye disease, inflammatory and autoimmune diseases, as well as to provide agents for wound healing and replacement of blood components.

Our team includes some of the world's leading scientists in the field of stem cell research and development, and experts in regulatory affairs and conducting clinical trials. We believe our technology base, combined with our know-how and experience both in the science and regulatory oversight of cell therapies, provides us with a strong competitive advantage and should facilitate the successful development and commercialization of products for use in the treatment of a wide array of chronic, degenerative diseases and in regenerative repair of a variety of acute diseases, such as trauma, eye diseases, and inflammatory and autoimmune disorders.

Although we have strong competitors in this field, we believe our intellectual property portfolio compares favorably with those of our competition based upon its size, focus and filing dates. With respect to the focus of our human embryonic stem cell portfolio, we believe that the manufacturing processes for generating therapeutic cell preparations and the use of those preparations for treating diseases or otherwise repairing or replacing failing tissues will prove to be one of the technological keys to successful development of stem cell therapies. As described above, our intellectual property includes patent rights and applications for specific applications of stem cell technology. In addition, we have succeeded in deriving human embryonic cell ("hESC") lines without destroying the donor embryo through our proprietary single blastomere derivation technology. We own or have a license to numerous other technologies directed to generating stem cell lines, including somatic cell nuclear transfer, parthenogenesis, transdifferentiation, induced pluripotency and dedifferentiation. In 2012, we entered into a license agreement with StemLifeLine, Inc. under which we receive exclusive rights to certain hESC lines that were generated without destroying the donor embryo.

Our research efforts to date in human embryonic technologies include clinical, pre-clinical and basic research efforts. In November and December 2010 we received approval for two Investigational New Drug (IND) Applications we filed with the U.S. Food and Drug Administration (FDA) to initiate Phase I/II multicenter studies using embryonic stem cell derived retinal pigment epithelial (RPE) cells to treat patients with Stargardt's Macular Dystrophy (SMD) in one study and patients with dry Age-related Macular Degeneration (dry AMD) in the other study. In September 2011, we received approval from U.K. Medicines and Healthcare products Regulatory Agency (MHRA) to conduct an SMD clinical trial in the United Kingdom. In December 2012, we reached the halfway point in our three clinical trials for macular degeneration, having completed dosing of patients in the second dose cohort. Recently, we amended the patient treatment protocol for the SMD and dry AMD clinical trials currently being conducted in the U.S. to include patients with better vision. By treating patients earlier in the course of the disease, we believe that the amended patient protocol will have a more significant impact on photoreceptor rescue and visual function. We have submitted a similar amendment in our U.K. SMD clinical trial. On February 11 2013, the Company also announced that its clinical partner, the Jules Stein Eye Institute at the University of California Los Angeles had received approval of its Investigator IND Application to initiate a Phase I/II study using ACT's RPE cells to treat myopic macular degeneration (MMD), a form of macular degeneration that can occur in association with severe forms of myopia (nearsightedness). The RPE cells used in all of these trials are derived from embryonic stem cells the company developed using our proprietary blastomere derivation techniques.

Our Hemangioblast program for the treatment of Diseases and Disorders of Circulatory and Vascular System is in preclinical development. These precursor cells, which can be derived from hESC lines as well as iPS cells, can be used to achieve vascular repair in animal models of vascular injury.

The Company has also been able to derive blood components, such as red blood cells and platelets, from pluripotent stem cell sources, including both ES and iPS, which the Company believes can be used to treat trauma and for use in surgical procedures. We hope to initiate an IND in 2013 using stem cell-derived platelets. Our platelet program aims to provide a renewable, donorless source of blood platelets to people in need of platelet transfusions.

We are focused on leveraging our key assets, including our intellectual property, our scientific team, our facilities and our capital to accelerate the advancement of our stem cell technologies. In addition, we continue to pursue strategic collaborations with members of academia, industry and foundations to further accelerate the pace of our research efforts

Principal Executive Office

Our executive offices are located at 33 Locke Drive, Marlborough, MA 01752. Our website is located at www.advancedcell.com, and our telephone number is 508-756-1212. None of the information on any of our websites forms a part of this prospectus.

The Offering

Issuer	Advanced Cell Technology, Inc.
Selling Stockholders:	CAMOFI Master LDC and CAMHZN Master LDC.
Securities offered by Selling Stockholders:	96,401,028 shares of common stock issuable upon conversion of the debentures held by the selling stockholders. In accordance with our agreement with the selling stockholders, we are registering our estimate of all shares of common stock issuable as principal upon conversion of the debentures, assuming all principal payments are made in shares of common stock and the debentures are held until maturity. The issuance of these debentures are described under the heading “Issuance of Securities to Selling Stockholders,” commencing on page 21 of this prospectus.

Use of Proceeds	We will not receive any proceeds from sales of the shares of common stock sold from time to time under this prospectus by the selling stockholders.
Risk Factors	An investment in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 4 for a discussion of certain factors that you should consider when evaluating an investment in our common stock.
Symbol on OTCQB	ACTC

RISK FACTORS

An investment in our company involves a high degree of risk. In addition to the other information included in this prospectus, you should carefully consider the following risk factors described in this prospectus and the risk factors that may be described in any applicable prospectus supplement and the documents incorporated by reference herein which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. You should consider these matters in conjunction with the other information included or incorporated by reference in this prospectus. The risks and uncertainties described in this prospectus, any applicable prospectus supplement and the documents incorporated by reference herein are not the only ones facing us. Additional risks and uncertainties that we do not presently know about or that we currently believe are not material may also adversely affect our business. Our business, results of operations or financial condition could be seriously harmed, and the trading price of our common stock may decline due to any of these or other risks.

This prospectus contains statements that constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements appear in a number of places in this prospectus and include statements regarding the intent, belief or current expectations of our management, directors or officers primarily with respect to our future operating performance. Prospective purchasers of our securities are cautioned that these forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from those in the forward-looking statements due to various factors. The accompanying information contained in this prospectus, including the information set forth below, identifies important factors that could cause these differences. See "Special Note Regarding Forward-Looking Statements" on page 19.

Risks Relating to the Company's Early Stage of Development

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

We do not yet have any product candidates in late-stage clinical trials or in the marketplace. Our potential therapeutic products will require extensive preclinical and clinical testing prior to regulatory approval in the United States and other countries. We may not be able to obtain regulatory approvals in some cases, or even be permitted to enter or continue clinical trials, for some of our products, or commercialize any products. Our therapeutic and 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 and commercialization. Any product using any of our technology may fail to provide the intended therapeutic benefits, or even achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing or production. In addition, we will need to determine whether any of our potential products can be manufactured in commercial quantities or at an acceptable cost. Our efforts may not result in a product that can be or will be marketed successfully. Physicians may not prescribe our products, and patients or third party payors may not accept our products. For these reasons we may not be able to generate revenues from commercial production.

We have limited clinical testing, regulatory, manufacturing, marketing, distribution and sales capabilities which may limit our ability to generate revenues.

Due to the relatively early stage of our therapeutic products, regenerative medical therapies and stem cell therapy-based programs, we have not yet invested significantly in regulatory, manufacturing, marketing, distribution or product sales resources. We cannot assure you that we will be able to invest or develop any of these resources successfully or as expediently as necessary. The inability to do so may inhibit or harm our ability to generate revenues or operate profitably.

We have a history of operating losses and we may not achieve future revenues or operating profits .

We have generated modest revenue to date from our operations. Historically we have had net operating losses each year since our inception. As of September 30, 2012, we have an accumulated deficit of $271,972,665 and a stockholders' deficit of $15,004,436. We incurred net losses of $18,180,184 and $60,683,215 for the nine months ended September 30, 2012 and 2011, respectively, and $72,795,119 and $54,373,332 for the years ended December 31, 2011 and 2010, respectively. We have limited current potential sources of income from licensing fees and the Company does not generate significant revenue outside of licensing non-core technologies. Additionally, even if we are able to commercialize our technologies or any products or services related to our technologies it is not certain that they will result in revenue or profitability.

We have a limited operating history on which investors may evaluate our operations and prospects for profitable operations.

If we continue to suffer losses as we have in the past, investors may not receive any return on their investment and perhaps their entire investment. Our prospects must be considered speculative in light of the risks, expenses and difficulties frequently encountered by companies in their early stages of development, particularly in light of the uncertainties relating to the new, competitive and rapidly evolving markets in which we anticipate we will operate. To attempt to address these risks, we must, among other things, further develop our technologies, products and services, successfully implement our research, development, marketing and commercialization strategies, respond to competitive developments and attract, retain and motivate qualified personnel. A substantial risk is involved in investing in us because, as an early stage company we have fewer resources than an established company, our management may be more likely to make mistakes at such an early stage, and we may be more vulnerable operationally and financially to any mistakes that may be made, as well as to external factors beyond our control.

Risks Relating to Technology

We are dependent on new and unproven technologies.

Our risks as an early stage company are compounded by our heavy dependence on emerging and sometimes unproven technologies. If these technologies do not produce satisfactory results, our business may be harmed. Additionally some of our technologies and significant potential revenue sources involve ethically sensitive and controversial issues which could become the subject of legislation or regulations that could materially restrict our operations and, therefore, harm our financial condition, operating results and prospects for bringing our investors a return on their investment.

Over the last two years we have narrowed our potential product pool to focusing on our Retinal Program as well as the applications of our iPS technology, which will limit our revenue sources.

Our human embryonic stem cell program includes research, preclinical and clinical products including two U.S. and one European phase I trials using our RPE cells; our myoblast program has received FDA clearance to proceed to Phase II human clinical trials; our blood and immune therapy programs are in the preclinical development stage, and the Company doesn't foresee having a commercial product until clinical trials are completed. We have identified the programs that we are working to get into the clinical testing phase. We have narrowed the scope of our developmental focus to our Retinal Program and other ocular therapies, and developing products in the blood component and immune therapeutic areas. As a result of our narrower product focus we have fewer revenue sources. Our emphasis on fewer programs may hinder our business if these programs are not successful. As a result of our emphasis on our eye programs and our blood component and immune therapy programs, our ability to progress as a company is more significantly hinged on the success of fewer programs and thus, a setback or adverse development relating to any one

of them could potentially have a significant impact on share price as well as an inhibitory effect on our ability to raise additional capital. We cannot guarantee that we will be able to successfully develop our therapeutic programs, or of our cell platform technologies such as single blastomere, embryonic stem cell and iPS cell technologies or that such development 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 our primary sources of revenues. If we are unable to develop our technologies, investors will likely lose their entire investment in us.

We may not be able to commercially develop our technologies and proposed product lines, which, in turn, would significantly harm our ability to earn revenues and result in a loss of investment.

Our ability to commercially develop our technologies will be dictated in large part by forces outside our control which cannot be predicted, including, but not limited to, general economic conditions, the success of our research and pre-clinical and field testing, the availability of collaborative partners to finance our work in pursuing applications of cell therapy technologies and technological or other developments in the biomedical field which, due to efficiencies, technological breakthroughs or greater acceptance in the biomedical industry, may render one or more areas of commercialization more attractive, obsolete or competitively unattractive. It is possible that one or more areas of commercialization will not be pursued at all if a collaborative partner or entity willing to fund research and development cannot be located. Our decisions regarding the ultimate products and/or services we pursue could have a significant adverse effect on our ability to earn revenue if we misinterpret trends, underestimate development costs and/or pursue wrong products or services. Any of these factors either alone or in concert could materially harm our ability to earn revenues or could result in a loss of any investment in us.

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. We cannot assure you that research and discoveries by other biotechnology, agricultural, pharmaceutical or other companies will not render our technologies or potential products or services uneconomical or result in products superior to those we develop or that any technologies, products or services we develop will be preferred to any existing or newly-developed technologies, products or services.

Risks Related to Intellectual Property

Certain aspects of our business are highly dependent upon maintaining licenses with respect to key technology.

Several of the patents we utilize are licensed to us by third parties. These licenses are subject to termination under certain circumstances (including, for example, our failure to make minimum royalty payments or to timely achieve spending, development and commercialization benchmarks). 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.

Certain of these licenses also contain restrictions, such as 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. The possibility exists that in the future we will require further licenses to complete and/or commercialize our proposed products. We cannot assure you that we will be able to acquire any such licenses on a commercially viable basis.

Certain parts of our technology are not protectable by patent.

Certain parts of our know-how and technology are not patentable. To protect our proprietary position in such know-how and technology, we require all employees, consultants, advisors and collaborators to enter into confidentiality and invention ownership agreements with us. We cannot assure you, however, that these agreements will 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.

Patent litigation presents an ongoing threat to our business with respect to both outcomes and costs.

We have previously been involved in patent interference litigation, and it is possible that further litigation over patent matters with one or more competitors could arise. We could incur substantial litigation or interference costs in defending ourselves against suits brought against us or in suits in which we may assert our patents against others. If the outcome of any such litigation is unfavorable, our business could be materially adversely affected. To determine the priority of inventions, we may also have to participate in interference proceedings declared by the United States Patent and Trademark Office, which could result in substantial cost to us. Without additional capital, we may not have the resources to adequately defend or pursue this litigation.

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

The biotechnology 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 in a timely manner or at all, or that the breadth or degree of protection of 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 not be challenged invalidated or infringed;
- patents will not issue to other parties, which may be infringed by our potential products or technologies; and
- we will continue to have the financial resources necessary to prosecute our existing patent applications, pay maintenance fees on patents and patent applications, or file patent applications on new inventions.

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 iPS cells and embryonic stem cells, 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.

Patents obtained 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 other pharmaceutical, biotechnology and other companies, universities and research institutions have filed patent applications or have been issued patents relating to cell therapies, 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 the generation, formulation and uses of various 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, there can be no assurance that we would be able to obtain licenses to these patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, we may not be able to develop 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.

We may not be able to remain in compliance with some of our license agreements.

Maintaining certain of our license agreements (for in-licensed technology) requires that we pay annual maintenance fees and/or meet particular development or spending milestones. If we are unable to be in compliance with our license agreements, the license may be terminated and our business may be harmed.

We may not be able to adequately defend against piracy of intellectual property in foreign jurisdictions.

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 potential competitors are located in these 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. Several of these potential competitors may be 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.

Regulatory Risks

We cannot market our product candidates until we receive regulatory approval.

We must comply with extensive government regulations in order to obtain and maintain marketing approval for our products in the United States and abroad. The process of obtaining regulatory approval is lengthy, expensive and uncertain. In the United States, the FDA imposes substantial requirements on the introduction of biological products and many medical devices through lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Satisfaction of these requirements typically takes several years and the time required to do so may vary substantially based upon the type and complexity of the biological product or medical device.

In addition, product candidates that we believe should be classified as medical devices for purposes of the FDA regulatory pathway may be determined by the FDA to be biologic products subject to the satisfaction of significantly more stringent requirements for FDA approval. Any difficulties that we encounter in obtaining regulatory approval may have a substantial adverse impact on our business and cause our stock price to significantly decline.

We cannot assure you that we will obtain FDA or foreign regulatory approval to market any of our product candidates for any indication in a timely manner or at all.

If we fail to obtain regulatory approval of any of our product candidates for at least one indication, we will not be permitted to market our product candidates and may be forced to cease our operations.

Even if some of our product candidates receive regulatory approval, these approvals may be subject to conditions, and we and our third party manufacturers will in any event be subject to significant ongoing regulatory obligations and oversight.

Even if any of our product candidates receives regulatory approval, the manufacturing, marketing and sale of our product candidates will be subject to stringent and ongoing government regulation. Conditions of approval, such as limiting the category of patients who can use the product, may significantly impact our ability to commercialize the product and may make it difficult or impossible for us to market a product profitably. Changes we may desire to make to an approved product, such as cell culturing changes or revised labeling, may require further regulatory review and approval, which could prevent us from updating or otherwise changing an approved product. If our product candidates are approved by the FDA or other regulatory authorities for the treatment of any indications, regulatory labeling may specify that our product candidates be used in conjunction with other therapies.

Once obtained, regulatory approvals may be withdrawn and can be expensive to maintain.

Regulatory approval may be withdrawn for a number of reasons, including the later discovery of previously unknown problems with the product. Regulatory approval may also require costly post-marketing follow-up studies, and failure of our product candidates to demonstrate sufficient efficacy and safety in these studies may result in either withdrawal of marketing approval or severe limitations on permitted product usage. In addition, numerous additional regulatory requirements relating to, among other processes, the labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping will also apply. Furthermore, regulatory agencies subject a marketed product, its manufacturer and the manufacturer’s facilities to continual review and periodic inspections. Compliance with these regulatory requirements is time consuming and requires the expenditure of substantial resources.

If any of our product candidates is approved, we will be required to report certain adverse events involving our products to the FDA, to provide updated safety and efficacy information and to comply with requirements concerning the advertisement and promotional labeling of our products. As a result, even if we obtain necessary regulatory approvals to market our product candidates for any indication, any adverse results, circumstances or events that are subsequently discovered, could require that we cease marketing the product for that indication or expend money, time and effort to ensure full compliance, which could have a material adverse effect on our business.

If our products do not comply with applicable laws and regulations our business will be harmed.

Any failure by us, or by any third parties that may manufacture or market our products, to comply with the law, including statutes and regulations administered by the FDA or other U.S. or foreign regulatory authorities, could result in, among other things, warning letters, fines and other civil penalties, suspension of regulatory approvals and the resulting requirement that we suspend sales of our products, refusal to approve pending applications or supplements to approved applications, export or import restrictions, interruption of production, operating restrictions, closure of the facilities used by us or third parties to manufacture our product candidates, injunctions or criminal prosecution. Any of the foregoing actions could have a material adverse effect on our business.

Our products may not be accepted in the marketplace .

If we are successful in obtaining regulatory approval for any of our product candidates, the degree of market acceptance of those products will depend on many factors, including:

- Our ability to provide acceptable evidence and the perception of patients and the healthcare community, including third party payors, of the positive characteristics of our product candidates relative to existing treatment methods, including their safety, efficacy, cost effectiveness and/or other potential advantages;
- The incidence and severity of any adverse side effects of our product candidates;
- The availability of alternative treatments;
- The labeling requirements imposed by the FDA and foreign regulatory agencies, including the scope of approved indications and any safety warnings;

- Our ability to obtain sufficient third party insurance coverage or reimbursement for our product candidates;
- The inclusion of our products on insurance company coverage policies;
- The willingness and ability of patients and the healthcare community to adopt new technologies;
- The procedure time associated with the use of our product candidates;
- Our ability to manufacture or obtain from third party manufacturers sufficient quantities of our product candidates with acceptable quality and at an acceptable cost to meet demand; and
- Marketing and distribution support for our products.

We cannot predict or guarantee that physicians, patients, healthcare insurers, third party payors or health maintenance organizations, or the healthcare community in general, will accept or utilize any of our product candidates. Failure to achieve market acceptance would limit our ability to generate revenue and would have a material adverse effect on our business. In addition, if any of our product candidates achieve market acceptance, we may not be able to maintain that market acceptance over time if competing products or technologies are introduced that are received more favorably or are more cost-effective.

Restrictions on the use of human embryonic 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.

Some of our most important programs involve the use of stem cells that are derived from human embryos. The use of human embryonic stem cells gives rise to ethical, legal and social issues regarding the appropriate derivation of these cells. In the event that our research related to human embryonic stem cells becomes the subject of adverse commentary or publicity, our business could be harmed or otherwise substantially impaired, and the market price for our common stock could be significantly harmed. Some political and religious groups have voiced opposition to our technology and practices. We use stem cells derived from human embryos that have been created for in vitro fertilization procedures but are no longer desired or suitable for that use and are donated with appropriate informed consent for research use. Many research institutions, including some of our scientific collaborators, have adopted policies regarding the ethical use of human embryonic tissue. These policies may have the effect of limiting the scope of research conducted using human embryonic stem cells, thereby impairing our ability to conduct research in this field.

Governmental regulations and laws could change.

There can be no assurance that our operations will not be restricted by any future legislative or administrative efforts by politicians or groups opposed to the development of hES cell technology or nuclear transfer technology. Additionally, the scope of the Dickey–Wicker Amendment, a 16-year-old ban on federal funding for activity related to the harm or destruction of an embryo, was recently under review by the federal courts and while it was determined not to preclude funding of hESC research by the federal government, there can be no assurance that it will not be challenged again or the language modified by Congress as to restrict government funding of hESD research. Judicial review of this or other federal or state laws could result in a more restrictive interpretation of those laws than is previously the case, and may limit or require us to terminate certain of our research and therapeutic programs.

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

Federal, state and local governments in the United States and governments in other countries have significant regulations in place that govern many of our activities. We are or may become subject to various federal, state and local laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances used in connection with our research and development work. The preclinical testing and clinical trials of the products that we or our collaborators develop are subject to extensive government regulation that may prevent us from creating commercially viable products from our discoveries. In addition, the sale by us or our collaborators of any commercially viable product will be subject to government regulation from several standpoints, including manufacturing, advertising and promoting, selling and marketing, labeling, and distributing.

If, and to the extent that, we are unable to comply with these regulations, our ability to earn revenues will be materially and negatively impacted. The regulatory process, particularly in the biotechnology field, is uncertain, can take many years and requires the expenditure of substantial resources. Biological drugs and non-biological drugs are rigorously regulated. In particular, proposed human pharmaceutical therapeutic product candidates are subject to rigorous preclinical and clinical testing and other requirements by the FDA in the United States and similar health authorities in other countries in order to demonstrate safety and efficacy. We may never obtain regulatory approval to market our proposed products.

Our products may not receive FDA approval, which would prevent us from commercially marketing our products and producing revenues.

The FDA and comparable government agencies in foreign countries impose substantial regulations on the manufacture and marketing of pharmaceutical products through lengthy and detailed laboratory, pre-clinical and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Satisfaction of these regulations typically takes several years or more and varies substantially based upon the type, complexity and novelty of the proposed product. We cannot assure you that FDA approvals for any products developed by us will be granted on a timely basis, if at all. Any such delay in obtaining, or failure to obtain, such approvals could have a material adverse effect on the marketing of our products and our ability to generate product revenue.

The United States federal government maintains certain rights in technology that we develop using federal government grant money and we may lose the revenues from such technology if we do not commercialize and utilize the technology pursuant to established federal government guidelines.

Certain of our and our licensors' research have been or are being funded in part by U.S. federal government grants. In connection with certain grants, the federal government retains rights in the technology developed with the grant. These rights could restrict our ability to fully capitalize upon the value of this research.

We may not be able to obtain required approvals in countries other than the United States.

The requirements governing the conduct of clinical trials and cell culturing and marketing of our product candidates outside the United States vary widely from country to country. Foreign approvals may take longer to obtain than FDA approvals and can require, among other things, additional testing and different clinical trial designs. Foreign regulatory approval processes generally include all of the risks associated with the FDA approval processes. Some foreign regulatory agencies also must approve prices of the products. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others. We may not be able to file for regulatory approvals and may not receive necessary approvals to market our product candidates in any foreign country. If we fail to comply with these regulatory requirements or fail to obtain and maintain required approvals in any foreign country, we will not be able to sell our product candidates in that country and our ability to generate revenue will be adversely affected.

Financial Risks

We may not be able to raise the required capital to conduct our operations and develop and commercialize our products.

We require substantial additional capital resources in order to conduct our operations and develop and commercialize our products and run our facilities. We will need significant additional funds or a collaborative partner, or both, to finance the research and development activities of our therapies and potential products. Accordingly, we are continuing to pursue additional sources of financing. Our future capital requirements will depend upon many factors, including:

- The continued progress and cost of our research and development programs;
- The progress with pre-clinical studies and clinical trials;

- The time and costs involved in obtaining regulatory clearance;
- The costs in preparing, filing, prosecuting, maintaining and enforcing patent claims;
- The costs of developing sales, marketing and distribution channels and our ability to sell the therapies/products if developed;
- The costs involved in establishing manufacturing capabilities for commercial quantities of our proposed products;
- Competing technological and market developments;
- Market acceptance of our proposed products;
- The costs for recruiting and retaining employees and consultants; and
- The costs for educating and training physicians about our proposed therapies/products.

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 shareholders. 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 programs or potential products, any of which could have a material adverse effect on our financial condition or business prospects.

Risks Relating to Our Debt Financings

There are a large number of shares underlying our convertible debt and warrants. The sale of these shares may depress the market price of our common stock.

As of December 31, 2012, on an aggregated basis our outstanding debt and preferred stock may result be converted into 133,793,145 shares of our common stock, and our outstanding warrants and options may be converted into approximately 102,195,888 shares of our common stock, this does not include the number of shares that are available for issuance upon conversion of the debentures issued to the selling stockholders. The conversion price of the debentures issued to the selling stockholders is subject to adjustment. If such conversion price is adjusted this would lead to the issuance of additional shares upon conversion which will result in further dilution of the voting power of our outstanding common stock.

Sales of a substantial number of shares of our common stock in the public market could adversely affect the market price for our common stock and make it more difficult for you to sell shares of our common stock at times and prices that you feel are appropriate.

Risks Related to Third Party Reliance

We depend on third parties to assist us in the conduct of our preclinical studies and clinical trials, and any failure of those parties to fulfill their obligations could result in costs and delays and prevent us from obtaining regulatory approval or successfully commercializing our product candidates on a timely basis, if at all.

We engage consultants and contract research organizations to help design, and to assist us in conducting, our preclinical studies and clinical trials and to collect and analyze data from those studies and trials. The consultants and contract research organizations we engage interact with clinical investigators to enroll patients in our clinical trials. As a result, we depend on these consultants and contract research organizations to perform the studies and trials in accordance with the investigational plan and protocol for each product candidate and in compliance with regulations and standards, commonly referred to as “good clinical practice”, for conducting, recording and reporting results of clinical trials to assure that the data and results are credible and accurate and the trial participants are adequately protected, as required by the FDA and foreign regulatory agencies. We may face delays in our regulatory approval process if these parties do not perform their obligations in a timely or competent fashion or if we are forced to change service providers.

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. 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.

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.

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.

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.

Preclinical & Clinical Product Development Risks

We have limited experience in conducting and managing preclinical development activities, clinical trials and the application process necessary to obtain regulatory approvals.

Our limited experience in conducting and managing preclinical development activities, clinical trials and the application process necessary to obtain regulatory approvals might prevent us from successfully designing or implementing a preclinical study or clinical trial. If we do not succeed in conducting and managing our preclinical development activities or clinical trials, or in obtaining regulatory approvals, we might not be able to commercialize our product candidates, or might be significantly delayed in doing so, which will materially harm our business.

Our ability to generate revenues from any of our product candidates will depend on a number of factors, including our ability to successfully complete clinical trials, obtain necessary regulatory approvals and implement our commercialization strategy. In addition, even if we are successful in obtaining necessary regulatory approvals and bringing one or more product candidates to market, we will be subject to the risk that the marketplace will not accept

those products. We may, and anticipate that we will need to, transition from a company with a research and development focus to a company capable of supporting commercial activities and we may not succeed in such a transition.

Because of the numerous risks and uncertainties associated with our product development and commercialization efforts, we are unable to predict the extent of our future losses or when or if we will become profitable.

Our failure to successfully commercialize our product candidates or to become and remain profitable could depress the market price of our common stock and impair our ability to raise capital, expand our business, diversify our product offerings and continue our operations.

None of the products that we are currently developing has been approved for marketing by the FDA or any similar regulatory authority in any foreign country. Our approach of using cell-based therapy for the treatment of retinal disease (we are beginning with a treatment for Startgardt's disease and dry AMD, for which we filed INDs with the FDA and Investigational Medicinal Product Dossiers with the MHRA) is risky and unproven and no products using this approach have received regulatory approval in the United States or Europe.

We believe that no other company has yet been successful in its efforts to obtain regulatory approval in the United States or Europe of a cell-based therapy product for the treatment of retinal disease or degeneration in humans. Cell-based therapy products, in general, 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 by regulators or commercial use. Many companies in the industry have suffered significant setbacks in advanced clinical trials, despite promising results in earlier trials. If our clinical trials are unsuccessful or significantly delayed, or if we do not complete our clinical trials, we will not receive regulatory approval for or be able to commercialize our product candidates.

Our lead product candidates, our therapeutic Retinal programs for Startgardt's disease and Dry AMD have recently started Phase I Clinical Trials and have not yet received market approval from the FDA or any similar foreign regulatory authority for any indication.

We cannot market any product candidate until regulatory agencies grant approval or licensure. In order to obtain regulatory approval for the sale of any product candidate, we must, among other requirements, provide the FDA and similar foreign regulatory authorities with preclinical and clinical data that demonstrate to the satisfaction of regulatory authorities that our product candidates are safe and effective for each indication under the applicable standards relating to such product candidate. The preclinical studies and clinical trials of any product candidates must comply with the regulations of the FDA and other governmental authorities in the United States and similar agencies in other countries. Our therapeutic Retinal programs may never receive market approval from the FDA or any similar foreign regulatory authority.

We may experience numerous unforeseen events during, or even if approved for clinical trials, as a result of, the clinical trial process that could delay or prevent regulatory approval and/or commercialization of our product candidates, including the following:

- The FDA or similar foreign regulatory authorities may find that our product candidates are not sufficiently safe or effective or may find our cell culturing processes or facilities unsatisfactory;

- Officials at the FDA or similar foreign regulatory authorities may interpret data from preclinical studies and clinical trials differently than we do;

- Our clinical trials may produce negative or inconclusive results or may not meet the level of statistical significance required by the FDA or other regulatory authorities, and we may decide, or regulators may require us, to conduct additional preclinical studies and/or clinical trials or to abandon one or more of our development programs;

- The FDA or similar foreign regulatory authorities may change their approval policies or adopt new regulations;

- There may be delays or failure in obtaining approval of our clinical trial protocols from the FDA or other regulatory authorities or obtaining institutional review board approvals or government approvals to conduct or continue clinical trials at current or prospective sites;

- We, or regulators, may suspend or terminate our clinical trials because the participating patients are being exposed to unacceptable health risks or undesirable side effects;

- We may experience difficulties in managing multiple clinical sites;

- Enrollment in our clinical trials for our product candidates may occur more slowly than we anticipate, or we may experience high drop-out rates of subjects in our clinical trials, resulting in significant delays;

- We may be unable to manufacture or obtain from third party manufacturers sufficient quantities of our product candidates for use in clinical trials;

- Our product candidates may be deemed unsafe or ineffective, or may be perceived as being unsafe or ineffective, by healthcare providers for a particular indication; and

- Any delay of regulatory approval will harm our business.

Risks Related to Competition

The market for therapeutic stem cell products is highly competitive.

We expect that our most significant competitors will be fully integrated pharmaceutical companies and more established biotechnology companies. These companies are developing stem cell-based products and they have significantly greater capital resources in research and development, manufacturing, testing, obtaining regulatory approvals, 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 recognition and filings.

The biotechnology industries are characterized by rapidly evolving technology and intense competition. Our competitors include major multinational pharmaceutical companies, specialty biotechnology companies and chemical and medical products companies operating in the fields of regenerative medicine, cell therapy, tissue engineering and tissue regeneration.

Many of these companies are well-established and possess technical, research and development, financial and sales and marketing resources significantly greater than ours. In addition, certain smaller biotech companies have formed strategic collaborations, partnerships and other types of joint ventures with larger, well established industry competitors that afford these companies' potential research and development and commercialization advantages. Academic institutions, governmental agencies and other public and private research organizations are also conducting and financing research activities which may produce products directly competitive to those we are developing. Moreover, many of these competitors may be able to obtain patent protection, obtain FDA and other regulatory approvals and begin commercial sales of their products before we do.

In the general area of cell-based therapies (including both allogeneic and autologous cell therapies), we compete with a variety of companies, most of whom are specialty biotechnology companies, such as, Genzyme Corporation, StemCells, Inc., Viacell, Inc., Biotime, Inc., ISCO, MG Biotherapeutics, Pfizer, Celgene, Baxter Healthcare, Osiris Therapeutics, Cytori, GlaxoSmithKline, Novartis, Roche and Cell Cure Neurosciences Ltd.

Each of these companies is well-established and have substantial technical and financial resources compared to us. However, as cell-based products are only just emerging as medical therapies, many of our direct competitors are smaller biotechnology and specialty medical products companies. These smaller companies may become significant competitors through rapid evolution of new technologies. Any of these companies could substantially strengthen their competitive position through strategic alliances or collaborative arrangements with large pharmaceutical or biotechnology companies.

The diseases and medical conditions we are targeting have no effective long-term therapies. Nevertheless, we expect that our technologies and products will compete with a variety of therapeutic products and procedures offered by major pharmaceutical companies. Many pharmaceutical and biotechnology companies are investigating new drugs and therapeutic approaches for the same purposes, which may achieve new efficacy profiles, extend the therapeutic window for such products, alter the prognosis of these diseases, or prevent their onset.

We believe that our products, when and if successfully developed, will compete with these products principally on the basis of improved and extended efficacy and safety and their overall economic benefit to the health care system.

Competition for any stem cell products that we may develop may be in the form of existing and new drugs, other forms of cell transplantation, ablative and simulative procedures, and gene therapy. We believe that some of our competitors are also trying to develop stem and progenitor cell-based technologies. We expect that all of these products will compete with our potential stem cell products based on efficacy, safety, cost and intellectual property positions. We may also face competition from companies that have filed patent applications relating to the use of genetically modified cells to treat disease, disorder or injury. In the event our therapies should require the use of such genetically modified cells, we may be required to seek licenses from these competitors in order to commercialize certain of our proposed products, and such licenses may not be granted.

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

Our competition includes both public and private organizations and collaborations among academic institutions and large pharmaceutical companies, most of which have significantly greater experience and financial resources than we do.

Private and public academic and research institutions also compete with us in the research and development of therapeutic products based on human embryonic and adult stem cell technologies. In the past several years, the pharmaceutical industry has selectively entered into collaborations with both public and private organizations to explore the possibilities that stem cell therapies may present for substantive breakthroughs in the fight against disease.

The biotechnology and pharmaceutical industries are characterized by intense competition. We compete against numerous companies, both domestic and foreign, many of which have substantially greater experience and financial and other resources than we have. Several such enterprises have initiated cell therapy research programs and/or efforts to treat the same diseases targeted by us.

Companies such as Pfizer, Genzyme Corporation, StemCells, Inc. and Viacell, Inc., as well as others, many of which have substantially greater resources and experience in our fields than we do, are well situated to effectively compete with us. Any of the world's largest pharmaceutical companies represents a significant actual or potential competitor with vastly greater resources than ours. These companies hold licenses to genetic selection technologies and other technologies that are competitive with our technologies. These and other competitive enterprises have devoted, and will continue to devote, substantial resources to the development of technologies and products in competition with us.

Many of our competitors have significantly greater experience than we have in the development, pre-clinical testing and human clinical trials of biotechnology and pharmaceutical products, in obtaining FDA and other regulatory approvals of such products and in manufacturing and marketing such products.

Accordingly our competitors may succeed in obtaining FDA approval for products more rapidly or effectively than we can. Our competitors may also be the first to discover and obtain a valid patent to a particular stem cell technology which may effectively block all others from doing so. It will be important for us or our collaborators to be the first to discover any stem cell technology that we are seeking to discover. Failure to be the first could prevent us from commercializing all of our research and development affected by that discovery. Additionally, if we commence commercial sales of any products, we will also be competing with respect to manufacturing efficiency and sales and marketing capabilities, areas in which we have no experience.

General Risks Relating to Our Business

We are 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. We cannot assure you that reimbursement in the United States or foreign countries will be available for any products we may develop or, if available, will not be decreased in the future, or that reimbursement amounts will not 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 are likely to be expensive to manufacture, and they may not be profitable if we are unable to control the costs to manufacture them.

Our products are likely to be significantly more expensive to manufacture than most other drugs currently on the market today. Our present manufacturing processes produce modest quantities of product intended for use in our ongoing research activities, and we have not developed processes, procedures and capability to produce commercial volumes of product. 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 most drugs 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.

Our current source of revenues depends on the stability and performance of our sub-licensees.

Our ability to collect royalties on product sales from our sub-licensees will depend on the financial and operational success of the companies operating under a sublicense. Revenues from those licensees will depend upon the financial and operational success of those third parties. We cannot assure you that these licensees will be successful in obtaining requisite financing or in developing and successfully marketing their products. These licensees may experience unanticipated obstacles including regulatory hurdles, and scientific or technical challenges, which could have the effect of reducing their ability to generate revenues and pay us royalties.

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 certain 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. There is intense competition for qualified personnel in the areas of our present and planned activities, and there can be no assurance that we will be able to continue to attract and retain the qualified personnel necessary for the development of our business. The failure to attract and retain such personnel or to develop such expertise would adversely affect our business.

Our insurance policies may be inadequate and potentially expose us to unrecoverable risks.

Any significant insurance claims would have a material adverse effect on our business, financial condition and results of operations. Insurance availability, coverage terms and pricing continue to vary with market conditions. We endeavor to obtain appropriate insurance coverage for insurable risks that we identify, however, we may fail to correctly anticipate or quantify insurable risks, we may not be able to obtain appropriate insurance coverage, and insurers may not respond as we intend to cover insurable events that may occur. We have observed rapidly changing conditions in the insurance markets relating to nearly all areas of traditional corporate insurance. Such conditions have resulted in higher premium costs, higher policy deductibles, and lower coverage limits. For some risks, we may not have or maintain insurance coverage because of cost or availability.

We have limited 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, and we cannot assure you that substantial product liability claims will not be asserted against us. We have limited product liability insurance. 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. We cannot assure you that adequate insurance coverage will be available in the future on acceptable terms, if at all, or that, if available, we will be able to maintain any such insurance at sufficient levels of coverage or that any such insurance will provide adequate protection against potential liabilities. Whether or not a product liability insurance policy is maintained in the future, any product liability claim could harm our business or financial condition.

We presently have members of management and other key employees located in various locations throughout the country which adds complexities to the operation of the business.

Presently, we have members of management and other key employees located in both California and Massachusetts, which adds complexities to the operation of our business.

Risks Relating to Our Common Stock

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 ability to obtain additional funding;

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Announcements of research activities, business developments, technological innovations or new products by companies or their competitors;

- Entering into or terminating strategic relationships;
- Changes in government regulation;
- Disputes concerning patents or proprietary rights;
- Changes in revenues or expense levels;
- Public concern regarding the safety, efficacy or other aspects of the products or methodologies being developed;
- 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 and the return on your investment.

A significant number of shares of our common stock have become available for sale and their sale could depress the price of our common stock.

Substantially all of our common stock is freely tradable in the equity markets.

We may also sell a substantial number of additional shares of our common stock in connection with a private placement or public offering of shares of our common stock (or other series or class of capital stock to be designated in the future). The terms of any such transactions would likely require us to register the resale of any shares of capital stock issued or issuable in the transaction.

Sales of a substantial number of shares of our common stock under any of the circumstances described above could adversely affect the market price for our common stock and make it more difficult for you to sell shares of our common stock at times and prices that you feel are appropriate.

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

Any payment of cash dividends will depend upon our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. We do not anticipate paying cash dividends on our common stock in the foreseeable future. Furthermore, we may incur additional indebtedness that may severely restrict or prohibit the payment of dividends.

Our common stock is subject to "penny stock" regulations and restrictions on initial and secondary broker-dealer sales.

The SEC has adopted regulations which generally define "penny stock" to be any listed, trading equity security that has a market price less than $5.00 per share or an exercise price of less than $5.00 per share, subject to certain exemptions. Penny stocks are subject to certain additional oversight and regulatory requirements. Brokers and dealers affecting transactions in our common stock in many circumstances must obtain the written consent of a customer prior to purchasing our common stock, must obtain information from the customer and must provide disclosures to the customer. These requirements may restrict the ability of broker-dealers to sell our common stock and may affect your ability to sell your shares of our common stock in the secondary market.

As an issuer of "penny stock," the protection provided by the federal securities laws relating to forward looking statements does not apply to us.

Although federal securities laws provide a safe harbor for forward-looking statements made by a public company that files reports under the federal securities laws, this safe harbor is not available to issuers of penny stocks. As a result, the Company will not have the benefit of this safe harbor protection in the event of any legal action based upon a claim that the material provided by the Company contained a material misstatement of fact or was misleading in any material respect because of the Company's failure to include any statements necessary to make the statements not misleading. Such an action could hurt our financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements in this prospectus and in the documents incorporated by reference in this prospectus contain forward-looking statements that involve risks and uncertainties. We use words such as "may," "assumes," "forecasts," "positions," "predicts," "strategy," "will," "expects," "estimates," "anticipates," "believes," "projects," "intends," "plans," "bud "continue" and variations thereof, and other statements contained in this prospectus, regarding matters that are not historical facts and are forward-looking statements. Because these statements involve risks and uncertainties, as well as certain assumptions, actual results may differ materially from those expressed or implied by such forward-looking statements. Factors that could cause actual results to differ materially include, but are not limited to those risks identified under "Risk Factors" and from time to time in our other filings with the SEC. The information in this prospectus or any prospectus supplement speaks only as of the date of that document and the information incorporated herein by reference speaks only as of the date of the document incorporated by reference. Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

Forward-looking statements include our plans and objectives for future operations, including plans and objectives relating to our products and our future economic performance. Assumptions relating to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions, future business decisions, and the time and money required to successfully complete development and commercialization of our technologies, all of which are difficult or impossible to predict accurately and many of which are beyond our control. Although we believe that the assumptions underlying the forward-looking statements contained herein are reasonable, any of those assumptions could prove inaccurate and, therefore, we cannot assure you that the results contemplated in any of the forward-looking statements contained herein will be realized. Based on the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of any such statement should not be regarded as a representation by us or any other person that our objectives or plans will be achieved.

USE OF PROCEEDS

We will not receive any proceeds from the sale or other disposition of the shares of common stock offered by the selling stockholders under this prospectus.

DETERMINATION OF OFFERING PRICE

The selling stockholders may offer and sell the shares of common stock covered by this prospectus at prevailing market prices or privately negotiated prices. See “Plan of Distribution.”

SELLING STOCKHOLDERS

This prospectus relates to the possible resale by CAMOFI Master LDC (“CAMOFI”) and CAMHZN Master LDC (“CAMHZN” and together with CAMOFI, the “selling stockholders”),of shares of common stock that may be issued to the selling stockholders upon conversion of the Debentures, as described in greater detail below. We are filing the registration statement of which this prospectus forms a part pursuant to the provisions of the registration rights agreement, which we entered into with the selling stockholders as part of the settlement agreement referenced below, in which we agreed to provide certain registration rights with respect to sales by the selling stockholders of the shares of our common stock that have may be issued to the selling stockholders upon conversion of the Debentures.

The selling stockholders may, from time to time, offer and sell pursuant to this prospectus any or all of the shares that they have received upon conversion of the Debentures. The selling stockholders may sell some, all or none of their shares. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale of any of the shares.

The following table presents information with respect to the beneficial ownership of our common stock held as of February 14, 2013 by the selling stockholders (assuming an aggregate of 96,401,028 shares of common stock are issued under the Debentures (as defined below)), the number of shares being offered hereby and the shares to be beneficially owned by the selling stockholders assuming the maximum number of shares registered hereunder are sold. The table is prepared based on information supplied to us by the selling stockholders as to their holdings as of February 14, 2013 and does not take into account certain contractual limitations on conversion that are applicable to the selling stockholders that limit their beneficial ownership of our common stock to no more than 4.99% of the total shares of our outstanding common stock. Neither CAMHZN, CAMOFI nor any of their affiliates has held a position or office, or had any other material relationship, with us or any of our predecessors or affiliates. Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act. The percentage of shares beneficially owned prior to the offering is based on 2,351,603,922 shares of our common stock were actually outstanding as of February 14, 2013 and the percentage of shares beneficially owned after the offering is based on 2,448,004,950 shares outstanding immediately after the completion of the offering (assuming an aggregate of 96,401,028 shares of common stock are issued under the Debentures).

Selling Stockholder	Shares Beneficially Owned Prior to the Offering Number	Percentage	Maximum Shares Offered Hereby Number	Shares Beneficially Owned After the Offering Number	Percentage
CAMOFI Master LDC	124,041,433[1]	5.11%	76,040,810	48,000,623	1.96%
CAMHZN Master LDC	33,213,238[2]	1.40%	20,360,218	12,853,020	*

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*** Less than 1%**

(1) This assumes 76,040,810 shares of common stock are to be issued to CAMOFI pursuant to the Debentures. As of February 14, 2013, CAMOFI held 48,000,623 shares of our common stock.

(2) This assumes 20,360,218 shares of common stock are to be issued to CAMHZN pursuant to the Debentures. As of February 14, 2013, CAMHZN held 12,853,020 shares of our common stock.

ISSUANCE OF SECURITIES TO SELLING STOCKHOLDERS

On January 11, 2013, we entered into a settlement agreement and mutual release with the selling stockholders, each of which are affiliates of Centrecourt Asset Management LLC. The settlement agreement relates to the lawsuit between the selling stockholders, as plaintiffs, and the Company, as defendant, in the Supreme Court of New York, New York County (the "Court"), docket number 652816/2011, in which the selling stockholders claimed that the conversion price of certain notes and the exercise price of certain warrants held by the selling stockholders should have been adjusted as a result of certain transactions by the Company.

Pursuant to the settlement agreement, and as approved by the Court on January 22, 2013, the Company agreed, in exchange for dismissal of the pending lawsuit with prejudice and a mutual release of all claims, to among other things, issue to the following debentures to the selling stockholders:

- to CAMOFI an Amortizing Senior Secured Convertible Debenture in the principal amount of $4,732,781; and.
- to CAMHZN an Amortizing Senior Secured Convertible Debenture in the original principal amount of $1,267,219 (collectively, the "Debentures").

The Debentures accrue interest payable monthly in cash at the rate of 8% per annum beginning on December 31, 2012, and mature on June 30, 2015. We may pre-pay all or a portion of the amounts due under the Debentures prior to maturity without penalty. The principal amount of the Debentures are convertible at the option of the holder at a price

per share of our common stock equal to 80% of the VWAP of the ten consecutive trading days prior to the conversion date (the “Conversion Price”). We must make quarterly principal payments under the Debentures on the last day of each calendar quarter commencing on March 31, 2013 in the amount of $473,278 to CAMOFI and $126,722 to CAMHZN. The quarterly payments may, at our option and subject to the satisfaction of certain conditions, be paid in shares of our common stock. In such case, the conversion price for such payment will be based on the lesser of (i) the Conversion Price or (ii) 80% of the average of the 10 closing prices immediately prior to the date the quarterly payment is due. To secure our obligations under the Debentures, we granted a security interest in substantially all of our assets, including our intellectual property, to the selling stockholders. The Debentures contain certain covenants customary for debt instruments of its kind.

If an event of default occurs under a Debenture, at the election of the holder of such Debenture, such Debenture may be declared accelerated, in which case the greater of the amounts calculated in accordance with the following formulas shall become immediately due and payable: (a) 120% of the principal amount of the Debenture to be prepaid plus 100% of the accrued and unpaid interest; or (b) the principal amount of the Debenture to be prepaid divided by the Conversion Price (calculated either on the date acceleration is demanded or due or the date the accelerated amount is paid in full, whichever is less) multiplied by the closing price of our common stock (calculated either on the date the acceleration is demanded or due or the date the accelerated amount is paid in full, whichever is greater). Commencing 5 days after the occurrence of any event of default that results in the eventual acceleration of the Debenture, the interest rate on the Debenture will accrue at 18% per annum. For purposes of the Debentures, an event of default includes certain events that are customary for debt instruments of this type (including certain cure periods as set forth in the Debenture) including the failure to pay any amounts due under the Debenture when due, the failure to observe covenants and obligations under the Debenture, default under other debt instruments in an amount exceeding $150,000, the cessation of the quoting of the our common stock on a trading market, the occurrence of a change of control transaction or other certain substantial transactions, the institution of bankruptcy or similar proceedings or the failure to have a registration statement covering the common stock underlying the Debentures effective within 180 days of January 23, 2013.

In connection with the settlement agreement, we entered into a registration rights agreement with the selling stockholders, pursuant to which we agreed to file a registration statement, of which this prospectus is a part, with the SEC for the resale of the shares of our common stock issuable upon conversion of the Debentures. The registration statement is required to be filed within 30 days from January 23, 2103.

The registration rights agreement contains penalty provisions, including if (i) we fail to file such registration statement before February 23, 2013, (ii) we fail to secure the effectiveness of the registration statement by the earlier of (a) within five trading days after the SEC has informed us that no review of the registration statement will be made or that the SEC has no further comments on the registration statement or (b) March 24, 2013, if the SEC does not review the registration statement or April 23, 2013, in the event of a full review, or (iii) we fail to maintain the effectiveness of such registration statement to permit the resale of all of the shares of common stock we agreed to register for resale. In the event of any such breach, we will be required to pay to each selling stockholder an amount in cash, as partial liquidated damages, equal to 1.5% of the original principal amount of the Debentures held by such selling stockholders. If we fail to pay any partial liquidated damages in full within 7 days after the date payable, we will pay interest thereon at a rate of 18% per annum until such amounts are paid in full. We also agreed to use commercially reasonable efforts to cause the registration statement to remain effective until each of the shares eligible for registration have been sold either pursuant to a registration statement or without restriction pursuant to Rule 144 promulgated under the Securities Act.

DESCRIPTION OF SECURITIES

We are authorized to issue 2,750,000,000 shares of common stock having a par value of $0.001 per share and 50,000,000 shares of preferred stock having a par value of $0.001 per share. The following is a brief description of the material provisions of our capital stock. This is only a summary and is qualified in its entirety by reference to our certificate of incorporation, as amended, and our bylaws, as amended, which have been filed with the SEC and are incorporated herein by reference. The terms of our capital stock may also be affected by the General Corporation Law Statute of the State of Delaware.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. Holders of our common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of outstanding preferred stock. Our outstanding shares of our common stock are fully paid and non-assessable. Holders of shares of our common stock have no conversion, preemptive or other subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of holders of our common stock are subject to the rights of the holders of shares or our outstanding preferred stock and any future series of preferred stock that we may designate and issue.

Preferred Stock

Series A-1 Convertible Preferred Stock

On March 3, 2009, we entered into a $5 million credit facility with a life sciences fund. Under the terms of the agreement, we may draw down funds, as needed, from the investor through the issuance of Series A-1 convertible preferred stock, par value $0.001, at a basis of 1 share of Series A-1 convertible preferred stock for every $10,000 invested. We may terminate the agreement and our right to initiate future draw-downs by providing 30 days advanced written notice to the investor, subject to certain limitations. The outstanding balance at December 31, 2012, was $1,130,165 convertible into 1,506,887 shares of our common stock.

The Series A-1 convertible preferred stock pays dividends, in kind of preferred stock, at an annual rate of 10%, matures four years from the initial drawdown date, and is convertible into common stock at $0.75 per share at the option of the holder. However, in the event the closing price of the common stock during the 5 trading days following the notice to convert falls below 75% of the closing bid price in the 5 trading day prior to the closing date, the investor may, at its option, and without penalty, decline to purchase the applicable put share at closing.

Upon the earlier of (i) the fourth anniversary of the issuance date, and (ii) the occurrence of a major transaction, each holder shall have the right, to require we redeem all or a portion of such holder's share of Series A-1 convertible preferred stock, at a price per share equal to the Series A-1 liquidation value. We have the option to pay the redemption price in cash or in shares of our common stock. We also have the right to redeem all or a portion of the shares of Series A-1 preferred stock, at any time at a price per share of Series A-1 preferred stock equal to 100% of the Series A-1 liquidation value.

Upon any liquidation, dissolution or winding up of the Company, the holders of the Series A-1 convertible preferred stock shall first be entitled to be paid out of the assets of the Company available for distribution (subject to certain limitations) to its stockholders an amount with respect to each share of Series A-1 convertible preferred stock equal to $10,000, plus any accrued by unpaid dividends.

Series B Preferred Stock

On November 2, 2009, we entered into a preferred stock purchase agreement with Optimus Life Sciences Capital Partners, LLC. Pursuant to the purchase agreement, we agreed to sell, in one or more purchases from time to time, at our sole discretion (i) up to 1,000 shares of Series B preferred stock at a purchase price of $10,000 per share, for an aggregate purchase price of up to $10,000,000, and (ii) five-year warrants to purchase shares of our common stock with an aggregate exercise price equal to 135% of the purchase price paid by the Investor, at an exercise price per share equal to the VWAP for the 5 trading days beginning on and including the notice date. As of December 31, 2012, 1,000 shares of Series B preferred stock were outstanding.

Holders of Series B preferred stock are entitled to receive dividends on each outstanding share of Series B preferred stock, which will accrue in shares of Series B preferred stock at a rate equal to 10% per annum from the issuance date compounded annually.

The Series B preferred stock may be redeemed at our option, commencing 4 years from the issuance date at a price per share of (a) $10,000 per share plus accrued but unpaid dividends (the "Series B Liquidation Value"), or, at a price per share of : (x) 127% of the Series B Liquidation Value if redeemed on or after the first anniversary but prior to the second anniversary of the initial issuance date, (y) 118% of the Series B Liquidation Value if redeemed on or after the second anniversary but prior to the third anniversary of the initial issuance date, and (z) 109% of the Series B Liquidation Value if redeemed on or after the third anniversary but prior to the fourth anniversary of the initial

issuance date.

The Series B preferred stock shall, with respect to dividend, rights upon liquidation, winding-up or dissolution, rank: (i) senior to the our common stock, and any other class or series of our preferred stock, except the Series A-1 convertible preferred stock which shall rank senior in right of liquidation and *pari passu* with respect to dividends; and (ii) junior to all existing and future indebtedness. Upon any liquidation, dissolution or winding up of the Company the holders of the Series B preferred stock shall be first entitled to be paid out of the assets of the Company available for distribution to its stockholders an amount with respect to each share of Series B preferred stock equal to $10,000, plus any accrued and unpaid dividends.

Series C Preferred Stock

On December 30, 2010, we entered into a securities purchase agreement with Socius CG II, Ltd. Purchaser to the purchase agreement, we agreed to sell, in one or more purchases from time to time, in our sole discretion, (i) up to 2,5000 shares of Series C preferred stock at a purchase price of $10,000 per share, for an aggregate purchase price of up to $25,000,000, and (ii) a two-year warrant to purchase shares of our common stock with an aggregate exercise price equal to 20% of the purchase price paid for the Series C preferred stock sold in each Series C tranche, at an exercise price per share equal to the closing bid price of our common stock on the date we provide notice of such Series C tranche. Each time we deliver a Series C tranche notice, Socius is obligated to purchase the number of shares of common stock equal in dollar amount to 100% of the Series C tranche amount at a price per share equal to the closing bid price for our common stock on such date. As of December 31, 2012, 1,750 shares of Series C preferred stock were outstanding.

Holders of Series C preferred stock are entitled to receive dividends on each outstanding share of Series C preferred stock, which will accrue in shares of Series C preferred stock at a rate equal to 6% per annum from the issuance date.

Subject to the rights of the Series A-1 convertible preferred stock and the Series B preferred stock, the Series C preferred stock may be redeem at our option, commencing 4 years from the issuance date at a price per share of 100% of $10,000 plus any accrued but unpaid dividends thereon (the “Series C Liquidation Value”). Prior to redemption pursuant to the immediately foregoing, subject to the rights of the Series A-1 convertible preferred stock and the Series B preferred stock, we have the right to redeem the Series C preferred stock at any time after issuance at a price per share of : (i) 136% of the Series C Liquidation Value if redeemed prior to the first anniversary of the initial issuance date, (ii) 127% of the Series C Liquidation Value if redeemed on or after the first anniversary but prior to the second anniversary of the initial issuance date; (iii) 118% of the Series C Liquidation Value if redeemed on or after the second anniversary but prior to the third anniversary of the initial issuance date, and (iv) 109% of the Series C Liquidation Value if redeemed on or after the third anniversary but prior to the fourth anniversary of the initial issuance date.

The Series C preferred stock shall, with respect to dividend, rights upon liquidation, winding-up or dissolution, rank: (i) senior to the our common stock, and any other class or series of our preferred stock of the Company, except for the Series A-1 convertible preferred stock and Series B preferred stock which shall rank senior in right of redemption, liquidation, and dividends and (ii) junior to all existing and future indebtedness.

PLAN OF DISTRIBUTION

Each selling stockholder and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the OTCQB or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;

- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with NASDR Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with NASDR IM-2440.

In connection with the sale of the common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of the common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed 8%.

We are also required to pay certain fees and expenses incurred by us incident to the registration of the shares. We have further agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because the selling stockholders may be deemed to be "underwriters" within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the shares may be resold by the selling stockholders without registration and without regard to any volume limitations by reason of Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the shares have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

Selected legal matters with respect to this offering and the validity of the common stock offered by this prospectus will be passed upon for us by Sheppard, Mullin, Richter & Hampton LLP, Los Angeles, California.

EXPERTS

Our consolidated financial statements incorporated in this prospectus by reference from our annual report on Form 10-K for our fiscal year ended December 31, 2011 have been audited by SingerLewak LLP, an independent registered public accounting firm, as stated in their report appearing with the financial statements, which are incorporated herein by reference, and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in auditing and accounting.

LIMITATION ON LIABILITY AND DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our directors and officers are indemnified by our bylaws against amounts actually and necessarily incurred by them in connection with the defense of any action, suit or proceeding in which they are a party by reason of being or having been directors or officers of the Company. Our certificate of incorporation provides that none of our directors or officers shall be personally liable for damages for breach of any fiduciary duty as a director or officer involving any act or omission of any such director or officer. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to such directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC 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 us of expenses incurred or paid by such director, officer or controlling person 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, we will, unless in the opinion of 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.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC. This prospectus and any subsequent prospectus supplements do not contain all of the information in the registration statement. We have omitted from this prospectus some parts of the registration statement as permitted by the rules and regulations of the SEC. Statements in this prospectus concerning any document we have filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified in their entirety by reference to these filings. In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any documents that we have filed with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the operation of the Public Reference Room. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information that we file electronically with the SEC, including us. The SEC's Internet site can be found at http://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 furnished them to the SEC. Our Internet site can be found at http:www.advancedcell.com. Our website is not a part of this propsectus.

INFORMATION INCORPORATED BY REFERENCE

We have elected to incorporate certain information by reference into this prospectus. By incorporating by reference, we can disclose important information to you by referring you to other documents we have filed or will file with the SEC. The information incorporated by reference is deemed to be part of this prospectus, except for information incorporated by reference that is superseded by information contained in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any statements in the prospectus or any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents set forth below that we have previously filed with the SEC:

- Our annual report on Form 10-K/A for the fiscal year ended December 31, 2011, filed with the SEC on October 26, 2012;

- Our quarterly reports on Form 10-Q for the fiscal quarters ended March 31, 2012, June 30, 2012 and September 30, 2012, filed with the SEC on May 8, 2012, August 8, 2012 and November 8, 2012, respectively;

- Our current reports on Form 8-K filed with the SEC on each of January 30, 2012, March 8, 2012, March 14, 2012, April 16, 2012, April 30, 2012, May 31, 2012, September 14, 2012, September 20, 2012, January 17, 2013, as amended on January 18, 2013 and January 25, 2013; and

- The description of our common stock contained in our registration statement on Form 8-A filed with the SEC on May 28, 2003.

We also incorporate by reference all documents we file in the future pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of the initial filing of the registration statement that contains this prospectus and prior to the termination of the offering.

You may obtain copies of these documents on the website maintained by the SEC at http://www.sec.gov, or from us without charge (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into such documents) by writing us at Corporate Secretary, Advanced Cell Technology, Inc., 33 Locke Drive, Marlborough, Massachusetts 01752 or visiting our website at www.advancedcell.com.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for the purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or deemed to be incorporated by reference herein modifies or supersedes that statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

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Advanced Cell Technology, Inc.

96,401,028 SHARES
COMMON STOCK

OFFERED BY SELLING STOCKHOLDERS

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth our costs and expenses in connection with the registration for resale of our common stock. All of the amounts shown are estimates except the Commission Registration Fee.

	AMOUNT
Commission Registration Fee	$1,012
Printing and Related Fees	$750
Legal Fees and Expenses	$11,000
Accounting Fees and Expenses	$15,000
Miscellaneous Expenses	$1,500
Total	$29,262

Item 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact of their prior or current service to the corporation as a director or officer, in accordance with the provisions of Section 145, which are sufficiently broad to permit indemnification under certain circumstances for liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”). The indemnity may cover expenses (including attorneys’ fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys’ fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of the ir status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

Our directors and officers are indemnified by our bylaws against amounts actually and necessarily incurred by them in connection with the defense of any action, suit or proceeding in which they are a party by reason of being or having been directors or officers of the Company. Our certificate of incorporation provides that none of our directors or officers shall be personally liable for damages for breach of any fiduciary duty as a director or officer involving any act or omission of any such director or officer. Insofar as indemnification for liabilities arising under the Securities

Act may be permitted to such directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC 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 us of expenses incurred or paid by such director, officer or controlling person 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, we will, unless in the opinion of 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.

Item 16. Exhibits.

See Index of Exhibits immediately following the signature page of this registration statement.

Item 17. Undertakings.

a. 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 the Securities Act of 1933;

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

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

Provided however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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.

4. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

i. Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

ii. Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

5. That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

i. Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

iii. The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

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

c. Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 SEC such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

d. The undersigned registrant hereby undertakes that:

1. For purposes of determining any liability under the Securities Act, 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 registration pursuant to Rule 424(b)(1) or (4) or 497(h) 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, 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, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Marlborough, State of Massachusetts, on February 21, 2013.

ADVANCED CELL TECHNOLOGY, INC., a Delaware corporation
By: /s/ Gary Rabin
Gary Rabin
Chief Executive Officer and Chairman
(Principal Executive Officer, Principal Financial Officer and
Principal Accounting Officer)

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Gary Rabin his true and lawful attorney in fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post effective amendments) to the registration statement, and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post effective amendments thereto, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, each acting alone, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

/s/ Gary Rabin
Gary Rabin — February 21, 2013
Chairman and Chief Executive Officer

(Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer)

/s/ Robert Langer
Robert Langer — February 21, 2013
Director

/s/ Zohar Loshitzer
Zohar Loshitzer — February 21, 2013
Director

/s/ Gregory D. Perry
Gregory D. Perry — February 21, 2013
Director

/s/ Alan C. Shapiro
Alan C. Shapiro — February 21, 2013
Director

/s/ Michael T. Heffernan
Michael T. Heffernan — February 21, 2013
Director

INDEX OF EXHIBITS

The following documents are filed as exhibits to this registration statement:

Exhibit Number	Description
4.1	Certificate of Incorporation of the Registrant dated November 17, 2005 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 and incorporated by reference herein).
4.2	Certificate of Amendment to Certificate of Incorporation dated October 13, 2006 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K on October 13, 2006 and incorporated herein by reference).
4.3	Certificate of the Powers, Designations, Preferences and Rights of the Series A-1 Convertible Preferred Stock dated March 5, 2009 (previously filed as Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q filed on July 20, 2009 and incorporated herein by reference).
4.4	Certificate of Amendment to Certificate of Incorporation dated September 15, 2009 (previously filed as Exhibit 3.15 to the Registrant's Registration Statement on Form S-1 filed November 18, 2009 and incorporated herein by reference).
4.5	Certificate of Designations of Preferences, Rights and Limitations of Series B Preferred Stock dated November 3, 2009 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 12, 2009 and incorporated by reference herein).
4.6	Certificate of Designations of Preferences, Rights and Limitations of Series C Preferred Stock dated December 30, 2010 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 3, 2011 and incorporated herein by reference).
4.7	Certificate of Amendment to Certificate of Incorporation dated January 24, 2012 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 30, 2012 and incorporated herein by reference).
4.8	Bylaws of the Registrant (previously filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 and incorporated by reference herein).
4.9	Amendment No. 1 to Bylaws of the Registrant (previously filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on November 30, 2007 and incorporated by reference herein).
4.10	Specimen Stock Certificate (previously filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 and incorporated by reference herein).

4.11	Form of Amortizing Senior Secured Convertible Debenture Issued to CAMOFI Master LDC (previously filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 17, 2013 and incorporated by reference herein).
4.12	Form of Amortizing Senior Secured Convertible Debenture Issued to CAMHZN Master LDC (previously filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on January 17, 2013 and incorporated by reference herein).
5.1	Opinion of Sheppard, Mullin, Richter & Hampton, LLP.
10.1	Settlement Agreement and Mutual Release, executed as of January 11, 2013, by and among the Registrant, CAMOFI Master LDC and CAMHZN Master LDC (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 17, 2013 and incorporated by reference herein).
10.2	Registration Rights Agreement dated January 23, 2013 by and among the Registrant, CAMOFI Master LDC and CAMHZN Master LDC.
23.1	Consent of SingerLewak LLP, an independent registered public accounting firm.
23.2	Consent of Sheppard, Mullin, Richter & Hampton, LLP (included in Exhibit 5.1).
24.1	Powers of Attorney (included in Signature Page).

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* Filed herewith