ADVANCED CELL TECHNOLOGY, INC.
Form 10-K
March 17, 2011

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2010

OR

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number 0-50295

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

Delaware	87-0656515
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(I.R.S. EMPLOYER IDENTIFICATION NO.)

33 Locke Drive, Marlborough, Massachusetts 01752

(508) 756-1212

(Address and telephone number, including area code, of registrant's principal executive offices)

Securities registered pursuant to Section 12(b) of the Act:
None.
(Title of Class)

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $0.001 par value per share
(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x

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Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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

Large accelerated filer ¨	Accelerated filer x
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act.) Yes ¨ No x

The aggregate market value of the registrant's Common Stock held by non-affiliates of the registrant (based upon the closing price of $0.08 for the registrant's Common Stock as of June 30, 2010) was approximately $65.5 million (based on 818,397,859 shares of common stock outstanding and held by non-affiliates on such date). Shares of the registrant's Common Stock held by each executive officer and director and by each entity or person that, to the registrant's knowledge, owned 5% or more of the registrant's outstanding Common Stock as of June 30, 2010 have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of outstanding shares of the registrant's Common Stock, $0.001 par value, was 1,506,715,382 shares as of March 11, 2011.

ADVANCED CELL TECHNOLOGY, INC.
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CAUTIONARY STATEMENT RELATING TO FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K and the information incorporated by reference includes ‘‘forward-looking statements’’ All statements regarding our expected financial position and operating results, our business strategy, our financing plans and the outcome of any contingencies are forward-looking statements. Any such forward-looking statements are based on current expectations, estimates, and projections about our industry and our business. Words such as ‘‘anticipates,’’ ‘‘expects,’’ ‘‘intends,’’ ‘‘plans,’’ ‘‘believes,’’ ‘‘seeks,’’ ‘‘estimates,’’ or variations of those words and similar e intended to identify such forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those stated in or implied by any forward-looking statements.

PART I

Item 1. Business

Overview

Advanced Cell Technology, Inc., a Delaware corporation (the “Company”, “we”, “us”, or our” is a biotechnology company focused on developing and commercializing human embryonic and adult stem cell technology in the emerging field of regenerative medicine.

We were incorporated in Nevada under the name Two Moon Kachinas Corp. on May 18, 2000. On December 30, 2004, we filed an amendment to our articles of incorporation to change our corporate name to A.C.T. Holdings, Inc. On January 31, 2005, we completed the acquisition of Advanced Cell Technology, Inc., a Delaware corporation (prior to the Reincorporation (as defined below), “ACT”), pursuant to the terms of an Agreement and Plan of Merger dated January 3, 2005. As a result of the transaction, we terminated our kachina doll business and succeeded to the business operations and research efforts of ACT in the field of biotechnology. On June 17, 2005, we filed an amendment to our articles of incorporation to change our corporate name to Advanced Cell Technology, Inc. On November 18, 2005, we consummated a merger with and into our wholly-owned subsidiary ACT (the “Reincorporation”). As a result of the Reincorporation, we became a Delaware corporation.

We have acquired, developed and maintain a portfolio of patents and patent applications that form the proprietary base for our research and development efforts in the area of embryonic and adult stem cell research. We believe that our intellectual property portfolio is one of the strongest in the field. Our team includes some of the world's leading scientists in the field of stem cell research and development, and experts in conducting clinical trials. We believe our technology base, combined with our know-how, provides us with a strong competitive advantage and will 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, myocardial infarction and burns.

Our belief that our intellectual property represents one of the strongest portfolios in the field is supported by:

• The early and consistent pace of filing, and the breadth of the large number of filings in the portfolio.
• The relative immaturity of this field of study.
• The limited number of truly competitive portfolios of intellectual property.

Regenerative medicine is a new and emerging field of study involving development of medical therapies based on advances in stem cell and nuclear transfer technology. We have developed and maintain a broad intellectual property (IP) portfolio, with ownership or exclusive licensing of over 28 issued patents and over 170 patent applications in the field of regenerative medicine and related areas. This significant volume of patents and patent licenses has been developed in the short span of approximately the past eight to eleven years.

Although we have strong competitors in this field, they are limited in number. 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 somatic cell nuclear transfer and chromatin transfer are, and will prove to be, one of the technological keys to successful development of stem cell therapies (see "Cellular Reprogramming," below). In addition, we have succeeded in deriving human embryonic cell lines without destroying the donor embryo through our proprietary single blastomere derivation technology. We own or have a license to numerous other technologies for dealing with transplant rejection, including means of activating oocytes during nuclear transfer, parthenogenesis, transdifferentiation, and dedifferentiation. Our intellectual property also includes patent rights and applications for specific applications of stem cell technology in producing retinal pigment epithelium (RPE), hemangioblasts, myoblast stem cells and numerous methods and compositions for the use of these technologies and derived cells in retinal disease, heart disease, immunodeficiency estates and cancer.

The company has secured Food and Drug Administration (FDA) clearance to proceed to a Phase II Clinical Trial for its Myoblast program for the treatment of heart failure, and the trial is currently being developed. We believe that the company's myoblast technology has demonstrated that a myoblast transplantation treatment is feasible and safe in clinical trials conducted to date and that the technology could address the large market potential presented by heart failure.

Our research efforts to date in human embryonic technologies are at the level of clinical trials, pre-clinical development and basic research. In November of 2009 we filed an Investigational New Drug (IND) Application with the US Food and Drug Administration (FDA) to initiate a Phase I/II multicenter study using embryonic stem cell derived retinal cells to treat patients with Stargardt's Macular Dystrophy (SMD), as part of our RPE program. These retinal cells were developed using our proprietary blastomere derivation techniques.

The company's Hemangioblast program for the treatment of Diseases and Disorders of Circulatory and Vascular System is in preclinical development. These precursor cells derived from human embryonic stem (ES) cells can be used to achieve vascular repair in animal models of vascular injury.

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.

The Field of Regenerative Medicine

The emerging field of treatment called "regenerative medicine" or "cell therapy" refers to treatments that are founded on the concept of producing new cells to replace malfunctioning or damaged cells as a vehicle to treat disease and injury. Our focus is the development of effective methods to generate replacement cells from both human embryonic and adult stem cells.

Many significant and currently untreatable human diseases arise from the loss or malfunction of specific cell types in the body. This is especially true of diseases associated with aging such as Alzheimer's disease, Parkinson's disease, type II diabetes, heart failure, osteoarthritis, macular degeneration, and aging of the immune system, known as immunosenescence. This is also true for medical conditions resulting from damage to cells due to acute disease, such as trauma, infarction and burns. We believe that replacing damaged or malfunctioning cells with fully functional ones may be a useful therapeutic strategy in treating many of these diseases and conditions.

A stem cell is a cell that has the ability to branch out and change, or differentiate, into two or more different cell types. Stem cells are self-renewing primitive cells that have the ability to develop into functional, differentiated cells. In general, there are two broad categories of stem cells: adult stem cells and embryonic stem cells. Adult stem cells are derived from various tissues in the human body. Because they can branch out into many different cell types, they are referred to as "multipotent." Multipotent means these cells develop into multiple, but not all, types of cells in the body.

Embryonic stem cells, referred to as ES cells, which are derived from pre-implantation embryos, are unique because they are "pluripotent," which means that they can develop into all cells and tissues in the body, and they self-renew indefinitely in their undifferentiated state. The ability of ES cells to divide indefinitely in the undifferentiated state without losing pluripotency is a unique characteristic that distinguishes them from all other stem cells discovered to date in humans.

Our business is focused on both the development and commercialization of adult stem cell transplantation therapies and ES cell based technologies.

Our adult stem cell-based products are specifically targeted at therapies for heart and other cardiovascular disease and are at a more advanced stage of development than our human ES cell based technologies. Our first human ES cell-based product retinal pigmented epithelial cells are poised to enter Phase I clinical trials pending clearance by the FDA. We believe retinal pigmented epithelial cells technologies have potentially broader and more powerful applications with respect to a wide range of diseases.

Human ES Cell Programs

Since the discovery of the human ES cell, medical researchers worldwide have generally recognized the significance of this new technology and have begun to focus research on the translation of this discovery into important new therapies. Specifically, researchers have focused on several key challenges
including:

• isolating and purifying cell lines,

• growing stable cell lines in culture for long periods without mutations,

• manufacturing cell lines in numbers sufficient for therapy,

• differentiating ES cells into all of the cell types desired for therapies, and

• solving the potential rejection of ES cells used in therapies due to immuno-incompatibility with the patient.

We believe that solving the potential rejection of ES cells in patients is the greatest scientific obstacle to developing successful therapeutics. Our research and technologies are focused on solving this obstacle by creating stem cell therapeutics with compatible tissues. Compatible tissues are referred to as being histocompatible.

We believe the potential markets for regenerative medicine and stem cell therapy are large. The table below summarizes the potential United States patient populations which we believe may be amenable to cell or organ transplantation and represent target markets for products generated through our regenerative medicine technology.

POTENTIAL U.S. PATIENT POPULATIONS FOR CELL-BASED THERAPIES

[chart format]

Medical Condition	Number of Patients*
Cardiovascular disease	70 million *
Autoimmune disease	50 million *
Diabetes	18 million
Osteoporosis	10 million
Cancer	10 million
Alzheimer's disease	4.5 million
Parkinson's disease	1 million
Burns (severe)	1.1 million
Spinal-cord injuries	0.25 million
Birth defects	0.15 million/year

* These estimates are based on patient estimates published by the following organizations from April 2005 to the present: the American Heart Association, the American Autoimmune Related Diseases Association, SEER (Surveillance, Epidemiology and End Result), American Burn Association, March of Dimes, the Alzheimer's Association, the Alzheimer's Disease Education & Referral Center (National Institute on Aging), the National Institutes of Health's National Institute on Neurological Disorders and Stroke, the Foundation for Spinal Cord Injury Prevention, Care & Cure, the Centers for Disease Control and Prevention, the American Association of Diabetes Educators, the Northwest Parkinson's Foundation and the Parkinson's Action Network.

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Our Human Embryonic Stem Cell Technologies

The ability to produce embryonic stem cells that are immunologically compatible with the patient is the hallmark and the strength of our technology platform. We believe our technology platform will enable the transformation of a patient's cells into an embryonic state where those cells can be differentiated into specific therapeutically relevant cell types that are genetically identical to the patient. We believe our technology may also enable the production of stem cell lines, from sources external to the patient, that have a sufficiently high level of histocompatibility to be useful in making cell therapies readily accessible to a large segment of the patient population, without the need for exact genetic matching of tissues.

As a result, our technology avoids reliance on more limited approaches that involve use of cell lines that are not histocompatible with the recipient, or therapies based upon use of adult stem cells.

The use of human embryonic stem cells gives rise to ethical, legal and social issues previously rooted in the fact that ES-cell derivation deprives preimplantation embryos of the potential to develop into a human being. We have developed a method to derive human embryonic stem cell lines at the blastomere stage that does not result in the destruction of the preimplantation embryo.

In August 2001, then-President George Bush set guidelines for federal funding of research on embryonic stem cells from human embryos created by in-vitro fertilization, referred to as IVF, limiting funding to just 60 lines. IVF-ES cells have the drawback that they are not genetically matched to the recipient patient. These ES cells are allogeneic. The word allogeneic literally means "other DNA type." Therapies using allogeneic cell lines can result in immune system incompatibilities where the host immune system attacks and rejects the transplanted cells or the transplanted cells attack the host. These incompatibilities may be partially suppressed with powerful immunosuppressive drugs, but the side effects can be severe and result in life-threatening complications. As a result, these incompatibilities have the potential to generate significant inefficiencies in the application of cell therapies.

However, in March 2009, President Barack Obama issued an executive order opening the door to a significant increase in federal funding for ES cell research. That led to the National Institutes of Health (NIH) approval of 13 additional stem cell lines for use in agency-funded research. The NIH is considering whether to approve an additional 96 lines, including blastomere derived lines we submitted for consideration.

The strategic focus of our human ES cell technology is to produce cell lines that are both histocompatible with the patient and pluripotent. We have numerous proprietary technologies that we believe will generate histocompatible, pluripotent stem cells for patient-specific application. These cells maximize the potential for effective use as transplants to replace diseased or destroyed cells in human patients. If successfully developed, our cellular reprogramming technologies will make it possible to produce cells that have the proliferative capacity of young cells, have specific therapeutic application, and are immunologically compatible with the patient.

All of our ES cell technologies are at the level of basic research or in the pre-clinical stage of development.

Our ES Cell Research Programs

Our ES cell research programs are divided into three core categories: cellular reprogramming, our reduced complexity program, and stem cell differentiation. Each of these core areas of focus is discussed below.

I. Cellular Reprogramming

This research program involves development of therapies based on the use of genetically identical pluripotent stem cells generated by our cellular reprogramming technologies. These technologies can be used to generate patient-specific pluripotent cells and tissues for transplantation. We believe our technology platform will enable the transformation of a patient's cells into pluripotent ES cells that are histocompatible with the patient and have the potential to be differentiated into any of the over 200 different human cell types that may be therapeutically relevant in treating diseased or destroyed tissues in human patients. We expect that our cellular reprogramming technologies will offer a new avenue for the introduction of targeted genetic modifications in cells and for the regeneration of cell lifespan, thereby making youthful cells available for aging patients. The combination of these advances, the ability to produce young cells of certain kinds that are histocompatible with the patient, is a core potential application of our technology. We believe these cellular reprogramming technologies will be effective therapies where there is time to prepare customized therapy through reprogramming of the patient's own cells.

Some of the technologies that support our cellular reprogramming program are somatic cell nuclear transfer, chromatin transfer, factor reprogramming, and fusion technologies.

Somatic cell nuclear transfer (SCNT) refers to the process wherein a body cell is transferred to an egg cell from which the nuclear DNA has been removed. This results in the body cell being "reprogrammed" by the egg cell. This reprogramming transforms the cell from the type of cell it was, for instance a skin cell, into an embryonic cell with the power to become any cell type in the body. A related technology is called chromatin transfer. Through this technology, the DNA and attached proteins, or chromatin, of the somatic cell is reprogrammed prior to transfer into an egg cell. Chromatin transfer has the potential to improve the efficiencies and therefore reduce the cost of nuclear transfer. We believe that one critical advantage of our proprietary SCNT and chromatin transfer technologies is that the cells are "rejuvenated" by returning the cell to a youthful state. This is important because these youthful cells will have the proliferative capacity of young cells. These healthy replacement cells, which would be genetically identical to the patient's own cells, would then be used for cell transplantation.

Our fusion technologies involve the fusion of the cytoplasm of one cell into another. In the same manner that the cytoplasm of an egg cell is capable of transforming any cell back to an embryonic state, the fusion of the cytoplasm of other cell types, including differentiated cell types (such as blood cells) is capable of reprogramming another cell type, such as a skin cell. These technologies have the potential of transforming a cell from a patient into another medically-useful cell type also identical to the patient. They also have the potential to fuse the cytoplasm of undifferentiated cells, such as embryonic stem cells, with somatic cells to transport the somatic cell DNA back to pluripotency. Alternatively, factors expressed by embryonic stem cells can be introduced into somatic cells to induce pluripotency. We believe that the fusion and factor reprogramming technologies we are developing can be developed into as broad and powerful techniques as SCNT, producing histocompatible, youthful stem cells that are multi and potentially even pluripotent. If successfully developed, this technology may also provide a pathway that does not utilize human egg cells which would reduce the cost of the procedure and increase the number of patients that could benefit from its implementation.

II. Stem Cell Differentiation

Regenerative medicine requires that stem cells, from whatever source derived, be differentiated, or re-differentiated, into specific body cell types and then physically transplanted into a patient. Differentiation into tissues such as cardiac muscle, blood, and other tissues occurs spontaneously in ES cells being cultured in a dish. Successful application of stem cell technology will require control over the specific kinds of cells into which stem cells differentiate. Control of differentiation and the culture and growth of stem and differentiated cells are important current areas of research for us. Also, some chemicals, such as retinoic acid, can be used to trigger differentiation into specific cell types such as nerve cells. We intend to pursue differentiation approaches both in-house and through collaborations with other researchers who have particular interests in, and skills related to, cellular differentiation. These efforts include using both animal and human stem cell lines. Our research in this area includes projects focusing on developing many different cell types that may be used in the future to treat a wide range of diseases. Our researchers have generated stable retinal pigment epithelium, or RPE, cell lines for use in our clinical retinal program and are working on projects to generate stable cell lines with particular focus on blood lineage and vascular epithelial cell lines from hemangioblast cells.

Retinal Pigment Epithelium Program. In November, 2006 we published data demonstrating human ES cell-derived RPE cells were capable of rescuing visual function in Royal College of Surgeon rats. Following the publication of that data, we entered into a pre-clinical development collaboration with Casey Eye Institute at Oregon Health & Science University. The purpose of the collaboration was to conduct dosage and safety studies in preparation for IND and Phase I human clinical trials. As mentioned, in November of last year we filed an Investigational New Drug (IND) Application with the US Food and Drug Administration (FDA) to initiate a Phase I/II multicenter study using

embryonic stem cell derived retinal cells to treat patients with Stargardt's Macular Dystrophy (SMD).

Hemangioblast Program. Hemangioblasts are a newly-characterized stem cell capable of differentiating into both hematopoietic, meaning blood cell-forming, and angiogenic, meaning blood vessel endothelium-forming, cells. We believe it will be possible to utilize hemangioblast cells in engraftment to repair age-related endothelial dysfunction associated with numerous significant age-related diseases, including cardiovascular disease, stroke, and perhaps even cancer. In 2006 we successfully derived hemangioblast cells generated from the company's blastomere-derived human embryonic stem cell lines. In 2007, we published data reporting that through utilization of hemangioblast based therapy we generated function in vivo with respect to the repair of ischemic retinal vasculatures and restoration of blood flow in ischemic limbs. In addition, we also reported increased survival rates of animals suffering from myocardial infarction. The hemangioblast program is currently in preclinical development.

III. Adult Stem Cell Program

Our adult stem cell-based program is developing an autologous myoblast transplantation therapy delivered using a minimally invasive catheter injection system to restore cardiac function in patients with advanced heart disease. The key target for the therapy will be heart failure patients with New York Heart Association ("NYHA") scores Class II to IV. The company's therapy could also benefit patients supported on ventricular assistance devices and potential additional indications, such as acute myocardial infarction, peripheral artery disease, and non-cardiac tissue repair. Currently available treatment options for heart failure patients are inadequate and can only slow the progression of heart failure; none can halt or reverse the process. We believe our autologous myoblast transplantation therapy uses patented myoblast compositions for catheter delivery to the heart offering repair of the disease in heart failure patients and for those end-stage disease patients on ventricular assistance device support.

These indications represent a significant unmet medical need and hold significant potential for clinical approval.

Our transplantation therapy involves extraction through simple biopsy from a patient's thigh of myoblasts, which are non-embryonic, skeletal muscle stem cells, that can be expanded in culture and injected back into damaged and scarred regions of the heart. This therapy promotes repair of damaged cardiac tissue by autologous cells, thereby avoiding immune rejection as each patient receives their own cells. Skeletal muscle, unlike heart muscle, can repair itself after injury. Skeletal muscle contains immature myoblasts that can fuse with surrounding myoblasts or with damaged muscle fibers to regenerate contractile skeletal muscle. In experimental models, our researchers have demonstrated that skeletal myoblasts can be transplanted into an infarcted myocardium with the subsequent development of elongated, striated cells characteristic of both skeletal and cardiac muscle. Our Phase I clinical studies have demonstrated the efficacy of this therapy on a preliminary basis.

We have received FDA approval to proceed with our Phase II clinical trial, to evaluate the applications for myoblast transplantation in slowing and/or reversing the impact of heart failure.

We perform our myoblast expansion, packaging, shipment, and quality testing using proprietary procedures that adhere to GMP regulations for manufacturing clinical trial material. After expansion, the myoblasts are packaged and delivered to the clinical site for implantation into the injured heart tissue by a surgeon or interventional cardiologist. To maximize cell therapy effectiveness, adequate numbers of cells must be delivered to the site of damage in a repeatable and safe manner. Our therapy utilizes a minimally invasive catheter-based delivery methodology, which provides a safe, targeted and high efficiency approach to cell delivery to the infarct area.

We believe that, unlike currently available treatment options, myoblast therapy has the ability to repair and improve the function of a damaged heart.

Our preclinical and Phase I clinical studies support the conclusion that our therapy presents significant advantages over currently available treatments, including:

• Ability to restore cardiac function through new muscle formation

• Ability to prevent further decline of heart function

• No risk immunological rejection of myoblasts due to autologous nature of the therapy

• Complementary to and capable of improving outcomes of current therapeutic options for heart disease

• hematopoietic cells for blood diseases and cancer,

• myocardial and endothelial vascular tissue for cardiovascular disease,

• congestive heart failure, myocardial infarction and other cardiovascular disease
• skin cells for dermatological conditions,

• retinal pigment epithelium cells as treatment for macular degeneration and retinal pigmentosis,

• neural cells for spinal cord injury, Parkinson's disease and other neuro-degenerative diseases,

• pancreatic islet ß cells for diabetes,

• liver cells for hepatitis and cirrhosis,

• cartilage cells for arthritis, and

• lung cells for a variety of pulmonary diseases.

Potential Commercial Applications of our ES Cell and Adult Stem Cell Technologies

We believe that, if successfully developed, stem cell-based therapy has the potential to provide treatment for a broad range of acute and chronic degenerative diseases. We believe the potential applications of cell-based therapeutics include

While we expect that any future products will take the form of medical procedures, tangible therapeutics, or combinations thereof, we currently have no products, and the identity of our future products, if any, is dependent upon the results of our ongoing research efforts, and, therefore cannot be determined at this time.

Our Intellectual Property

Our research and development is supported by a broad intellectual property portfolio. We currently own or have exclusive licenses to over 45 patents and have over 170 patent applications pending worldwide in the field of regenerative medicine and stem cell therapy. We also have non-exclusive rights to a portfolio of patents and patent applications that support our core intellectual property.

Our success will likely depend upon our ability to preserve our proprietary technologies and operate without infringing the proprietary rights of other parties. However, we may rely on certain proprietary technologies and know-how that are not patentable. We protect such proprietary information, in part, by the use of confidentiality agreements with our employees, consultants and certain of our contractors.

We maintain a disciplined patent policy and, when appropriate, seek patent protection for inventions in our core technologies and in ancillary technologies that support our core technologies or which we otherwise believe will provide us with a competitive advantage. We pursue this strategy by filing patent applications for discoveries we make, either alone or in collaboration with scientific collaborators and strategic partners. Typically, although not always, we file patent applications both in the United States and in select international markets. In addition, we plan to obtain licenses or options to acquire licenses to patent filings from other individuals and organizations that we anticipate could be useful in advancing our research, development and commercialization initiatives and our strategic business interests.

The following table identifies the issued patents we own or license that we believe currently support our technology platform.

Owned by Advanced Cell Technology, Inc.

Number Patent	Country	Filing Date	Issue Date	Expiration Date*	Title
6,808,704	United States (US)	09/06/2000	10/26/2004	09/6/2020	Method for Generating Immune-Compatible Cells and Tissues Using Nuclear Transfer Techniques
783162	Australia (AU)	09/06/2000	01/12/2006	09/6/2020	Method for Generating Immune-Compatible Cells and Tissues Using Nuclear Transfer Techniques
265679	Mexico	09/06/2000	04/03/2009	09/06/2020	Method for Generating Immune-Compatible Cells and Tissues Using Nuclear Transfer Techniques
536786	New Zealand (NZ)	09/06/2000	01/11/2007	09/6/2020	Method for Generating Immune-Compatible Cells and Tissues Using Nuclear Transfer Techniques
782385	AU	10/13/2000	11/3/2005	10/13/2020	Method of Differentiation of Morula or Inner Cell Mass Cells and Method of Making Lineage-Defective Embryonic Stem Cells
518191	NZ	10/13/2000	05/10/2004	10/13/2020	Method of Differentiation of Morula or Inner Cell Mass Cells and Method of Making Lineage-Defective Embryonic Stem Cells
516236	NZ	06/30/2000	08/07/2005	06/30/2020	

					Cytoplasmic Transfer to De-Differentiate Recipient Cells
782286	AU	06/30/2000	10/27/2005	06/30/2020	Cytoplasmic Transfer to De-Differentiate Recipient Cells
531844	NZ	09/06/2000	12/08/05	09/06/2020	Telomere Restoration and Extension of Cell Life-Span in Animals Cloned from Senescent Somatic Cells
519347	NZ	12/20/2000	11/11/2004	12/20/2020	Method to Produce Cloned Embryos and Adults from Cultured Cells
00818200.0	China (CN)	12/20/2000	10/18/2006	12/20/2020	Method to Produce Cloned Embryos and Adults from Cultured Cells
5,453,366	US	03/15/1993	09/26/1995	09/26/2012	Method of Cloning Bovine Embryos
6,011,197	US	01/28/1999	01/04/2000	03/06/2017	Method of Cloning Bovines Using Reprogrammed Non-Embryonic Bovine Cells
6,395,958	US	07/15/1999	05/28/2002	03/06/2017	Method of Producing a Polypeptide in an Ungulate
5,496,720	US	02/10/1993	03/05/1996	03/05/2013	Parthenogenic Oocyte Activation
5,843,754	US	06/06/1995	12/01/1998	12/01/2015	Parthenogenic Bovine Oocyte Activation
6,194,202	US	03/04/1996	02/27/2001	02/10/2013	Parthenogenic Oocyte Activation
6,077,710	US	10/21/1998	06/20/2000	02/10/2013	Parthenogenic Oocyte Activation
5,346,990	US	03/12/1991	09/13/1994	09/13/2011	Sex-Associated Membrane Proteins and Methods for Increasing the Probability that Offspring will be of a Desired Sex

Owned by Advanced Cell Technology, Inc.'s wholly-owned subsidiary Mytogen, Inc.

Number Patent	Country	Filing Date	Issue Date	Expiration Date*	Title
6,673,604	US	07/24/2000	01/06/2004	07/24/2020	Muscle Cells and Their Use in Cardiac Repair**

6,432,711	US	11/01/1994	08/13/2002	08/13/2019	Embryonic Stem Cells Capable of Differentiating into Desired Cell Lines
2,174,746	Canada (CA)	11/02/1994	04/24/2007	11/02/2014	Embryonic Stem Cells Capable of Differentiating into Desired Cell Lines

** Currently undergoing Inter Partes Reexamination

University of Massachusetts Exclusive License to Advanced Cell Technology, Inc.

Number Patent	Country	Filing Date	Issue Date	Expiration Date*	Title
518365	NZ	10/27/2000	08/12/2004	10/27/2020	Gynogenetic or Androgenetic Production of Pluripotent Cells and Cell Lines, and Use Thereof to Produce Differentiated Cells and Tissues
782846	AU	10/27/2000	12/15/2005	10/27/2020	Gynogenetic or Androgenetic Production of Pluripotent Cells and Cell Lines, and Use Thereof to Produce Differentiated Cells and Tissues
5994619	US	12/16/1996	11/30/1999	04/01/2016	Production of Chimeric Bovine or Porcine Animals Using Cultured Inner Cell Mass Cells
5905042	US	04/01/1996	05/08/1999	04/01/2016	Production of Chimeric Bovine or Porcine Animals Using Cultured Inner Cell Mass Cells

* Actual patent expiration dates may differ from the dates listed herein including due to patent term adjustments pursuant to 35 U.S.C. § 154(b) and 37 C.F.R. §§ 1.702-1.705.

The fundamental consequence of patent expiration is that the invention covered by that patent will enter the public domain. However, the expiration of patent protection, or anticipated patent protection, for the bulk of our portfolio is not scheduled to begin for approximately ten to fifteen years. Due to the rapid pace of technology development in this field, and the volume of intellectual property we anticipate will be generated over the next decade, it is unlikely that the expiration of any existing patents or patent rights would have an adverse affect on our business. Due to our current stage of development, our existing patent portfolio is not currently supporting a marketed product, so we will not suffer from any reduction in product revenue from patent expiration. Any actual products that we develop are expected to be supported by intellectual property covered by current patent applications that, if granted, would not expire for 20 years from the date first filed. For example, our patent rights under the University of Massachusetts license listed in the patent table, above, do not begin to expire until 2016. Due to the early stage of our business, we differ from, for example, the pharmaceutical industry where the loss of a key significant patent can result in contemporaneous loss of products, programs or revenues. As our table demonstrates, our business is at the front end of the patent protection spectrum and is not expected to be significantly impacted by expiration of existing patents or patents issued in response to existing applications.

Research and License Agreements

Licenses of Intellectual Property to Us

The following summarizes technology licensed to us.

UMass License - On February 1, 2002 and April 16, 1996, we entered into exclusive license agreements (indefinite license period) with the University of Massachusetts. The 1996 Agreement has been amended by amendments dated September 1, 1997, May 31, 2000 and September 19, 2002. Pursuant to these agreements, the University of Massachusetts, referred to as UMass, exclusively licensed to us certain biological materials, patent rights and related technology for commercialization in specified fields. The license agreements require us to use diligent efforts to develop licensed products and licensed services and require us to pay certain royalties, minimum annual royalties, milestone payments and sublicense income to UMass. UMass received 73,263 shares of common stock of ACT as partial consideration of the license granted. We are currently behind on our payments of all UMass license fees, since 2008, and as such we are in breach of the license agreement.

2002 License - Under the 2002 license, UMass licenses to us certain patent rights relating to the cloning of non-human animals for use in connection with the development, manufacture and sale of products and services in the field of non-human animals for agriculture, companion animals, research and diagnostic products, non-human and human therapeutics, and neutraceuticals, except production of immunoglobulin in the blood of Bos taurus and Bos indicus. We are required to pay royalties to UMass ranging from 1.5% to 2.0% based on the covered product or service. We agreed to pay minimum royalty payments of $15,000 on the first and second anniversary of the agreement, $20,000 on the third anniversary, $25,000 on the fourth anniversary, and increasing to $45,000 on the fifth anniversary and for each year thereafter. We also agreed to make milestone payments to UMass of up to $1,630,000 upon the achievement of various development and commercialization milestones. Finally, we have agreed to pay UMass 18% of all sublicense income.

1996 License - The 1996 license covers certain patent rights, biological materials and know-how related to the cloning of non-human animals and cells for use in cell fields except the production of immunoglobulin in the blood of Bos taurus and Bos indicus. We are required to pay royalties ranging from 2.5% to 4.5% on net sales of products and services covered by the license, and minimum royalty payments in the amount of $15,000 per year (beginning on the later of the fourth year after the effective date of the agreement or the completion of certain clinical trials) for net sales on products and services for use in human therapeutics, and $30,000 per year (beginning in the third year after the effective date of the agreement) for net sales on products and services for all uses other than in human therapeutics.

UMass agreed to waive minimum royalty payments during any calendar year in which we fund research at UMass in the aggregate amount of $300,000. There are no milestone payments. We agreed to pay UMass 18% of all sublicense income except for equity. With respect to equity, we are required to pay UMass an amount equal to 10% of the total equity we receive for any transfer of rights under the 1996 license.

Both the 2002 agreement and the 1996 agreement remain in effect until all issued patents within the patent rights licensed under the agreement have expired, or for a period ten years after the effective date of the agreement if no patents have issued within that ten-year period. Each party has the right to terminate the agreement upon the occurrence of a material uncured breach. We also have the right to terminate at any time for any reason with ninety days' written notice.

Wake Forest License - On January 26, 2001, we entered into a materials and research data license agreement with Wake Forest University (indefinite license period), pursuant to which WFU granted to us a worldwide, exclusive, royalty-free, perpetual and irrevocable right and license to use certain data and stem cells and stem cell cultures created by us from biological materials provided by WFU to us for specified purposes only. The agreement allows us to utilize certain primate skin cells and ovary materials produced by WFU and transferred to us pursuant to an agreement relating to the transfer of biological materials. There are no milestone payments. There are no royalty requirements unless we desire to negotiate a commercial license for use of the biological materials provided to us by WFU. WFU received 60,000 shares of common stock of ACT Group, Inc., a now dissolved Delaware corporation referred to hereinafter as ACT Group. We have agreed to provide WFU samples of stem cells for WFU's research, education and teaching purposes and we have a first option to obtain an exclusive license to any intellectual property rights claimed by WFU in connection with the use of such stem cells. The term of the license granted is perpetual and irrevocable absent a breach by us.

Start Licensing License - On August 30, 2006, we entered into a Settlement and License Agreement with UMass and Start Licensing, Inc. (indefinite license period).Pursuant to this agreement Start Licensing licenses to us, on a nonexclusive, royalty-free and paid-up basis, certain patent rights for use with non-human animal research or studies, including preclinical trials, in connection with the research, development and sale of therapeutic and diagnostic human cell products.

GenVec Agreement - On December 28, 2005, Mytogen and GenVec, Inc. entered into a patent assignment and security agreement (indefinite period). Under the agreement, as amended on July 31, 2007, GenVec assigned certain agreements and intellectual property to Mytogen, and retained a royalty-free non-exclusive license, with the right to grant sublicenses, to practice the intellectual property in connection with products, processes or services developed or provided by GenVec other than autologous and allogenic skeletal myoblasts for cardiac therapy. Under the original agreement, Mytogen granted a security interest in the assigned intellectual property, but the security interest was released in the amendment to the agreement. Under the agreement, as amended, Mytogen must use commercially reasonable efforts to commercialize the assigned intellectual property, including by spending specified amounts in support of research and development in support of such commercialization; Mytogen must pay GenVec one-half of the first milestone payment (anticipated to be two million U.S. dollars) received by Mytogen under the Terumo Agreement; and Mytogen must also pay GenVec four percent (4%) of the net sales revenue from sales or other provision of products, processes or services covered by the agreement.

Exclusive Licenses of Intellectual Property by Us

The following summarizes licenses from us to third parties.

Exeter Life Sciences License - On October 22, 2003, we entered into an exclusive license with Exeter Life Sciences, Inc. (indefinite license period), pursuant to which we exclusively licensed to Exeter certain technology and patent rights for use in the fields of agriculture, endangered species, companion animals and equine animals. The license also grants Exeter a right of first negotiation to any improvement patents that are obtained by us that relate to the licensed intellectual property or which are useful, necessary or required to develop or manufacture certain animals, cells or tissues within the defined fields of use.

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Under the agreement, we license rights to certain patent rights and technology useful for the fields of use of non-human animals for agriculture, endangered animals and companion animals; excluding production of such animals for the primary purpose of producing human and non-human animal therapeutics and human healthcare products, including without limitation the production of biopharmaceutical agents in milk, such as proteins, peptides and polypeptides for pharmaceutical, neutraceutical or other use, and excluding the production of immunoglobulin in the blood of Bos taurus and Bos indicus. The field includes:

- the cloning, development, manufacture and sale of cloned non-human animals, including without limitation, bovine, hircine, ovine, porcine, equine animals and ungulates (as well as any transgenic variance or enhancements thereto) or products that are composed of, made in or derived, extracted or isolated from cells or tissues of such animals for the production of food or fiber, and the rendering of services or uses that relate to the production of such products;

- the cloning, development, manufacture and sale of endangered species for purposes of researching, aiding, reproducing or assisting in the reproduction of such endangered species;

- the cloning, development, and sale of hircine, ovine, feline, canine and equine animals (as well as any transgenic variance or enhancements thereto) for personal, business or commercial purposes, specifically excluding the sale of these animals as scientific research laboratory subjects; and

- the cloning, development, manufacture and sale of cloned equine animals (as well as any transgenic variance or enhancements thereto) or products that are composed of, made in or derived, extracted or isolated from cells or tissues of such animals for non-therapeutic purposes, including but not limited to, for use in agriculture, for use as food, for use as companion, service, work or recreational animals, or for use as racing or other equine event animals, and the rendering of services or uses that relate to the production of such products.

In consideration of the rights and licenses granted to Exeter, Exeter paid to us an initial license fee of $1,000,000, and has agreed to pay royalties equal to 5% of the net sales of all products and services covered by the license; provided that, sublicense income for license products that are the progeny of cloned animals covered by the license or products obtained from such progeny, the royalty is 3%. Exeter is required to pay an annual maintenance fee for the license, equal to $100,000 in 2005, increasing annually by $50,000 up to $500,000. Exeter's obligation to pay the annual maintenance fee was suspended until certain intellectual property that is the subject of litigation, namely the matter styled University of Massachusetts v. James M. Robl and Phillipe Collas, Massachusetts Superior Court, Suffolk County, Docket No. 04-0445-BLS, was settled in dispute. Negotiations are continuing to amend the license subject to the outcome of the settlement. The license also provides that we will refund certain amounts to Exeter if certain conditions concerning the referenced litigation are not met and that we will extend to Exeter rights associated with "improvement patents" that are obtained by us or the University in connection with the referenced litigation or any patent interference or opposition proceedings involving us that relate to the licensed intellectual property or which are useful, necessary or required to develop or manufacture cloned and/or transgenic non-human animals and cloned and/or transgenic cells and tissues from non-human animals within the field of use. The license grants Exeter a right of first negotiation to any improvement patents. There are no milestone payments. Exeter agrees to pay us a total of 25% of all sublicense income under the license. Either party may terminate the agreement in the event of an uncured breach. Exeter may terminate without cause on 60 days' prior written notice to us, or may terminate immediately in the

event of a change in law that materially affects Exeter's ability to commercialize the licensed intellectual property under the license.

We expect that the Exeter Life Science License will be amended as a result of the Start Settlement and the settlement of the University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00706 RMU), and University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00353 RMU).

Lifeline License - On May 14, 2004, we entered into three license agreements (indefinite license periods) with Lifeline Cell Technology, formerly known as PacGen Cellco, LLC; the licenses were subsequently amended in August 2005. Pursuant to the license agreements, as amended, we licensed to Lifeline, on an exclusive or non-exclusive basis, as applicable, certain know-how and patent rights for, among other things, the research, development, manufacture and sale of human cells for cell therapy in the treatment of human diabetes and liver diseases, and retinal diseases and retinal degenerative diseases. The license agreements require milestone payments up to $1.75 million in the aggregate. The agreement requires Lifeline to meet minimum research and development requirements. The licenses continue until expiration of the last valid claim within the licensed patent rights. Either party may terminate the agreements for an uncured breach, and Lifeline may terminate the agreement at any time with 30 days' notice.

Exclusive License Agreement Number 1, as amended, covers patent rights and technology developed by us that are relevant to:

- the research, development, manufacture and sale of human and non-human animal cells for commercial research and
- the manufacture and selling of human cells for therapeutic and diagnostic use in the treatment of human diabetes and liver diseases, and retinal diseases and retinal degenerative diseases.

Lifeline has agreed to pay us royalties ranging from 3% to 10% on net sales of products and services covered by the license, and a minimum royalty fee of $175,000 in the first year, plus, commencing 12 months after the effective date of the agreement, additional minimum royalty fees in the amount of $15,000 at 12 months, $37,500 at 24 months, $60,625 at 36 months, and $75,000 annually thereafter. Lifeline also agreed to pay a license fee in the amount of $225,000 in the form of a Convertible Promissory Note, which was repaid in cash in 2007.

We expect that Lifeline Exclusive License Agreement Number 1, as amended, will be further amended as a result of the Start Settlement and the settlement of University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00706 RMU), and University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00353 RMU).

Exclusive License Agreement Number 2, as amended, covers patent rights and technology developed by UMass relevant to:

- the research, development, manufacture and sale of human and non-human animal cells and defined animal cell lines for commercial research,

- the manufacture and selling of human cells for therapeutic and diagnostic use in the treatment of human diabetes and liver diseases and retinal diseases and retinal degenerative diseases, and

- the use of defined animal cell lines in the process of manufacturing and selling human cells for therapeutic and diagnostic use in the treatment of human diabetes and liver diseases.

Lifeline is required to pay us royalties ranging from 3% to 12% on net sales of products and services covered by the license, and a minimum royalty fee of $100,000 in the first year, plus, commencing 12 months after the effective date

of the agreement, additional minimum royalty fees in the amount of $15,000 at 12 months, $30,000 at 24 months, $45,000 at 36 months, and $60,000 annually thereafter. Lifeline also paid a license fee in the amount of $150,000 on June 1, 2007.

We expect that Lifeline Exclusive License Agreement Number 2, as amended, will be further amended as a result of the Start Settlement and the settlement of University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00706 RMU), and University of Massachusetts and Advanced Cell Technology, Inc. v. Roslin Institute (Edinburgh), Geron Corporation and Exeter Life Sciences, Inc., U.S. District Court for the District of Columbia (Case No. 1:05-cv-00353 RMU).

Exclusive License Agreement Number 3, as amended, covers patent rights and technology developed by Infigen relevant to the research, development, manufacture and sale of human cells for cell therapy in the treatment of therapeutic and diagnostic use in the treatment of human diabetes and liver diseases, and retinal diseases and retinal degenerative diseases. Lifeline is required to pay us royalties equal to 6% of net sales of products and services covered by the license, and a minimum royalty fee of $25,000 in the first year, plus, commencing 12 months after the effective date of the agreement, additional minimum royalty fees in the amount of $7,500 at 12 months, $7,500 at 24 months, $6,875 at 36 months, and $15,000 annually thereafter. Lifeline also paid a license fee in the amount of $225,000 in cash on June 1, 2007.

We expect that Lifeline Exclusive License Agreement Number 3, as amended, will be further amended or terminated, as a result of the dissolution of Infigen and the acquisition by us of certain of the Infigen patent rights.

Start Licensing License - On August 30, 2006, we entered into a Settlement and License Agreement with UMass and Start Licensing, Inc. (indefinite license period). See description of this agreement above. Pursuant to this agreement, we granted Start Licensing a worldwide, exclusive, fully paid-up and royalty-free license, with the right to grant sublicenses, to certain patent rights for use in connection with all uses and applications in non-human animals. The agreement was reached in connection with the settlement of the patent interference actions. The terms of the agreement also includes an initial payment to us, which has been made, and certain milestone payments. In addition, under the agreement, Start, Geron Corporation and Roslin Institute ("Roslin") each agree not to sue us under certain patent applications owned by Roslin.

Terumo Agreement - Diacrin, Inc. and Terumo Corporation entered into a development and license agreement on September 4, 2002 (indefinite license period); the agreement was transferred to Mytogen on December 28, 2005. Under the agreement, the parties agreed to collaborate to develop and commercialize products in the field described as autologous skeletal myoblasts for cardiac therapy (and conditionally allogenic skeletal myoblasts for cardiac therapy) in Japan and such other Asian countries as the parties may agree. Pursuant to the agreement, Terumo has an exclusive, royalty-bearing license, with a limited right to grant sublicenses, under certain technology and patent rights controlled by Mytogen; and a non-exclusive, non-royalty bearing right and license to use certain data resulting from clinical trials for products based on the licensed technology and patent rights for purposes of seeking regulatory approvals. The agreement specifies the rights and obligations of the parties with respect to collaboration and development of products covered by the agreement. The agreement also requires Terumo to make certain milestone payments, including the following: two million dollars upon initiation of any clinical trials of any covered product in Japan; two million dollars upon the first filing for regulatory approval of a covered product in Japan; one million dollars upon the first filing for regulatory approval of a covered product in any country other than Japan if the territory is expanded to include countries other than Japan; two million dollars upon the first commercial sale of a covered product in Japan; and one million dollars upon the first commercial sale of a covered product in any country other than Japan if the territory is expanded to include countries other than Japan. Terumo is also required under the agreement to pay royalties in an amount equal to ten percent (10%) of the net sales on covered products. In May 2008, Terumo exercised an option to extend a milestone for one year for $300,000. The milestone consisted of a Phase I clinical trial for the Myoblast Program in Japan and was extended for two years. This agreement is no longer in effect as of

December 31, 2010.

Pharming Technologies B.V. License - On February 26, 2008, we entered into a License Agreement with Pharming Technologies B.V., referred to as Pharming, pursuant to which we exclusively licensed to Pharming certain patents including oocyte activation patents for all uses and applications in or related to non-human animals (indefinite license period). We retained all use and applications of such patents in or related to humans. This agreement is no longer in effect as of December 31, 2010.

Transition Holdings, Inc. - On December 18, 2008, we entered into a license agreement with an Ireland-based investor, Transition Holdings Inc. ("Transition"), for certain of our non-core technology (indefinite license period). This license was terminated effective February 9, 2011.

Stem Cell & Regenerative Medicine International, Inc. - On December 1, 2008, the Company and CHA Bio & Diostech Co., Ltd. ("CHA"), a leading Korean-based biotechnology company focused on the development of stem cell technologies, formed an international joint venture. The new company, Stem Cell & Regenerative Medicine International, Inc. ("SCRMI"), will develop human blood cells and other clinical therapies based on our Hemangioblast Program, one of our core technologies. SCRMI has agreed to pay the Company fee of $500,000 for an exclusive, worldwide, license to the Hemangioblast Program (indefinite license period).

CHA – On March 31, 2009, we entered into a licensing agreement (indefinite license period) under which we have licensed our retinal pigment epithelium ("RPE") technology, for the treatment of diseases of the eye, to CHA for development and commercialization exclusively in Korea. We are eligible to receive up to $1.9 million in fees based upon achieving certain milestones, including us making an IND submission to the US FDA to commence clinical trials in humans using the technology, which we currently plan to do during the second half of 2009. We received an up-front fee of $250,000 and additional consideration under the agreement in the amount of $850,000. Under the terms of the agreement, CHA will incur all of the cost associated with RPE clinical trials in Korea.

CHA – On May 21, 2009, we have entered into a licensing agreement (indefinite license period) under which we will license our proprietary single blastomere technology, which has the potential to generate stable cell lines, including retinal pigment epithelium (RPE) cells for the treatment of diseases of the eye, to CHA for development and commercialization exclusively in Korea. We received a $300,000 up-front license fee, and received an additional $300,000 in December 2009. We believe there are some 200 different retinal diseases that may be impacted by this stem cell derived therapy including macular degeneration. Age-related macular degeneration (AMD) affects more than 30 million people worldwide and is the leading cause of blindness in people over 60 years of age in the United States (Source: Foundation For Fighting Blindness).

Embroyme Sciences, Inc. – In 2008, we entered into a license agreement (indefinite license period) whereby we licensed to Embryome Sciences certain cell processing technologies, including the technology licensed from Kirin Beer.We received an up-front payment of $470,000 and will receive royalties from future sales of product that utilizes the technologies from the licenses.

Nonexclusive Licenses of Intellectual Property by Us

We have entered into numerous nonexclusive license agreements pursuant to which we have granted non-exclusive rights to various parties to use certain patent rights in defined fields. These licenses generally provide for commercialization of our intellectual property and typically contain minimum royalties, milestones and continuing royalties based upon percentages of revenue.

Regulations

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

Outside the United States, we will be subject to regulations that govern the import of drug products from the United States or other manufacturing sites and foreign regulatory requirements governing human clinical trials and marketing approval for our products. The requirements governing the conduct of clinical trials, product licensing, pricing and

reimbursements vary widely from country to country.

The United States Congress, several states and foreign countries have considered legislation banning or restricting human application of ES cell-based and nuclear transfer based technologies. No assurance can be given regarding future restrictions or prohibitions that might affect our technology and business. In addition, we cannot assure you that future judicial rulings with respect to nuclear transfer technology or human ES cells will not have the effect of delaying, limiting or preventing the use of nuclear transfer technology or ES cell-based technology or delaying, limiting or preventing the sale, manufacture or use of products or services derived from nuclear transfer technology or ES cell-derived material. Any such legislative or judicial development would harm our ability to generate revenues and operate profitably.

For additional information about governmental regulations that will affect our planned and intended business operations, see "RISK FACTORS " beginning below.

Employees

As of March 11, 2011, we had 22 full-time employees, of whom six hold Ph.D. or M.D. degrees. Twelve employees are directly involved in research and development activities and ten are engaged in business development and administration. We also use the services of numerous outside consultants in business and scientific matters. We believe that we have good relations with our employees and consultants.

Item 1A. RISK FACTORS

An investment in the Company's common stock involves a high degree of risk. You should carefully consider the risks described below as well as other information provided to you in this prospectus, including information in the section of this document entitled "Forward Looking Statements." The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations could be materially adversely affected, the value of our common stock could decline, and you may lose all or part of your investment.

Risks 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 (see REGULATORY RISKS), enter clinical trials for any 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. Any product using any of our technology may fail to provide the intended therapeutic benefits, or achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing or production. 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 December 31, 2010, we have an accumulated deficit of $180,949,523 and a stockholders' deficit of $23,653,090. We incurred net losses of $54,373,332 and $36,758,208 for the years ended December 31, 2010 and 2009, 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 are in the early stages of a strategic joint venture which may slow, impede or result in the termination of potential therapeutic products whose development is now the responsibility of the partnership and not solely of the Company.

In 2008, we entered into a new partnership (CHA) and as a result, we are subject to 3rd party interests (see RISKS RELATED TO THIRD PARTY RELIANCE) and control issues, not the least of which relates to certain of our employees no longer being exclusively managed by us. We therefore could be at risk for losing key employees. Additionally substantial operating and working capital will be required and there is no assurance that CHA Biotech Co. limited, partner in our joint venture, will be able to fund their requirements.

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 may 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 I.P.S. technology, which will limit our revenue sources.

Our human embryonic stem cell program is in the IND phase; our myoblast program has received FDA clearance to proceed to Phase II human clinical trials; our Hemangioblast program is 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 those related therapies, our blastomere program and, as part of our recently established partnership with CHA, developing products in the hemangioblast/immunology arena (see DESCRIPTION OF BUSINESS Section of prospectus). As a result of our narrower product focus we have fewer revenue sources. Our emphasis on fewer programs may hinder our results if these programs are not successful. Although our adult stem cell myoblast program has been approved for a Phase II clinical trial, we have suspended that program indefinitely due to a lack of funding. As a result of our emphasis on our retinal program, our hemangioblast program and our blastomere program, 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. Additionally, we partially rely on nuclear transfer and embryonic stem cell technologies that we may not be able to successfully develop, which will prevent us from generating revenues, operating profitably or providing investors any return on their investment. We cannot guarantee that we will be able to successfully develop our retinal, hemangioblast, blastomere, nuclear transfer technology, embryonic stem cell or myoblast 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 nuclear transfer technology 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 affect 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

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

Several of the key 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 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 of our technology is 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 intend to 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, and

- patents will not issue to other parties, which may be infringed by our potential products or technologies.

- 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 nuclear transfer 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 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. And 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 are not in full compliance with some of our license agreements.

We are not in full compliance with some of our licenses (see Our Intellectual Property in the DESCRIPTION OF BUSINESS section of this prospectus) and due to limited financial resources we cannot guarantee that we will regain full compliance status. If we are unable to be in compliance with our license agreements, 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 are time consuming and require 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 products 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.

Risks Related to Domestic Governmental Regulation

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 use of these cells. In the event that our research related to human embryonic stem cells becomes the subject of adverse commentary or publicity, 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.

Despite the rescission of President Bush's Executive order in August 2001 by President Barack Obama in March 2009, the overall effect of new laws drafted by the NIH and put into effect regarding the dropping of restrictions on hES research has yet to be seen or made clear.

While it is unclear whether Federal law continues to restrict the use of federal funds for human embryonic cell research, commonly referred to as hES cell research, 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 executive order does not overturn the Dickey–Wicker Amendment, a 13-year-old ban on federal funding for the actual creation of new stem cell lines, an act that destroys an embryo. In the United States these efforts still must be funded privately or by state governments. Further, there can be no assurance that legislative or administrative restrictions directly or indirectly delaying, limiting or preventing the use of hES technology, nuclear transfer technology, IPS technology, the use of human embryonic material, or the sale, manufacture or use of products or services derived from nuclear transfer technology or other hES technology will not be adopted or extended in the future.

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.

For-profit entities may be prohibited from benefiting from grant funding.

There has been much publicity about grant resources for stem cell research, including Proposition 71 in California. While the California Institute CIRM has provided grant funds to some for-profit entities, there is no guarantee that it will continue to do so, particularly given the state's current budgetary conditions. As a result of these uncertainties regarding Proposition 71, we cannot assure you that funding, if any, will be available to us.

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

Certain of our and our licensors' research has been or is being funded in part by government grants. In connection with certain grants, the U.S. 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.

Risks Related to International Regulation

We may not be able to obtain required approvals in other countries.

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 affect on our financial condition or business prospects.

Risks Relating to Our Debt Financings

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

As of December 31, 2010, on an aggregated basis our debt and preferred stock financings may result in being converted into 6,400,425 shares of our common stock, and warrants and options that may be converted into approximately 183,307,361 shares of our 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.

The issuance of shares upon conversion of the convertible debentures and exercise of outstanding warrants will cause immediate and substantial dilution to our existing stockholders.

The issuance of shares upon conversion of the convertible debentures and exercise of warrants, including the replacement warrants, will result in substantial dilution to the interests of other stockholders since the selling security holders may ultimately convert and sell the full amount issuable on conversion. Although no single selling security holder may convert its convertible debentures and/or exercise its warrants if such conversion or exercise would cause it to own more than 4.99% of our outstanding common stock, this restriction does not prevent each selling security holder from converting and/or exercising some of its holdings and then converting the rest of its holdings. In this way, each selling security holder could sell more than this limit while never holding more than this limit. There is no upper limit on the number of shares that may be issued which will have the effect of further diluting the proportionate equity interest and voting power of holders of our common stock.

Our outstanding indebtedness on our Debentures imposes certain restrictions on how we conduct our business. In addition, all of our assets, including our intellectual property, are pledged to secure this indebtedness. If we fail to meet our obligations under the Debentures, our payment obligations may be accelerated and the collateral securing the debt may be sold to satisfy these obligations.

The Debentures and related agreements contain various provisions that restrict our operating flexibility. Pursuant to the agreement, we may not, among other things:

- Except for certain permitted indebtedness, enter into, create, incur, assume, guarantee or suffer to exist any indebtedness for borrowed money of any kind, including but not limited to, a guarantee, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom,

- Except for certain permitted liens, enter into, create, incur, assume or suffer to exist any liens of any kind, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom,

- Amend our certificate of incorporation, bylaws or other charter documents so as to materially and adversely affect any rights of holders of the Debentures and Warrants,

- Repay, repurchase or offer to repay, repurchase or otherwise acquire more than a de minimis number of shares of our common stock or common stock equivalents,

- Enter into any transaction with any of our affiliates, which would be required to be disclosed in any public filing with the Securities and Exchange Commission, unless such transaction is made on an arm's-length basis and expressly approved by a majority of our disinterested directors (even if less than a quorum otherwise required for board approval),

- Pay cash dividends or distributions on any of our equity securities,

- Grant certain registration rights
- Enter into any agreement with respect to any of the foregoing, or
- Make cash expenditures in excess of $1,000,000 per calendar month, subject to certain specified exceptions.

These provisions could have important consequences for us, including (i) making it more difficult for us to obtain additional debt financing from another lender, or obtain new debt financing on terms favorable to us, (ii) causing us to use a portion of our available cash for debt repayment and service rather than other perceived needs and/or (iii) impacting our ability to take advantage of significant, perceived business opportunities.

Our obligations under our securities purchase agreements are secured by substantially all of our assets.

Our obligations under certain security agreements, executed in connection with certain financings, with the holders of the debentures and warrants are secured by substantially all of our assets. As a result, if we default under the terms of the security agreement, such holders could foreclose on their security interest and liquidate all of our assets. This would cause operations to cease.

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.

We are in a Strategic Joint Venture which may slow, impede or result in the termination of potential therapeutic products whose development is now the responsibility of the partnership and not solely of the Company.

In 2008, the Company entered into a new partnership (CHA) and as a result, we are subject to 3rd party interests and control issues, not the least of which relates to certain of our employees no longer being exclusively managed by us. We therefore could be at risk for losing key employees. Additionally substantial operating and working capital will be required and there is no assurance that CHA Biotech Co. limited, partner in our joint venture, will be able to fund their requirements. Any failure on their part could negatively impact our product development, human capital and financial resources allocated to other of our programs.

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 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, for which we filed an IND with the FDA) is risky and unproven and no products using this approach have received regulatory approval in the United States or Europe.

We believe that no 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 candidate, our therapeutic Retinal program for Startgardt's disease has not yet started Phase I Clinical Trials and has not yet received 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 program may never receive approval from the FDA or any similar foreign regulatory authority.

We may experience numerous unforeseen events during, or 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 clinical trials at 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, and
- 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.

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 ES cell and autologous cell therapies), we compete with a variety of companies, most of whom are specialty biotechnology companies, such as Geron Corporation, Genzyme Corporation, StemCells, Inc., Aastrom Biosciences, Inc., Viacell, Inc., MG Biotherapeutics, Celgene, BioHeart, Inc., Baxter Healthcare, Osiris Therapeutics and Cytori.

Each of these companies are 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 (in the Retinal Disease indication one of our primary competitors is Celgene). 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 Geron Corporation, Genzyme Corporation, StemCells, Inc., Aastrom Biosciences, 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. See "LEGAL PROCEEDINGS" in this prospectus for a more complete discussion of currently pending litigation against the Company.

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 credibility as a business operating in the field of human embryonic stem cells is largely dependent upon the support of our Ethics Advisory Board.

Because the use of human embryonic stem cells gives rise to ethical, legal and social issues, we have instituted an Ethics Advisory Board. Our Ethics Advisory Board is made up of highly qualified individuals with expertise in the field of human embryonic stem cells. We cannot assure you that these members will continue to serve on our Ethics Advisory Board, and the loss of any such member may affect the credibility and effectiveness of the Board. As a result, our business may be materially harmed in the event of any such loss.

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

We have limited director and officer insurance and commercial insurance policies. 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 no 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 no 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 obtained or 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.

We face risks related to compliance with corporate governance laws and financial reporting standards.

The Sarbanes-Oxley Act of 2002, as well as related new rules and regulations implemented by the Securities and Exchange Commission and the Public Company Accounting Oversight Board, require changes in the corporate governance practices and financial reporting standards for public companies. These new laws, rules and regulations, including compliance with Section 404 of the Sarbanes-Oxley Act of 2002 relating to internal control over financial reporting, referred to as Section 404, have materially increased our legal and financial compliance costs and made some activities more time-consuming and more burdensome.

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,
- 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.

In 2008, a significant number of our outstanding securities that were previously restricted became eligible for sale under Rule 144 of the Securities Act, and their sale will not be subject to any volume limitations.

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 private placement would likely require us to register the resale of any shares of capital stock issued or issuable in the transaction. We have also issued common stock to certain parties, such as vendors and service providers, as payment for products and services. Under these arrangements, we may agree to register the shares for resale soon after their issuance. We may also continue to pay for certain goods and services with equity, which would dilute your interest in the company.

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 Securities and Exchange Commission (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.

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Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our headquarters are located in Marlboro, Massachusetts, where we lease approximately 10,607 square foot of office and laboratory facilities. The monthly rent for this property is $12,596. The lease term is from April 1, 2010 through June 30, 2015. We also lease approximately 700 square feet of corporate office space in Santa Monica, CA. The lease for our Santa Monica office terminates on February 28, 2012. The monthly rent for this space is $2,170.

Item 3. Legal Proceedings

Gary D. Aronson v. Advanced Cell Technology, Inc., Superior Court of California, County of Alameda, Case No. RG07348990. John S. Gorton v. Advanced Cell Technology, Inc, Superior Court of California, County of Alameda Case No. RG07350437. On October 1, 2007 Gary D. Aronson brought suit against us with respect to a dispute over the interpretation of the anti-dilution provisions of our warrants issued to Mr. Aronson on or about September 14, 2005. John S. Gorton initiated a similar suit on October 10, 2007. The two cases have been consolidated. The plaintiffs allege that we breached warrants to purchase securities issued by us to these individuals by not timely issuing stock after the warrants were exercised, failing to issue additional shares of stock in accordance with the terms of the warrants and failing to provide proper notice of certain events allegedly triggering Plaintiffs' purported rights to additional shares. The Plaintiffs withdrew their case the day before the trial date. We sought attorney fees relating to us defending the case over the past 2.5 years. The court denied the motion and we have appealed.

Bristol Investment Fund, Ltd. as Collateral Agent for the Holders of Certain Original Issue Discount Senior Convertible Debentures v. Alexandria Real Estate—79/96 Charlestown Navy Yard, LLC (Suffolk Superior Court). The Company has been named as a third party defendant in this action, filed September 16, 2009, in which the plaintiff alleges that Alexandria Real Estate (“Alexandria”) improperly charged a trustee holding approximately $146,000 of funds in a Company account that Bristol claimed as collateral. Alexandria brought a third party complaint against the Company for indemnification. The case was dismissed as of December 31, 2010.

On February 9, 2011, we entered into a settlement agreement and mutual release with Transition Holdings Ltd. (“Transition”), in a dispute over the $3,500,000 received in 2008 and 2009. The two parties disputed the nature of the consideration provided to the Company. We agreed to deliver Transition 7,413,000 shares of our common stock, issuable in consideration of all monies previously delivered to the Company by Transition in the aggregate amount of $3,500,000. Upon issuance of the shares, all other agreements between the Company and Transition, including licenses, are deemed cancelled, null and void, and of no force or effect.

On February 11, 2011, we entered into a settlement agreement and mutual release with Gemini Master Fund, Ltd. (“Gemini”). The two parties disputed the number of shares of common stock to be issued upon exercise of warrants held by Gemini. In settlement, we agreed to deliver Gemini 20,000,000 shares of its common stock, issuable upon cashless exercise of all warrants previously issued by the Company to Gemini. Upon issuance of the shares to Gemini, all other agreements between the Company and Gemini, including any agreements between the Company and any entity controlled by Gemini or their principals, are hereby deemed cancelled, null and void, and of no force or effect.

Item 4. [Reserved]

Not applicable.

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PART II

Item 5. Market for the Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock is quoted on the OTCBB under the symbol "ACTC.OB." For the periods indicated, the following table sets forth the high and low bid prices per share of our common stock. These prices represent inter-dealer quotations without retail markup, markdown, or commission and may not necessarily represent actual transactions.

Fiscal Year 2009	High Bid	Low Bid
First Quarter	$ 0.29	$ 0.04
Second Quarter	$ 0.27	$ 0.10
Third Quarter	$ 0.24	$ 0.12
Fourth Quarter	$ 0.13	$ 0.09

Fiscal Year 2010	High Bid	Low Bid
First Quarter	$ 0.12	$ 0.08
Second Quarter	$ 0.10	$ 0.07
Third Quarter	$ 0.09	$ 0.05
Fourth Quarter	$ 0.27	$ 0.04

Trades of our common stock are subject to Rule 15g-9 of the Securities and Exchange Commission, known as the Penny Stock Rule. This rule imposes requirements on broker/dealers who sell securities subject to the rule to persons other than established customers and accredited investors. For transactions covered by the rule, brokers/dealers must make a special suitability determination for purchasers of the securities and receive the purchaser's written agreement to the transaction prior to sale. The Securities and Exchange Commission also has rules that regulate broker/dealer practices in connection with transactions in "penny stocks." Penny stocks generally are equity securities with a price of less than $5.00, other than securities registered on certain national securities exchanges or quoted on the NASDAQ system, provided that current price and volume information with respect to transactions in that security is provided by the exchange or system. The Penny Stock Rules requires a broker/dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document prepared by the Commission that provides information about penny stocks and the nature and level of risks in the penny stock market. The broker/dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker/dealer and its salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker/dealer

and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation. These disclosure requirements have the effect of reducing the level of trading activity in the secondary market for our common stock. As a result of these rules, investors may find it difficult to sell their shares.

Holders

As of March 11, 2011, there were approximately 235 shareholders of record of our common stock.

Dividends

We have never paid cash dividends and have no plans to do so in the foreseeable future. Our future dividend policy will be determined by our board of directors and will depend upon a number of factors, including our financial condition and performance, our cash needs and expansion plans, income tax consequences, and the restrictions that applicable laws, our current preferred stock instruments, and our future credit arrangements may then impose.

Currently under Delaware law, unless further restricted in its certificate of incorporation, a corporation may declare and pay dividends out of surplus, or if no surplus exists, out of net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year (provided that the amount of capital of the corporation is not less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets).

Securities Authorized for Issuance Under Equity Compensation Plans

The following table shows information with respect to each equity compensation plan under which the Company's common stock is authorized for issuance as of the fiscal year ended December 31, 2010.

EQUITY COMPENSATION PLAN INFORMATION

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for issuance under equity complensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	48,376,119(1)	$ 0.23	131,621,494(2)
Equity compensation plans not approved by security holders	3,201,943	0.56	-
Total	51,578,062	0.25	131,621,494

(1) Awards for 2,492,000 options have been issued under the Advanced Cell Technology, Inc. 2004 Stock Option Plan I ("2004 Plan 1"), 1,301,161 options have been issued under the Advanced Cell Technology, Inc. 2004 Stock Option Plan II ("2004 Plan 2" and together with the 2004 Plan I, the "2004 ACT Plans"), and 49,495,484 options have been issued under the 2005 Stock Plan.

(2) This number included 370,000 shares available under the 2004 Plan I, 230,000 shares available under the 2004 Plan II and 131,021,494 shares available under the 2005 Stock Plan.

Recent Sales of Unregistered Securities; Uses of Proceeds From Registered Securities

Recent Sales of Unregistered Securities

During the year ended December 31, 2010, the Company issued 31,399,587 shares of its common stock in a cashless exercise of warrants. These shares were eligible for sale under the Rule 144.

On February 11, 2011, the Company issued 7,413,000 shares of its common stock to Transition Holdings, Ltd. pursuant to a settlement agreement and mutual release between the Company and the investor.

On February 11, 2011, the Company issued 20,000,000 shares of its common stock to Gemini Master Fund, Ltd. pursuant to a settlement agreement and mutual release between the Company and the investor.

In connection with the foregoing, the Company relied upon the exemption from securities registration afforded by Rule 506 of Regulation D as promulgated by the United States Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act") and/or Section 4(2) of the Securities Act. No advertising or general solicitation was employed in offering the securities. The issuances were made to a limited number of persons, all of whom were accredited investors, and transfer of the securities was restricted in accordance with the requirements of the Securities Act of 1933.

Use of Proceeds from Registered Securities

Not Applicable.

Item 6. Selected Financial Data

	For the Year Ended December 31,				
	2010	2009	2008	2007 (restated)	2006 (restated)
Revenue	$725,044	$1,415,979	$787,106	$647,349	$440,842
Net loss	(54,373,332)	(36,758,208)	(33,903,513)	(15,898,725)	(16,861,789)
Net loss per common share:					
Basic	$(0.04)	$(0.07)	$(0.14)	$(0.26)	$(0.58)
Diluted	$(0.04)	$(0.07)	$(0.14)	$(0.26)	$(0.58)

	As of December 31,				
	2010	2009	2008	2007 (restated)	2006 (restated)
Total assets	$19,054,152	$5,088,008	$2,577,778	$8,607,045	$16,989,718
Long-term debt:					
2005 Convertible debenture and embedded derivatives, net of discounts	$-	$-	$85,997	$1,276,871	$10,466,735
2006 Convertible debenture and embedded derivative, fair value	-	-	1,993,354	3,047,491	13,238,476
2007 Convertible debenture and embedded derivatives, fair value	-	-	7,706,344	3,482,542	-
2008 Convertible debenture and embedded derivatives, fair value	-	-	4,066,505	-	-
Convertible promissory notes and embedded derivatives, fair value	-	-	1,757,470	-	-
Amended and restated convertible debentures, net of discounts	-	7,605,107	-	-	-
Convertible promissory notes, net of discounts	2,780	744,417	-	-	-

2009 Convertible promissory notes, net of discounts	132,680	281,271	-	-	-
Total Long-term debt	$135,460	$8,630,795	$15,609,670	$7,806,904	$23,705,211
Redeemable preferred stock	$1,272,441	$908,195	$-	$-	$-
Cash dividends delcared per common share	$-	$-	$-	$-	$-

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Certain statements in this annual report on Form 10-K that are not historical in fact constitute "forward-looking statements." Words such as, but not limited to, "believe," "expect," "anticipate," "estimate," "intend," "plan," and similar expressions are intended to identify forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other factors based on the Company's estimates and expectations concerning future events that may cause the actual results of the Company to be materially different from historical results or from any results expressed or implied by such forward-looking statements. These risks and uncertainties, as well as the Company's critical accounting policies, are discussed in more detail under "Management's Discussion and Analysis—Critical Accounting Policies" and in periodic filings with the Securities and Exchange Commission. The Company undertakes no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

You should read the following discussion of our financial condition and results of operations together with the audited financial statements and the notes to the audited financial statements included in this annual report. This discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results may differ materially from those anticipated in these forward-looking statements.

Executive Level Overview

We are a biotechnology company focused on developing and commercializing human stem cell technology in the emerging fields of regenerative medicine and stem cell therapy.

Critical Accounting Estimates

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of any contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. We regularly review our estimates and assumptions, which are based upon historical experience, as well as current economic conditions and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of certain assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates and assumptions.

We believe that the following critical accounting policies are affected by significant judgments and estimates used in the preparation of our consolidated financial statements.

Fair Value Measurements — For certain financial instruments, including accounts payable, accrued expenses and notes payable, the carrying amounts approximate fair value due to their relatively short maturities.

On January 1, 2008, we adopted ASC 820-10, “Fair Value Measurements and Disclosures.” ASC 820-10 defines fair value, and establishes a three-level valuation hierarchy for disclosures of fair value measurement that enhances disclosure requirements for fair value measures. The carrying amounts reported in the consolidated balance sheets for receivables and current liabilities each qualify as financial instruments and are a reasonable estimate of their fair values because of the short period of time between the origination of such instruments and their expected realization and their current market rate of interest. The three levels of valuation hierarchy are defined as follows:

- Level 1 inputs to the valuation methodology are quoted prices for identical assets or liabilities in active markets.

- Level 2 inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

- Level 3 inputs to the valuation methodology are unobservable and significant to the fair value measurement.

We analyze all financial instruments with features of both liabilities and equity under ASC 480, “Distinguishing Liabilities From Equity” and ASC 815, “Derivatives and Hedging.” Derivative liabilities are adjusted to reflect fair value at each period end, with any increase or decrease in the fair value being recorded in results of operations as adjustments to fair value of derivatives. The effects of interactions between embedded derivatives are calculated and accounted for in arriving at the overall fair value of the financial instruments. In addition, the fair values of freestanding derivative instruments such as warrant and option derivatives are valued using the Black-Scholes model.

We did not identify any other non-recurring assets and liabilities that are required to be presented in the consolidated balance sheets at fair value in accordance with ASC 815.

Revenue Recognition— Our revenues are generated from license and research agreements with collaborators. Licensing revenue is recognized on a straight-line basis over the shorter of the life of the license or the estimated economic life of the patents related to the license. License fee revenue begins to be recognized in the first full month following the effective date of the license agreement. Deferred revenue represents the portion of the license and other payments received that has not been earned. Costs associated with the license revenue are deferred and recognized over the same term as the revenue. Reimbursements of research expense pursuant to grants are recorded in the period during which collection of the reimbursement becomes assured, because the reimbursements are subject to approval.

Stock Based Compensation— We record stock-based compensation in accordance with ASC 718, "Compensation – Stock Compensation." ASC 718 requires companies to measure compensation cost for stock-based employee compensation at fair value at the grant date and recognize the expense over the employee's requisite service period. We recognize in the statement of operations the grant-date fair value of stock options and other equity-based compensation issued to employees and non-employees.

Recent Accounting Pronouncements

On July 1, 2009, the Company adopted Accounting Standards Update ("ASU") No. 2009-01, "Topic 105 - Generally Accepted Accounting Principles - amendments based on Statement of Financial Accounting Standards No. 168, "The FASB Accounting Standards Codification™ and the Hierarchy of Generally Accepted Accounting Principles" ("ASU No. 2009-01"). ASU No. 2009-01 re-defines authoritative GAAP for nongovernmental entities to be only comprised of the FASB Accounting Standards Codification™ ("Codification") and, for SEC registrants, guidance issued by the SEC. The Codification is a reorganization and compilation of all then-existing authoritative GAAP for nongovernmental entities, except for guidance issued by the SEC. The Codification is amended to effect non-SEC changes to authoritative GAAP. Adoption of ASU No. 2009-01 only changed the referencing convention of GAAP in Notes to the consolidated financial statements.

In August 2009, the FASB issued Accounting Standards Update 2009-05, Fair Value Measurements and Disclosures (ASC 820) Measuring Liabilities at Fair Value. This guidance clarifies that in circumstances in which a quoted price in an active market for an identical liability is not available, a reporting entity is required to measure fair value of such liability using one or more of the of the techniques prescribed by the update. This guidance is effective for the first reporting period beginning after issuance, which is the period ending December 31, 2009. The impact of the adoption of this guidance was not significant to our consolidated financial statements.

In January 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2010-06, Improving Disclosures about Fair Value Measurements ("ASU No. 2010-06"). The new standard addresses, among other things, guidance regarding activity in Level 3 fair value measurements. Portions of ASU No. 2010-06 that relate to the Level 3 activity disclosures are effective for the annual reporting period beginning after December 15, 2010. The Company will provide the required disclosures beginning with the Company's Annual Report on Form 10-K for the year ending December 31, 2011. Based on the initial evaluation, we do not anticipate a material impact to our financial position, results of operations or cash flows as a result of this change.

On March 5, 2010, the FASB issued ASU No. 2010-11 Derivatives and Hedging Topic 815 "Scope Exception Related to Embedded Credit Derivatives." This ASU clarifies the guidance within the derivative literature that exempts certain credit related features from analysis as potential embedded derivatives requiring separate accounting. The ASU specifies that an embedded credit derivative feature related to the transfer of credit risk that is only in the form of subordination of one financial instrument to another is not subject to bifurcation from a host contract under ASC 815-15-25, "Derivatives and Hedging — Embedded Derivatives — Recognition." All other embedded credit derivative features should be analyzed to determine whether their economic characteristics and risks are "clearly and closely related" to the economic characteristics and risks of the host contract and whether bifurcation is required. The ASU became effective for the Company on July 1, 2010. The adoption of this ASU did not have an impact on our consolidated financial statements.

RESULTS OF OPERATIONS

Comparison of the Years Ended December 31, 2010 and 2009

	2010		2009	
	Amount	% of Revenue	Amount	% of Revenue
Revenue	$725,044	100.0 %	$1,415,979	100.0 %
Cost of Revenue	216,600	29.9 %	500,899	35.4 %
Gross profit	508,444	70.1 %	915,080	64.6 %
Research and development expenses and Grant reimbursements	7,461,426	1029.1 %	3,394,700	239.7 %
General and administrative expenses	15,506,191	2138.7 %	3,439,085	242.9 %
Change in estimate of accrued liabilities	(1,263,009)	-174.2 %	-	0.0 %
Loss on settlement of litigation	11,132,467	1535.4 %	4,903,949	346.3 %
Non-operating income (expense):	(22,044,701)	-3040.5 %	(25,935,554)	-1831.6 %
Net loss	$(54,373,332)	-7499.3 %	$(36,758,208)	-2596.0 %

Revenue

Revenue relates to license fees and royalties collected that are being amortized over the period of the license granted, and are therefore typically consistent between periods. The decrease in revenue during the year ended December 31, 2010, was due to license agreements that were terminated in 2009 that were recognized in 2009 revenue. During 2009, we recognized approximately $382,000 in license fee revenue for licenses that were terminated in 2009. Further, we received $2,600,000 in license fees in 2009, and of that we recognized an additional $231,000 in license fee revenues during the year ended December 31, 2009. We expect that our collaboration efforts with CHA Biotech in the SCRMI joint venture will provide us valuable opportunities to develop and license our technologies.

Research and Development Expenses and Grant Reimbursements

Research and development expenses (“R&D”) consists mainly of facility costs, payroll and payroll related expenses, research supplies and costs incurred in connection with specific research grants, and for scientific research. R&D expenditures increased from $3,531,540 in 2009 to $8,439,343 for 2010. The increase in R&D expenditures during the 2010 as compared to 2009 because during 2010, the US Food and Drug Administration (“FDA”) cleared our Investigational New Drug (“IND”) application to immediately initiate a Phase I/II multicenter clinical trial using retinal cells derived from human embryonic stem cells (hESCs) to treat patients with Stargardt’s Macular Dystrophy (SMD), one of the most common forms of juvenile macular degeneration in the world. The decision removes the clinical hold that the FDA had placed on the trial. Stargardt’s Macular Dystrophy causes progressive vision loss, usually starting in children between 10 to 20 years of age. Eventually, blindness results from photoreceptor loss associated with degeneration in the pigmented layer of the retina, called the retinal pigment epithelium (RPE).

The Phase I/II trial will be a prospective, open-label study that is designed to determine the safety and tolerability of the RPE cells following sub-retinal transplantation to patients with advanced SMD. A total of twelve patients will be enrolled in the study at multiple clinical sites. The sites which are currently under consideration are the Jules Stein Eye Institute at UCLA (headed by Dr. Steven Schwartz); the Casey Eye Institute in Portland, Oregon (headed by Dr. Peter Francis of the Oregon Health Sciences University); the University of Massachusetts Memorial Medical Center in Worcester, Massachusetts (headed by Dr. Shalesh Kaushal, Chair of the Department of Ophthalmology); the UMDNJ – New Jersey Medical School in Newark, New Jersey (headed by Dr. Marco Zarbin, Chair, Institute of Ophthalmology and Visual Science); additional sites may be considered.

Further, in January 2011, the FDA cleared our IND application to treat Dry Age-Related Macular Degeneration ("AMD") using retinal pigment epithelial (RPE) cells derived from human embryonic stem cells (hESCs). ACT is now permitted to initiate a Phase I/II multicenter clinical trial to treat patients with Dry AMD, the most common form of macular degeneration in the world. There are currently no treatments available for this prevalent disease of an aging global population. Dry AMD, representing a substantial global market opportunity and afflicts between 10-15 million Americans.

Our research and development expenses consist primarily of costs associated with basic and pre-clinical research exclusively in the field of human stem cell therapies and regenerative medicine, with focus on development of our technologies in cellular reprogramming, reduced complexity applications, and stem cell differentiation. These expenses represent both pre-clinical development costs and costs associated with non-clinical support activities such as quality control and regulatory processes. The cost of our research and development personnel is the most significant category of expense; however, we also incur expenses with third parties, including license agreements, sponsored research programs and consulting expenses.

We do not segregate research and development costs by project because our research is focused exclusively on human stem cell therapies as a unitary field of study. Although we have three principal areas of focus for our research, these areas are completely intertwined and have not yet matured to the point where they are separate and distinct projects. The intellectual property, scientists and other resources dedicated to these efforts are not separately allocated to individual projects, but rather are conducting our research on an integrated basis.

We expect that research and development expenses will increase in the foreseeable future as we add personnel, expand our pre-clinical research, begin clinical trial activities, and increase our regulatory compliance capabilities. The amount of these increases is difficult to predict due to the uncertainty inherent in the timing and extent of progress in our research programs, and initiation of clinical trials. In addition, the results from our basic research and pre-clinical trials, as well as the results of trials of similar therapeutics under development by others, will influence the number, size and duration of planned and unplanned trials. As our research efforts mature, we will continue to review the direction of our research based on an assessment of the value of possible commercial applications emerging from these efforts. Based on this continuing review, we expect to establish discrete research programs and evaluate the cost and potential for cash inflows from commercializing products, partnering with others in the biotechnology or pharmaceutical industry, or licensing the technologies associated with these programs to third parties.

We believe that it is not possible at this stage to provide a meaningful estimate of the total cost to complete our ongoing projects and bring any proposed products to market. The use of human embryonic stem cells as a therapy is an emerging area of medicine, and it is not known what clinical trials will be required by the FDA in order to gain marketing approval. Costs to complete could vary substantially depending upon the projects selected for development, the number of clinical trials required and the number of patients needed for each study. It is possible that the completion of these studies could be delayed for a variety of reasons, including difficulties in enrolling patients, delays in manufacturing, incomplete or inconsistent data from the pre-clinical or clinical trials, and difficulties evaluating the trial results. Any delay in completion of a trial would increase the cost of that trial, which would harm our results of operations. Due to these uncertainties, we cannot reasonably estimate the size, nature nor timing of the costs to complete, or the amount or timing of the net cash inflows from our current activities. Until we obtain further relevant pre-clinical and clinical data, we will not be able to estimate our future expenses related to these programs or when, if ever, and to what extent we will receive cash inflows from resulting products.

General and Administrative Expenses

General and administrative expenses for 2010 compared to 2009 increased by $12,067,106 to $15,506,191 in 2010. This expense increase was primarily a result of shares of our stock issued to our Chief Executive Officer and directors, and stock options issued to employees, for a total increase in G&A salaries, bonuses and option compensation of $10.8 million. Further, legal fees were higher in 2010 because we retained council to defend the Company in legal matters (see "Commitments and Contingencies" footnote to our accompanying consolidated financial statements, as well as the "Legal Proceedings" section filed in this Form 10-K).

Change in Estimate of Accrued Liabilities

We recognized income of $1,263,009 related to reversals in our estimates of accrued liabilities during the year ended December 31, 2010. This amount relates to prior accrued liabilities where our estimate was adjusted based on new information as it became available. This amount has been separately classified in operating expenses in the accompanying consolidated statement of operations.

Loss on Settlement of Litigation

In 2010, we settled a lawsuit with an investor, whereby the Company delivered to the investor 49,220,665 shares of its common stock. Further, on September 30, 2010, under the terms of a final settlement and mutual release with the same investor, we exchanged a new convertible debenture to the investor in exchange for the investor's outstanding convertible debenture. The terms of the new convertible debenture are the same as the amended and restated debentures, except that the amounts under the debenture are due and payable on or before December 31, 2010 and June 30, 2011. Concurrently with the settlement and release, all common stock purchase warrants previously issued to the investor were cancelled (23,701,263 warrants in total) and the legal actions were dismissed. We recorded a loss on settlement in the amount of $3,132,300 during the year ended December 31, 2010 in its accompanying statement of operations.

On December 22, 2010, Optimus CGII, Ltd. ("Optimus") purchased a claim previously brought against the Company in a civil action by Alexandria Real Estate-79/96 Charlestown Navy Yard ("ARE"). In that action, ARE alleged that it was unable to relet the premises and therefore seeking rent for the vacated premises since September 2008. ARE also sought certain clean-up and storage expenses. On December 23, 2010, Optimus and the Company settled the claim in the amount of $8,000,167. During December 2010, we issued 55,688,368 shares of the Company's common stock to Optimus in full settlement of this claim. Accordingly, we recognized loss on settlement in the amount of $8,000,167 in our accompanying consolidated statements of operations for the year ended December 31, 2010. This settlement ended all claims previously brought against the Company by ARE, and Optimus as bona fide claimant.

In 2009, we settled $505,199 in accounts payable through the issuance of 39,380,847 shares of our common stock. We recorded a loss on settlement of $4,793,949 in our accompanying statements of operations for the year ended December 31, 2009.

On June 30, 2009, an investor submitted a conversion notice in the principal amount of $150,000 into 7,500,000 shares of common stock at $0.02 per share. At that time, we did not have sufficient authorized shares to satisfy this conversion notice. On July 6, 2009, by means of a settlement between the two parties, we agreed to deliver the 7,500,000 shares of our common stock no later than September 25, 2009. We delivered the 7,500,000 shares on September 25, 2009. Further, we agreed to provide the investor with an additional $110,000 principal, which is to be upon the same terms and conditions as the original 2008 debenture. Accordingly, we recognized a loss on settlement in the amount of $110,000 during the year ended December 31, 2009.

Other Income (Expense)

Other income (expense), net, for 2010 and 2009 was ($22,044,701) and ($25,935,554), respectively. The change of ($3,890,853) is primarily due to an increase of $2,626,586 in finance costs during 2010 and an increase in interest expense of $2,535,313. Adjustments to fair value of derivative liabilities during 2010 was ($6,209,898) compared to $23,103,668 in 2009. In periods when the share price increases, the derivative securities become more attractive to exercise or in-the-money, and therefore the value of the derivative liabilities increases. Additionally, in 2009, we recognized charges related to repricing derivative liabilities in the amount of ($30,316,708). These repricing charges were incurred in connection with the modification of our debt during 2009. We also recognized $8,200,984 in loss on extinguishment of convertible debentures and note, relating to the modification of our debt during 2009.

Interest expense including late fees was $11,726,120 and $9,190,807, for the years ended 2010 and 2009, respectively. The increase in interest expense of $2,535,313 is due to the additional debt that was issued in 2010. Further, the interest expense in 2010 was greater than in 2009 because we amortized remaining debt discounts on the 2005-2008 debentures. These debentures were repaid in full by December 31, 2010.

Comparison of the Years Ended December 31, 2009 and 2008

	2009			2008		
	Amount	% of Revenue		Amount	% of Revenue	
Revenue	$1,415,979	100.0	%	$787,106	100.0	%
Cost of Revenue	500,899	35.4	%	765,769	97.3	%
Gross profit	915,080	64.6	%	21,337	2.7	%
Research and development expenses and Grant reimbursements	3,394,700	239.7	%	8,530,408	1083.8	%
General and administrative expenses	3,439,085	242.9	%	5,009,418	636.4	%
Loss on settlement of litigation	4,903,949	346.3	%	5,436,137	690.6	%
Non-operating income (expense):	(25,935,554)	-1831.6	%	(14,948,887)	-1899.2	%
Net loss	$(36,758,208)	-2596.0	%	$(33,903,513)	-4307.4	%

Revenue

Revenues relates to license fees and royalties collected that are being amortized over the period of the license granted, and are therefore typically consistent between periods. The increase in revenue during the year ended December 31, 2009, was due to more new licenses being granted as compared to the year ended December 31, 2008 as well as license agreements that were terminated in 2009 that were recognized in 2009 revenue. During 2009, we recognized approximately $382,000 in license fee revenue for licenses that were terminated in 2009. Further, we received $2,600,000 in license fees in 2009, and of that we recognized an additional $231,000 in license fee revenues during the year ended December 31, 2009 as compared with 2008. We expect that our collaboration efforts with CHA Biotech in the SCRMI joint venture will provide us valuable opportunities to develop and license our technologies.

Research and Development Expenses and Grant Reimbursements

Research and development expenses (“R&D”) consists mainly of facility costs, payroll and payroll related expenses, research supplies and costs incurred in connection with specific research grants, and for scientific research. R&D expenditures declined from $8,635,577 in 2008 to $3,531,540 for 2009. The decline in R&D expenditures during the 2009 as compared to 2008 is primarily due to the fact that we closed our Charlestown, Massachusetts and Alameda, California facilities at the end of May 2008 and that we laid off a majority of our employees.

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Our research and development expenses consist primarily of costs associated with basic and pre-clinical research exclusively in the field of human stem cell therapies and regenerative medicine, with focus on development of our technologies in cellular reprogramming, reduced complexity applications, and stem cell differentiation. These expenses represent both pre-clinical development costs and costs associated with non-clinical support activities such as quality control and regulatory processes. The cost of our research and development personnel is the most significant category of expense; however, we also incur expenses with third parties, including license agreements, sponsored research programs and consulting expenses.

We do not segregate research and development costs by project because our research is focused exclusively on human stem cell therapies as a unitary field of study. Although we have three principal areas of focus for our research, these areas are completely intertwined and have not yet matured to the point where they are separate and distinct projects. The intellectual property, scientists and other resources dedicated to these efforts are not separately allocated to individual projects, but rather are conducting our research on an integrated basis.

We expect that research and development expenses will increase in the foreseeable future as we add personnel, expand our pre-clinical research, begin clinical trial activities, and increase our regulatory compliance capabilities. The amount of these increases is difficult to predict due to the uncertainty inherent in the timing and extent of progress in our research programs, and initiation of clinical trials. In addition, the results from our basic research and pre-clinical trials, as well as the results of trials of similar therapeutics under development by others, will influence the number, size and duration of planned and unplanned trials. As our research efforts mature, we will continue to review the direction of our research based on an assessment of the value of possible commercial applications emerging from these efforts. Based on this continuing review, we expect to establish discrete research programs and evaluate the cost and potential for cash inflows from commercializing products, partnering with others in the biotechnology or pharmaceutical industry, or licensing the technologies associated with these programs to third parties.

We believe that it is not possible at this stage to provide a meaningful estimate of the total cost to complete our ongoing projects and bring any proposed products to market. The use of human embryonic stem cells as a therapy is an emerging area of medicine, and it is not known what clinical trials will be required by the FDA in order to gain marketing approval. Costs to complete could vary substantially depending upon the projects selected for development, the number of clinical trials required and the number of patients needed for each study. It is possible that the completion of these studies could be delayed for a variety of reasons, including difficulties in enrolling patients, delays in manufacturing, incomplete or inconsistent data from the pre-clinical or clinical trials, and difficulties evaluating the trial results. Any delay in completion of a trial would increase the cost of that trial, which would harm our results of operations. Due to these uncertainties, we cannot reasonably estimate the size, nature nor timing of the costs to complete, or the amount or timing of the net cash inflows from our current activities. Until we obtain further relevant pre-clinical and clinical data, we will not be able to estimate our future expenses related to these programs or when, if ever, and to what extent we will receive cash inflows from resulting products.

General and Administrative Expenses

General and administrative expenses for 2009 compared to 2008 decreased by $1,570,333 to $3,439,085 in 2009. This expense decrease was primarily a result of management’s efforts to reduce costs and streamline operations so that we could move closer to achieving profitability. General and administrative expenses should continue to slightly decrease over the short term as we continue to streamline our operations. We expect that with the successful IND submission of our core technologies and a rebound of the U.S. and world economy there will come additional opportunities for growth and capital.

Loss on Settlement of Litigation

In 2008, we settled $603,474 in accounts payable through the issuance of 220,735,436 shares of our common stock. In 2009, we settled $505,199 in accounts payable through the issuance of 39,380,847 shares of our common stock. We recorded a loss on settlement of $4,793,949 and $5,436,137 in our accompanying statements of operations for the years ended December 31, 2009 and 2008, respectively.

On June 30, 2009, an investor submitted a conversion notice in the principal amount of $150,000 into 7,500,000 shares of common stock at $0.02 per share. At that time, we did not have sufficient authorized shares to satisfy this conversion notice. On July 6, 2009, by means of a settlement between the two parties, we agreed to deliver the 7,500,000 shares of our common stock no later than September 25, 2009. We delivered the 7,500,000 shares on September 25, 2009. Further, we agreed to provide the investor with an additional $110,000 principal, which is to be upon the same terms and conditions as the original 2008 debenture. Accordingly, we recognized a loss on settlement in the amount of $110,000 during the year ended December 31, 2009.

Other Income (Expense)

Other income (expense), net, for 2009 and 2008 was ($25,935,554) and ($14,948,887), respectively. The change of ($10,986,667) is primarily due to the ($8,200,984) loss on extinguishment of convertible debentures and note plus the ($30,316,708) charges related to repricing derivative liabilities, offset by the decrease in the adjustments to fair value of derivatives of $23,103,668 also by interest expense of $10,86,498 as compared to $26,614,761 in 2008.

Interest expense including late fees was $9,190,807 and $26,614,761, for the years ended 2009 and 2008, respectively. The decrease in interest expense is due to the additional debt that was issued in 2008 and the late fees incurred as we did not issue shares to convert the debt to equity and we do not have the cash to pay down the notes. Further, the interest expense in 2008 was greater than in 2009 because we amortized remaining debt discounts on all outstanding debentures as a result of our default on August 6, 2008.

The gain on the fair value of derivatives was $23,103,668 and $13,082,247, for the years ended 2009 and 2008, respectively. The decline in our share price in 2007 and 2008 contributed most significantly to the gain on the fair value of derivatives, as well as issuance of new debt and warrants during 2009. In periods when the share price declines, the derivative securities become less attractive to exercise or out-of-the-money, and therefore the value of the derivative liabilities declines.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flows

The following table sets forth a summary of our cash flows for the periods indicated below:

	2010	2009	2008
Net cash used in operating activities	$(9,032,932)	$(5,142,778)	$(2,964,820)
Net cash used in investing activities	(219,998)	(7,538)	(174,514)
Net cash provided by financing activities	22,603,501	6,872,250	2,790,122
Net increase (decrease) in cash and cash equivalents	13,350,571	1,721,934	(349,212)
Cash and cash equivalents at the end of the period	$15,889,409	$2,538,838	$816,904

Cash used in operating activities changed from $5,142,778 in 2009 to $9,032,932 in 2010. The change arose from changes in net income after adjusting for non-cash items, as well as less cash received from license agreements during 2010. Cash used in operating activities in 2008 was $2,964,820. The increase in cash used in operating activities from 2008 to 2009 is primarily attributable to the decrease in accrued interest during 2009, offset by income after adjusting for non-cash items as well as differences in cash received from license agreements and changes in our accounts payable.

Cash used in investing activities was minimal in 2010, 2009 and 2008, and primarily consisted of purchases of property and equipment.

Cash generated by financing activities in 2010, 2009 and 2008 arose from proceeds from new convertible debt and preferred stock that we successfully raised. We also received $719,636 in 2010 upon exercises of warrants.

As of December 31, 2010, we have $15,889,409 in cash, under $1 million in debt, and $4,636,302 in working capital. During 2010, we received the following amounts:

- $977,917 from a federal grant under the Patient Protection and Affordable Care Act of 2010 ("PPACA");
- $580,165 upon the sale of our Series A-1 preferred stock;
- Approximately $9.5 million through the sale of 1,000 shares of our Series B preferred stock;
- $4 million through the sale of our Series C preferred stock;
- $5,880,000 through the sale of convertible notes; and
- $1,685,000 upon the second close of our 2009 debenture.

We plan to fund our operations for the next twelve months primarily from the following financings:

- As of December 31, 2010, $1,581,834 is available to us upon the sale of our Series A-1 preferred stock for a maximum placement commitment of $5 million.
- As of December 31, 2010, $21 million is available to us upon the sale of our Series C preferred stock for a maximum placement commitment of $25 million.
- We continue to repay our debt financings in shares of common stock, enabling us to use our cash resources to fund our operations.

On a longer term basis, we have no expectation of generating any meaningful revenues from our product candidates for a substantial period of time and will rely on raising funds in capital transactions to finance our research and development programs. Our future cash requirements will depend on many factors, including the pace and scope of our research and development programs, the costs involved in filing, prosecuting and enforcing patents, and other costs associated with commercializing our potential products. We intend to seek additional funding primarily through public or private financing transactions, and, to a lesser degree, new licensing or scientific collaborations, grants from governmental or other institutions, and other related transactions. If we are unable to raise additional funds, we will be forced to either scale back or business efforts or curtail our business activities entirely. We anticipate that our available cash and expected income will be sufficient to finance most of our current activities for at least twelve months from the date we file these financial statements, although certain of these activities and related personnel may need to be reduced. We cannot assure you that public or private financing or grants will be available on acceptable terms, if at all. Several factors will affect our ability to raise additional funding, including, but not limited to, the volatility of our common stock.

Contractual Obligations

At December 31, 2010, our significant contractual obligations were as follows:

	Less than One Year	One to Three Years	Three to Five Years	More Than Five Years	Total
Operating lease obligations	156,816	312,906	241,309	-	711,031
Convertible debt	316,036	123,658	-	-	439,694
Total	$472,852	$436,564	$241,309	$-	$1,150,725

Off-Balance Sheet Arrangements

We do not maintain any off-balance sheet arrangements, transactions, obligations or other relationships with unconsolidated entities that would be expected to have a material current or future effect upon our financial condition or results of operations.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk is limited primarily to interest income sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because a significant portion of our investments are in short-term debt securities issued by the U.S. government and institutional money market funds. The primary objective of our investment activities is to preserve principal. Due to the nature of our marketable securities, we believe that we are not exposed to any material market risk. We do not have any derivative financial instruments or foreign currency instruments. If interest rates had varied by 10% in the year ended December 31, 2010, it would not have had a material effect on our results of operations or cash flows for that period.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Advanced Cell Technology, Inc. and subsidiary

We have audited the accompanying consolidated balance sheets of Advanced Cell Technology, Inc. and subsidiary as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' deficit and cash flows for each of the three years in the period ended December 31, 2010. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Advanced Cell Technology, Inc. and subsidiary as of December 31, 2010 and 2009, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Advanced Cell Technology, Inc. and subsidiary's internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 16, 2011 expressed an unqualified opinion on the effectiveness of Advanced Cell Technologies, Inc. and subsidiary's internal control over financial reporting.

SingerLewak LLP

Los Angeles, California
March 16, 2011

ADVANCED CELL TECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2010 AND 2009

	December 31, 2010	December 31, 2009
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$15,889,409	$2,538,838
Deferred royalty fees, current portion	91,598	91,598
Prepaid expenses	-	9,054
Total current assets	15,981,007	2,639,490
Property and equipment, net	185,102	113,904
Deferred royalty fees, less current portion	295,089	386,689
Deposits	14,766	2,170
Deferred issuance costs, net of amortization of $4,152,812 and $3,535,245	2,578,188	1,945,755
TOTAL ASSETS	$19,054,152	$5,088,008
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES:		
Accounts payable	$1,982,743	$6,172,881
Accrued expenses	4,971,304	2,031,032
Accrued settlement	3,205,856	-
Deferred revenue, current portion	506,418	805,926
Amended and restated convertible debentures, current portion, net of discounts of $0 and $585,088, respectively	-	7,605,107
Convertible promissory notes, current portion, net of discounts of $162,542 and $905,973, respectively	1,585	685,233
2009 Convertible promissory notes, current portion, net of discounts of $19,229 and $1,599,073, respectively	132,680	246,893
Embedded conversion option liabilities, current portion	537,249	6,772,200
Deferred joint venture obligations, current portion	6,870	56,602
Total current liabilities	11,344,705	24,375,874
Convertible promissory notes, less current portion, net of discounts of $122,463 and $1,150,300, respectively	1,195	59,184
2009 Convertible promissory notes, less current portion, net of disounts of $0 and $222,656, respectively	-	34,378
Embedded conversion option liabilities, less current portion	482,686	1,837,604
Warrant and option derivative liabilities	27,307,218	18,168,597
Deferred revenue, less current portion	2,298,997	5,780,389
Deferred joint venture obligations, less current portion	-	6,870

Total liabilities	41,434,801	50,262,896
Series A-1 redeemable preferred stock, $0.001 par value; 50,000,000 shares authorized,		
113 and 92 shares issued and outstanding; aggregate liquidation value, net of discounts: $1,349,657 and $1,044,305, respectively	1,272,441	908,195
Commitments and contingencies		
STOCKHOLDERS' DEFICIT:		
Preferred stock, Series B; $0.001 par value; 50,000,000 shares authorized,		
1,000 and 0 shares issued and outstanding	1	-
Preferred stock, Series C; $0.001 par value; 50,000,000 shares authorized,		
400 and 0 shares issued and outstanding	-	-
Common stock, $0.001par value; 1,750,000,000 shares authorized,		
1,439,826,362, and 663,649,294 shares issued and outstanding	1,439,826	663,649
Additional paid-in capital	166,033,976	79,829,080
Promissory notes receivable, net of discount of $3,322,630 and $0, respectively	(10,177,370)	-
Accumulated deficit	(180,949,523)	(126,575,812)
Total stockholders' deficit	(23,653,090)	(46,083,083)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$19,054,152	$5,088,008

The accompanying notes are an integral part of these consolidated financial statements.

ADVANCED CELL TECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2010, 2009 AND 2008

	2010	2009	2008
Revenue (License fees and royalties)	$ 725,044	$ 1,415,979	$ 787,106
Cost of Revenue	216,600	500,899	765,769
Gross profit	508,444	915,080	21,337
Operating expenses:			
Research and development	8,439,343	3,531,540	8,635,577
Grant reimbursements	(977,917)	(136,840)	(105,169)
General and administrative expenses	15,506,191	3,439,085	5,009,418
Change in estimate of accrued liabilities	(1,263,009)	-	-
Loss on settlement of litigation	11,132,467	4,903,949	5,436,137
Total operating expenses	32,837,075	11,737,734	18,975,963
Loss from operations	(32,328,631)	(10,822,654)	(18,954,626)
Non-operating income (expense):			
Interest income	16,724	4,661	7,933
Interest expense and late fees	(11,726,120)	(9,190,807)	(26,614,761)
Finance cost	(4,332,277)	(1,705,691)	(806,079)
Adjustments to fair value of derivatives	(6,209,898)	23,103,668	13,082,247
Gain (loss) on disposal of fixed assets	9,500	-	(227,543)
Gain on forgiveness of debt	197,370	598,425	-
Loss on extinguishment of convertible debentures and note	-	(8,200,984)	-
Charges related to repricing derivative liabilities	-	(30,316,708)	-
Loss on warrant re-pricing	-	(83,680)	-
Losses attributable to equity method investment	-	(144,438)	(20,930)
Charges related to issuance of 2008 convertible debentures	-	-	(1,217,342)
Income related to repricing of 2006 and 2007 convertible debentures and warrants	-	-	847,588
Total non-operating income (expense)	(22,044,701)	(25,935,554)	(14,948,887)
Loss before income tax	(54,373,332)	(36,758,208)	(33,903,513)
Income tax	-	-	-
Net loss	$ (54,373,332)	$ (36,758,208)	$ (33,903,513)
Weighted average shares outstanding :			
Basic and diluted	1,218,190,921	521,343,094	245,279,135
Loss per share:			

Basic and diluted	$ (0.04)	$ (0.07)	$ (0.14)

The accompanying notes are an integral part of these consolidated financial statements.

ADVANCED CELL TECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
FOR THE YEARS ENDED DECEMBER 31, 2010, 2009 AND 2008

	Series B Preferred Stock		Series C Preferred Stock		Common Stock		Additional Paid-in	Promissory Notes Receivable,		Tot Stockho
	Shares	Amount	Shares	Amount	Shares	Amount	Capital	net	Accumulated Deficit	Defi
Balance December 31, 2007 (Restated)	-	$-	-	$-	85,027,461	$85,027	$34,302,334	$-	$(55,914,091)	$(21,52
Convertible debentures redemptions	-	-	-	-	65,463,111	65,463	5,390,989	-	-	5,456,
Convertible debentures conversions	-	-	-	-	39,741,987	39,743	6,121,900	-	-	6,161,
Issuance of stock for debenture financing costs	-	-	-	-	14,710,329	14,710	791,369	-	-	806,07
Option compensation charges	-	-	-	-	-	-	527,243	-	-	527,24
Adjustment to fair value of derivatives	-	-	-	-	-	-	78,367	-	-	78,367
Issuance in respect of anti-dilution provision of convertible debenture	-	-	-	-	70,503	71	15,510	-	-	15,581
Issuance of stock in payment of professional	-	-	-	-	1,002,291	1,002	212,847	-	-	213,84

fees										
Issuance of stock in settlement of accounts payable	-	-	-	-	220,735,436	220,735	5,818,877	-	-	6,039,
Issuance of stock under stock incentive plan	-	-	-	-	1,497,263	1,497	140,936	-	-	142,43
Issuance of stock upon exercise of options	-	-	-	-	1,200,000	1,200	58,800	-	-	60,000
Net loss for the year ended December 31, 2008	-	-	-	-	-	-	-	-	(33,903,513)	(33,90
Balance December 31, 2008	-	$-	-	$-	429,448,381	$429,448	$53,459,172	$-	$(89,817,604)	$(35,92
Convertible debentures redemptions	-	-	-	-	63,009,884	63,010	5,965,243	-	-	6,028,
Debt and preferred stock conversions	-	-	-	-	104,412,687	104,413	9,299,147	-	-	9,403,
Option compensation charges	-	-	-	-	-	-	817,444	-	-	817,44
Issuance of stock in settlement of accounts payable	-	-	-	-	39,380,847	39,381	5,259,767	-	-	5,299,
Issuance of stock in payment of debt issue costs for	-	-	-	-	24,900,000	24,900	4,706,100	-	-	4,731,

preferred stock credit facility										
Issuance of common stock for legal services	-	-	-	-	375,000	375	37,875	-	-	38,250
Issuance of common stock on cashless warrant exercise	-	-	-	-	2,122,495	2,122	284,332	-	-	286,45
Net loss for the year ended December 31, 2009	-	-	-	-	-	-	-	-	(36,758,208)	(36,75
Balance December 31, 2009	-	$-	-	$-	663,649,294	$663,649	$79,829,080	$-	$(126,575,812)	$(46,08
Redemptions of convertible debentures	-	-	-	-	144,311,100	144,311	9,582,742	-	-	9,727,
Conversions of convertible debentures	-	-	-	-	34,822,169	34,822	3,379,286	-	-	3,414,
Conversions of Series A-1 preferred stock	-	-	-	-	6,206,961	6,207	614,489	-	-	620,69
Conversions of amended convertible promissory notes	-	-	-	-	211,916,152	211,916	9,545,273	-	-	9,757,
Common stock issued on exercise of warrants	-	-	-	-	36,390,745	36,391	12,805,631	-	-	12,842
Common stock issued to executives for	-	-	-	-	107,051,697	107,052	9,527,601	-	-	9,634,

compensation										
Common stock issued to directors for board compensation	-	-	-	-	16,773,597	16,774	1,543,439	-	-	1,560,
Common stock issued for settlements	-	-	-	-	120,875,143	120,875	13,760,283	-	-	13,881
Issuance of stock for financing costs	-	-	-	-	1,959,142	1,959	396,552	-	-	398,51
Issuance of Series B preferred stock	1,000	1	-	-	-	-	9,999,999	-	-	10,000
Common stock issued upon exercise of Series B preferred stock warrants	-	-	-	-	95,870,362	95,870	9,884,893	(9,980,763)	-	-
Dividends on Series B preferred stock	-	-	-	-	-	-	196,986	-	(196,986)	-
Issuance of Series C preferred stock	-	-	400	-	-	-	4,000,000	-	-	4,000,
Accretion of note receivable discount	-	-	-	-	-	-	-	(196,607)	196,607	-
Option compensation charges	-	-	-	-	-	-	967,722	-	-	967,72
Net loss for year ended	-	-	-	-	-	-	-	-	(54,373,332)	(54,37

December 31, 2010										
Balance December 31, 2010	1,000	$1	400	$-	1,439,826,362	$1,439,826	$166,033,976	$(10,177,370)	$(180,949,523)	$(23,65

The accompanying notes are an integral part of these consolidated financial statements

ADVANCED CELL TECHNOLOGY, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2010, 2009 AND 2008

	2010	2009	2008
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$(54,373,332)	$(36,758,208)	$(33,903,513)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	138,050	291,472	402,867
Amortization of deferred charges	91,600	363,399	702,018
Amortization of deferred revenue	(725,044)	(1,415,979)	(798,310)
Redeemable preferred stock dividend accrual	95,883	123,609	-
Stock based compensation	967,721	817,444	889,269
Amortization of deferred issuance costs	617,568	3,535,245	4,792,087
Amortization of discounts	12,443,112	4,134,693	17,871,392
Adjustments to fair value of derivatives	6,209,898	(23,103,668)	(13,082,247)
Shares of common stock issued for services	11,194,866	38,250	759,496
Shares of common stock issued for settlement	55,168	-	-
Non-cash financing costs	3,375,745	1,704,535	806,079
Loss on settlement of litigation	11,132,467	4,903,949	5,436,137
Gain on forgiveness of debt	(197,370)	(598,425)	-
(Gain) Loss on disposal of fixed assets	(9,500)	-	227,543
Amortization of deferred joint venture obligations	(56,602)	(86,574)	(15,322)
Loss on extinguishment of debt	-	8,200,984	-
Charges related to repricing derivative liabilities	-	30,316,708	-
Loss attributable to investment in joint venture	-	144,438	20,930
Repricing of 2006 and 2007 convertible debentures and warrants	-	83,680	(847,588)
Warrants issued for consulting services	-	130,663	155,281
Charges related to issuance of debt	-	-	1,232,923
Forfeiture of rent deposits	-	-	88,504
Write-off of uncollectible accounts receivable	-	-	30,782
(Increase) / decrease in assets:			
Accounts receivable	-	261,504	(265,260)
Prepaid expenses	9,054	23,422	35,940
Increase / (decrease) in current liabilities:			
Accounts payable and accrued expenses	97,784	(2,915,249)	5,355,229
Accrued interest	-	1,311,330	3,722,198
Deferred revenue	150,000	3,350,000	3,418,745
Net cash used in operating activities	(8,782,932)	(5,142,778)	(2,964,820)
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchases of property and equipment	(207,402)	(5,368)	(174,514)
Payment of lease deposits	(12,596)	(2,170)	-
Net cash used in investing activities	(219,998)	(7,538)	(174,514)

CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from exercise of warrants	719,636	-	-
Proceeds from issuance of convertible debentures	1,685,000	-	2,182,432
Proceeds from convertible promissory notes	5,880,000	4,284,250	630,000
Proceeds from issuance of preferred stock	14,068,865	2,588,000	-
Payments on notes and leases	-	-	(18,650)
Payment for issuance costs on note payable	-	-	(3,660)
Net cash provided by financing activities	22,353,501	6,872,250	2,790,122
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	13,350,571	1,721,934	(349,212)
CASH AND CASH EQUIVALENTS, BEGINNING BALANCE	2,538,838	816,904	1,166,116
CASH AND CASH EQUIVALENTS, ENDING BALANCE	$15,889,409	$2,538,838	$816,904
CASH PAID FOR:			
Interest	$-	$-	$-
Income taxes	$5,353	$970	$1,549
SUPPLEMENTAL DISCLOSURE OF NON-CASH FINANCING ACTIVITIES:			
Issuance of 144,311,100, 63,009,884 and 65,463,111 shares of common stock in redemption of debt	$9,727,053	$6,028,253	$5,456,452
Issuance of 246,738,321, 87,739,641 and 39,741,987 shares of common stock in conversion of debt	$13,171,297	$7,736,256	$6,161,643
Issuance of 6,206,961 and 16,673,046 shares of common stock in conversion of preferred stock	$620,696	$1,667,304	$-
Issuance of stock on cashless exercise of warrants	$12,118,685	$286,454	$-
Issuance of 120,267,220, 39,380,847 and 220,735,436 shares of common stock in settlement of litigation	$13,881,158	$5,299,148	$6,039,612
Issuance of 16,773,597 shares of common stock in payment of board fees	$1,560,213	$-	$-
Issuance of 107,051,697 shares of common stock in payment of board compensation	$9,634,653	$-	$-
Issuance of 1,959,142 shares of common stock in payment of financing costs	$398,511	$-	$-
Series B preferred stock dividend	$196,986	$-	$-
Interest of promissory notes receivable	$196,607	$-	$-
Issuance of 24,900,000 shares of common stock in payment convertible preferred stock issuance costs	$-	$4,731,000	$-
Issuance of 70,503 shares of common stock to settle an anti-dilution provision feature of convertible debenture	$-	$-	$15,581
Issuance of 1,200,000 shares of common stock upon exercise of employee stock options	$-	$-	$60,000

The accompanying notes are an integral part of these consolidated financial statements.

ADVANCED CELL TECHNOLOGY, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2010, 2009 and 2008

1. ORGANIZATIONAL MATTERS

Organization and Nature of Business

Advanced Cell Technology, Inc. (the "Company") is a biotechnology company, incorporated in the state of Delaware, focused on developing and commercializing human embryonic and adult stem cell technology in the emerging fields of regenerative medicine. Principal activities to date have included obtaining financing, securing operating facilities, and conducting research and development. The Company has no therapeutic products currently available for sale and does not expect to have any therapeutic products commercially available for sale for a period of years, if at all. These factors indicate that the Company's ability to continue its research and development activities is dependent upon the ability of management to obtain additional financing as required.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation —The Company follows accounting standards set by the Financial Accounting Standards Board ("FASB"). The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). References to GAAP issued by the FASB in these footnotes are to the FASB Accounting Standards Codification,™ sometimes referred to as the Codification or ASC.

Principles of Consolidation — The accounts of the Company and its wholly-owned subsidiary Mytogen, Inc. ("Mytogen") are included in the accompanying consolidated financial statements. All intercompany balances and transactions were eliminated in consolidation.

Segment Reporting —ASC 280, "Segment Reporting" requires use of the "management approach" model for segment reporting. The management approach model is based on the way a company's management organizes segments within the company for making operating decisions and assessing performance. The Company determined it has one operating segment. Disaggregation of the Company's operating results is impracticable, because the Company's research and development activities and its assets overlap, and management reviews its business as a single operating segment. Thus, discrete financial information is not available by more than one operating segment.

Use of Estimates — These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States and, accordingly, require management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Specifically, the Company's management has estimated variables used to calculate the Black-Scholes option pricing model used to value derivative instruments as discussed below under "Fair Value Measurements". In addition, management has estimated the expected economic life and value of the Company's licensed technology, the Company's net operating loss for tax purposes, share-based payments for compensation to employees, directors, consultants and investment banks, and the useful lives of the Company's fixed assets and its accounts receivable allowance. Actual results could differ from those estimates.

Reclassifications — Certain prior year financial statement balances have been reclassified to conform to the current year presentation.

Cash and Cash Equivalents — Cash equivalents are comprised of certain highly liquid investments with maturities of three months or less when purchased. The Company maintains its cash in bank deposit accounts, which at times, may

exceed federally insured limits. The Company has not experienced any losses related to this concentration of risk. As of December 31, 2010 and December 31, 2009, the Company had deposits in excess of federally-insured limits totaling $15,399,150 and $2,028,195, respectively.

Accounts Receivable — The Company periodically assesses its accounts receivable for collectability on a specific identification basis. If collectability of an account becomes unlikely, the Company records an allowance for that doubtful account. Once the Company has exhausted efforts to collect, management writes off the account receivable against the allowance it has already created. The Company does not require collateral for its trade accounts receivable.

Property and Equipment — The Company records its property and equipment at historical cost. The Company expenses maintenance and repairs as incurred. Upon disposition of property and equipment, the gross cost and accumulated depreciation are written off and the difference between the proceeds and the net book value is recorded as a gain or loss on sale of assets. In the case of certain assets acquired under capital leases, the assets are recorded net of imputed interest, based upon the net present value of future payments. Assets under capital lease are pledged as collateral for the related lease.

The Company provides for depreciation over the assets' estimated useful lives as follows:

Machinery & equipment	4 years
Computer equipment	3 years
Office furniture	4 years
Leasehold improvements	Lesser of lease life or economic life
Capital leases	Lesser of lease life or economic life

Equity Method Investment — The Company follows ASC 323 "Investments-Equity Method and Joint Ventures" in accounting for its investment in the joint venture. In the event the Company's share of the joint venture's net losses reduces the Company's investment to zero, the Company will discontinue applying the equity method and will not provide for additional losses unless the Company has guaranteed obligations of the joint venture or is otherwise committed to provide further financial support for the joint venture. If the joint venture subsequently reports net income, the Company will resume applying the equity method only after its share of that net income equals the share of net losses not recognized during the period the equity method was suspended.

Deferred Issuance Costs — Consists of the following:

(a) Payments, either in cash or share-based, made in connection with the sale of debentures which are amortized using the effective interest method over the lives of the related debentures. These deferred issuance costs are charged to financing costs when and if the related debt instrument is retired or converted early. The weighted average amortization period for deferred debt issuance costs is 48 months.
(b) Payments made to secure commitments under certain financing arrangements. These amounts are recognized in financing costs ratably over the period of the financing arrangements,and are recognized in financing costs immediately if the arrangement is cancelled, forfeited or the utility of the arrangement to the company is otherwise compromised.
(c) Payments made to financial institutions and consulting firms in order to provide financing related services. These costs are being amortized over the terms of the related agreements.

Intangible and Long-Lived Assets— The Company follows ASC 360-10, "Property, Plant, and Equipment," which established a "primary asset" approach to determine the cash flow estimation period for a group of assets and liabilities that represents the unit of accounting for a long-lived asset to be held and used. Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Long-lived assets to be

disposed of are reported at the lower of carrying amount or fair value less cost to sell. Through December 31, 2010, the Company had not experienced impairment losses on its long-lived assets.

Fair Value of Financial Instruments — For certain financial instruments, including cash and cash equivalents, prepaid expenses, accounts payable, accrued expenses and notes payable, the carrying amounts approximate fair value due to their relatively short maturities.

Fair Value Measurements — The Company applies the provisions of ASC 820-10, “Fair Value Measurements and Disclosures.” ASC 820-10 defines fair value, and establishes a three-level valuation hierarchy for disclosures of fair value measurement that enhances disclosure requirements for fair value measures. The carrying amounts reported in the consolidated balance sheets for receivables and current liabilities each qualify as financial instruments and are a reasonable estimate of their fair values because of the short period of time between the origination of such instruments and their expected realization and their current market rate of interest. The three levels of valuation hierarchy are defined as follows:

- Level 1 inputs to the valuation methodology are quoted prices for identical assets or liabilities in active markets.

- Level 2 inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

- Level 3 inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The Company analyzes all financial instruments with features of both liabilities and equity under ASC 480, “Distinguishing Liabilities From Equity” and ASC 815, “Derivatives and Hedging.” Derivative liabilities are adjusted to reflect fair value at each period end, with any increase or decrease in the fair value being recorded in results of operations as adjustments to fair value of derivatives. The effects of interactions between embedded derivatives are calculated and accounted for in arriving at the overall fair value of the financial instruments. In addition, the fair values of freestanding derivative instruments such as warrant and option derivatives are valued using the Black-Scholes model.

The Company uses Level 2 inputs for its valuation methodology for the warrant derivative liabilities and embedded conversion option liabilities as their fair values were determined by using the Black-Scholes option pricing model based on various assumptions. The Company’s derivative liabilities are adjusted to reflect fair value at each period end, with any increase or decrease in the fair value being recorded in results of operations as adjustments to fair value of derivatives.

At December 31, 2010, the Company identified the following assets and liabilities that are required to be presented on the balance sheet at fair value:

		Fair Value Measurements at December 31, 2010 Using Fair Value Hierarchy		
Derivative Liabilities	Fair Value As of December 31, 2010	Level 1	Level 2	Level 3
Warrant derivative liabilities	$27,307,218	$-	27,307,218	-
Embedded conversion option liabilities	1,019,935	-	1,019,935	-
	$28,327,153	$-	28,327,153	-

At December 31, 2009, the Company identified the following assets and liabilities that are required to be presented on the balance sheet at fair value:

Derivative Liabilities	Fair Value As of December 31, 2009	Fair Value Measurements at December 31, 2009 Using Fair Value Hierarchy Level 1	Level 2	Level 3
Warrant derivative liabilities	$18,168,597	$-	18,168,597	-
Embedded conversion option liabilities	8,609,804	-	8,609,804	-
	$26,778,401	$-	26,778,401	-

For the years ended December 31, 2010, 2009 and 2008, the Company recognized a gain (loss) of ($6,209,898), $23,103,668, and $13,082,247, respectively, for the changes in the valuation of derivative liabilities.

The Company did not identify any non-recurring assets and liabilities that were recorded at fair value during the periods presented.

Revenue Recognition and Deferred Revenue — The Company's revenues are primarily generated from license and research agreements with collaborators. Licensing revenue is recognized on a straight-line basis over the shorter of the life of the license or the estimated economic life of the patents related to the license.

License fee revenue begins to be recognized in the first full month following the effective date of the license agreement. Deferred revenue represents the portion of the license and other payments received that has not been earned. Costs associated with the license revenue are deferred and recognized over the same term as the revenue. Reimbursements of research expense pursuant to grants are recorded in the period during which collection of the reimbursement becomes assured, because the reimbursements are subject to approval.

In some cases, the company is entitled to receive royalty payments from licensees. In such cases, the company recognizes the royalties when they are earned and collectability of those royalty payments is reasonably assured.

In connection with its license agreements, the Company recorded $418,166, $553,448 and $302,239 in license fee revenue for the years ended December 31, 2010, 2009 and 2008, respectively, in its accompanying consolidated statements of operations, and the remainder of the license fee has been accrued in deferred revenue at December 31, 2010 and 2009, respectively.

Research and Development Costs — Research and development costs consist of expenditures for the research and development of patents and technology, which cannot be capitalized. The Company's research and development costs consist mainly of payroll and payroll related expenses, research supplies and research grants. Reimbursements of research expense pursuant to grants are recorded in the period during which collection of the reimbursement becomes assured, because the reimbursements are subject to approval. Research and development costs are expensed as incurred.

Share-Based Compensation —The Company records stock-based compensation in accordance with ASC 718, "Compensation – Stock Compensation." ASC 718 requires companies to measure compensation cost for stock-based employee compensation at fair value at the grant date and recognize the expense over the employee's requisite service period. The Company recognizes in the statement of operations the grant-date fair value of stock options and other equity-based compensation issued to employees and non-employees. There were 48,376,119 options outstanding as of December 31, 2010.

Income Taxes — Deferred income taxes are provided using the liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards, and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of the changes in tax laws and rates of the date of enactment.

When tax returns are filed, it is highly certain that some positions taken would be sustained upon examination by the taxing authorities, while others are subject to uncertainty about the merits of the position taken or the amount of the position that would be ultimately sustained. The benefit of a tax position is recognized in the financial statements in the period during which, based on all available evidence, management believes it is more likely than not that the position will be sustained upon examination, including the resolution of appeals or litigation processes, if any. Tax positions taken are not offset or aggregated with other positions. Tax positions that meet the more-likely-than-not recognition threshold are measured as the largest amount of tax benefit that is more than 50 percent likely of being realized upon settlement with the applicable taxing authority. The portion of the benefits associated with tax positions taken that exceeds the amount measured as described above is reflected as a liability for unrecognized tax benefits in the accompanying balance sheets along with any associated interest and penalties that would be payable to the taxing authorities upon examination.

Applicable interest and penalties associated with unrecognized tax benefits are classified as additional income taxes in the statements of operations.

Net Loss Per Share —Earnings per share is calculated in accordance with the ASC 260-10, “Earnings Per Share.” Basic earnings-per-share is based upon the weighted average number of common shares outstanding. Diluted earnings-per-share is based on the assumption that all dilutive convertible shares and stock options were converted or exercised. Dilution is computed by applying the treasury stock method. Under this method, options and warrants are assumed to be exercised at the beginning of the period (or at the time of issuance, if later), and as if funds obtained thereby were used to purchase common stock at the average market price during the period.

At December 31, 2010, 2009 and 2008, approximately 190,000,000, 395,000,000 and 270,000,000 potentially dilutive shares, respectively, were excluded from the shares used to calculate diluted earnings per share as their inclusion would be anti-dilutive.

Concentrations and Other Risks — Currently, the Company’s revenues and accounts receivable are concentrated on a small number of customers. The following table shows the Company’s concentrations of its revenue for those customers comprising greater than 10% of total license revenue for the years ended December 31, 2010, 2009 and 2008.

	Year Ended December 31,		
	2010	2009	2008
Exeter Life Sciences, Inc.	17 %	*	16 %
START Licensing, Inc.	14 %	*	13 %
International Stem Cell Corporation	23 %	10 %	11 %
Transition Holdings, Inc.	*	14 %	*
CHA Biotech and SCRMI	18 %	*	11 %
Genzyme Transgenics Corporation	*	28 %	17 %
Terumo Corporation	*	*	25 %

*License revenue earned during the period was less than 10% of total license revenue.

Other risks include the uncertainty of the regulatory environment and the effect of future regulations on the Company’s business activities. As the Company is a biotechnology research and development company, there is also the attendant risk that someone could commence legal proceedings over the Company’s discoveries. Acts of God could also adversely affect the Company’s business.

Recent Accounting Pronouncements

In January 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2010-06, Improving Disclosures about Fair Value Measurements ("ASU No. 2010-06"). The new standard addresses, among other things, guidance regarding activity in Level 3 fair value measurements. Portions of ASU No. 2010-06 that relate to the Level 3 activity disclosures are effective for the annual reporting period beginning after December 15, 2010. The Company will provide the required disclosures beginning with the Company's Annual Report on Form 10-K for the year ending December 31, 2011. Based on the initial evaluation, the Company does not anticipate a material impact to the Company's financial position, results of operations or cash flows as a result of this change.

On March 5, 2010, the FASB issued ASU No. 2010-11 Derivatives and Hedging Topic 815 "Scope Exception Related to Embedded Credit Derivatives." This ASU clarifies the guidance within the derivative literature that exempts certain credit related features from analysis as potential embedded derivatives requiring separate accounting. The ASU specifies that an embedded credit derivative feature related to the transfer of credit risk that is only in the form of subordination of one financial instrument to another is not subject to bifurcation from a host contract under ASC 815-15-25, "Derivatives and Hedging — Embedded Derivatives — Recognition." All other embedded credit derivative features should be analyzed to determine whether their economic characteristics and risks are "clearly and closely related" to the economic characteristics and risks of the host contract and whether bifurcation is required. The ASU became effective for the Company on July 1, 2010. The adoption of this ASU did not have an impact on the Company's consolidated financial statements.

(Make sure that all significant new pronouncements are included here)

3. SETTLEMENT AND CANCELATION OF LICENSE AGREEMENT

On December 18, 2008, the Company entered into a license agreement with Transition Holdings, Inc. for certain of the Company's non-core technology. Under the agreement, the Company received $2,000,000, less wire fees, during 2008. The Company further received $1,500,000 in 2009. The Company had initially recorded the transactions as deferred revenue and was amortizing over its 17-year patent useful life. In December 2010, the company received notice that Transition Holdings, Inc. was disputing the nature of the arrangement (See Note 19), and subsequently entered into a settlement arrangement with Transition Holdings, Inc. As a result of this settlement, the Company reclassified the unamortized license fee in the amount of $3,205,856 from deferred revenue to accrued settlement. Amounts of revenue recognized under the arrangement prior to the settlement were not material to the financial statements.

4. INVESTMENT IN JOINT VENTURE

On December 1, 2008, the Company and CHA Bio & Diostech Co., Ltd. formed an international joint venture. The new company, Stem Cell & Regenerative Medicine International, Inc. ("SCRMI"), will develop human blood cells and other clinical therapies based on the Company's hemangioblast program, one of the Company's core technologies. Under the terms of the agreement, the Company purchased upfront a 33% interest in the joint venture, and will receive another 7% interest upon fulfilling certain obligations under the agreement over a period of 3 years. The Company's contribution includes (a) the uninterrupted use of a portion of its leased facility at the Company's expense, (b) the uninterrupted use of certain equipment in the leased facility, and (c) the release of certain of the Company's research and science personnel to be employed by the joint venture. In return, for a 60% interest, CHA has agreed to contribute $150,000 cash and to fund all operational costs in order to conduct the hemangioblast program. Effective May 1, 2010, the Company was no longer obligated to provide laboratory space to SCRMI, and the Company holds a 40% interest in the joint venture and CHA Bio & Diostech, Ltd. owns a 60% interest. The two partners to the joint venture are in negotiations on further funding of the joint venture, but there can be no assurances that an agreement will be reached. Any financial statement impact at this time is unclear should an agreement not be reached.

The Company has agreed to collaborate with the joint venture in securing grants to further research and development of its technology. Additionally, SCRMI has agreed to pay the Company a fee of $500,000 for an exclusive, worldwide license to the Hemangioblast Program. The Company recorded $29,412, $29,412 and $2,450 in license fee revenue for the years ended December 31, 2010, 2009 and 2008, respectively, in its accompanying consolidated statements of operations, and the balance of unamortized license fee of $439,951 and $469,363 is included in deferred revenue in the accompanying consolidated balance sheets at December 31, 2010 and 2009, respectively.

ASC 323 "Investments-Equity Method and Joint Ventures" requires that the difference between the cost of an investment and the amount of underlying equity in net assets of an investee should be accounted for as if the investee were a consolidated subsidiary. The Company has calculated the difference between the cost of the investment and the amount of underlying equity in net assets of the joint venture to be $196,130, based on the Company's initial cost basis in the investment of $246,130, less its 33.3% of the initial equity in net assets of the joint venture of $50,000. The Company amortized the $196,130 over the term of the shorter of the equipment usage or lease term (through April 2010, or 17 months from December 1, 2008). The amortization was applied against the value of the Company's investment. Amortization expense for the years ended December 31, 2010, 2009 and 2008 was $0, $80,761 and $11,537, respectively.

The following table is a summary of key financial data for the joint venture as of and for the years ended December 31, 2010, 2009 and 2008 were as follows:

	2010	2009	2008
Current assets	$611,843	$737,760	$179,400
Noncurrent assets	$855,372	$501,744	$468,150
Current liabilities	$1,203,941	$863,436	$76,869
Noncurrent liabilities	$1,439,394	$488,297	$468,150
Net revenue	$76,672	$26,775	$2,450
Net loss	$(1,852,336)	$(1,526,851)	$(62,791)

5. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following at December 31, 2010 and 2009:

	December 31, 2010	December 31, 2009
Machinery & equipment	$1,488,527	$1,470,306
Computer equipment	449,893	441,744
Office furniture	76,201	76,201
Leasehold improvements	281,383	127,197
Capital leases	51,235	51,235
Accumulated depreciation	(2,162,137)	(2,052,779)
Property and equipment, net	$185,102	$113,904

Depreciation expense for the years ended December 31, 2010, 2009 and 2008 amounted to $138,050, $291,472 and $402,867, respectively.

6. AMENDED AND RESTATED CONVERTIBLE DEBENTURES

On July 29, 2009, the Company entered into a consent, amendment and exchange agreement (the "Consent and Amendment") with holders (the "Holders") of the Company's outstanding convertible debentures and warrants to purchase shares of the Company's common stock (the "Warrants"), which were issued in private placements to the 2005, 2006, 2007 and 2008 debentures.

Amendment and Forbearance to 2005, 2006, 2007 and 2008 Debentures
Pursuant to the Consent and Amendment, the Company agreed to issue to each Holder in exchange for such Holder's Debenture an amended and restated Debenture (the "Amended and Restated Debentures") in a principal amount equal to the principal amount of such Holder's Debenture times 1.35 minus any interest paid thereon. The conversion price under the Amended and Restated Debentures was reduced to $0.10, subject to further adjustment as provided therein (including for stock splits, stock dividends, and certain subsequent equity sales). The maturity date under the Amended and Restated Debentures was extended until December 31, 2010. The Amended and Restated Debentures included interest at the rate of 12% per annum, which accreted to, and increased the principal amount payable upon maturity. The Amended and Restated Debentures amortized beginning on September 25, 2009 and then the first day of each month thereafter until maturity at a rate of 6.25% of the outstanding principal amount per month, valued at the lesser of the then conversion price and 90% of the average volume weighted average price for the ten prior trading days.

The Company agreed to issue to each holder in exchange for the holder's amended and restated warrants (the "Amended and Restated Warrants"), as well as additional warrants exercisable into 79,076,873 shares of the Company's common stock for a total of warrants exercisable into 192,172,519 shares of common stock, both warrants containing a reduced exercise price of $0.10, subject to certain customary anti-dilution adjustments (including for stock splits, stock dividends, and certain subsequent equity sales). The termination date under the Amended and Restated Warrants was extended until June 30, 2014.

The Company agreed to amend its articles of incorporation to increase the number of authorized shares of Common Stock (the "Amendment"). The Company agreed to increase the number of shares available for issuance under the Company's 2005 Stock Incentive Plan to 129,000,000 shares. The Holders agreed to waive certain defaults. Simultaneously with the execution of Consent and Amendment, and as a condition of the Consent and Amendment,

the Company and the Holders entered into a Standstill and Forbearance Agreement (the "Forbearance Agreement") and agreed to forbear from exercising their rights and remedies under the Debentures and the Transaction Documents, and the Company provided a general release in favor of the Holders.

The Company has considered the impact of ASC 470-50 “Debt-Modifications and Extinguishments” on the accounting treatment of the change in conversion price of the 2005, 2006, 2007 and 2008 convertible debentures. ASC 470-50 states that a transaction resulting in a significant change in the nature of a debt instrument should be accounted for as an extinguishment of debt. The difference between the reacquisition price and the net carrying amount of the extinguished debt should be recognized currently in income of the period of extinguishment. The Company has concluded that the issuance of the amended and restated debentures constitutes a substantial modification. During the year ended December 31, 2009, the Company recognized a loss on extinguishment of convertible debentures of $8,450,457 representing the difference between the fair value of the amended and restated convertible debentures and the carrying value of the original 2005, 2006, 2007 and 2008 convertible debentures. The fair value of the amended and restated convertible debentures at July 29, 2009 was $18,192,813, net of debt discounts of $2,011,065 that were amortized over the remaining life of the amended and restated convertible debentures. The following table summarizes the convertible debentures through December 31, 2009:

December 31, 2008	
2005 Convertible debenture and embedded derivatives, net of discounts of $0	$85,997
2006 Convertible debenture and embedded derivatives, fair value	1,993,354
2007 Convertible debenture and embedded derivatives, fair value	7,706,344
April 2008 Convertible debenture and embedded derivatives	4,066,505
Fair value 2005, 2006, 2007 and 2008 convertible debentures	$13,852,200
Year ended December 31, 2009	
Convertible debenture conversions	$(12,495,486)
Change in fair value of embedded derivatives through July 29, 2009	6,823,641
Adjustment to bifurcate embedded derivatives upon adoption of ASC 815 on July 29, 2009	(7,629,147)
Addition to principal to Debenture Holder	110,000
Accrued default interest on 2005, 2006, 2007 and 2008 convertible debentures, December 31, 2008	3,522,964
Additional accrual of default interest through July 29, 2009	1,227,181
Loss on extinguishment on July 29, 2009	767,778
Amortization of debt discounts	1,425,976
December 31, 2009 Balance, Amended and restated convertible debentures	$7,605,107
Less: current portion	(7,605,107)
Non-current portion	$-

Interest expense from amortization of debt discounts for the years ended December 31, 2010, 2009 and 2008 was $585,091, $2,917,266 and $22,542,636, respectively. Default interest expense recognized for the years ended December 31, 2010, 2009 and 2008 was $0, $1,227,180, and $3,522,964, respectively.

Warrants:
In connection with the amended and restated convertible debentures, the Company issued an additional 79,076,873 warrants to all holders. The warrants are in addition to the 113,095,646 warrants held by the holders just before the issuance of the amended and restated convertible debentures, for a total of 192,172,519 issued to the holders of the amended and restated convertible debentures. The terms of the amended and restated warrants include a reduced exercise price of $0.10, subject to certain customary anti-dilution adjustments. The termination date under the amended and restated warrants was extended until June 30, 2014. The fair value of the 113,095,646 warrants

immediately prior to the July 29, 2009 modification was estimated at $14,396,487 representing a decrease in the fair value of the liability of $9,521,469 through the date of modification, which was recorded through the results of operations as an adjustment to fair value of derivatives.

The assumptions used in the Black-Scholes option pricing model at July 29, 2009 are as follows: (1) dividend yield of 0%; (2) expected volatility of 190%, (3) risk-free interest rate of 0.50% - 1.72%, and (4) expected life of 1.09 – 3.68 years. The July 29, 2009 fair value of the 192,172,519 warrants was estimated at $29,956,246 using the Black-Scholes pricing model.

The warrants were again valued at $21,230,788 at December 31, 2010 at fair value using the Black-Scholes model. The total increase (decrease) in the fair value of this warrant liability was $16,975,616 and ($5,195,108) during the years ended December 31, 2010 and 2009, respectively, which was recorded through the results of operations as an adjustment to fair value of derivatives. The assumptions used in the Black-Scholes option pricing model at December 31, 2010 are as follows: (1) dividend yield of 0%; (2) expected volatility of 175%, (3) risk-free interest rate of 1.02%, and (4) expected life of 3.5 years.

Conversion Option:
The Company recorded the fair value of the embedded conversion option liability associated with the amended and restated convertible debentures. The fair value of the embedded conversion option was valued using the Black-Scholes model, resulting in a fair value of $7,629,146 immediately prior to the July 29, 2009 modification. As of July 29, 2009, the convertible debentures were convertible at the option of the holders into a total of 101,213,921 shares, subject to anti-dilution and other customary adjustments. The decrease in fair value of $8,550,020 was recorded through the results of operations as an adjustment to fair value of derivatives during the year ended December 31, 2009.

The assumptions used in the Black-Scholes option pricing model at July 29, 2009 are as follows: (1) dividend yield of 0%; (2) expected volatility of 190%, (3) risk-free interest rate of 0.14% – 0.50%, and (4) expected life of 0.01 – 1.09 years.

These debentures were repaid in full at December 31, 2010. As such, the embedded conversion option value was $0. The fair value of the embedded conversion option was $4,519,815 at December 31, 2009. A decrease in the fair value of the liability of $4,693,596 and $17,644,086 was recognized during the years ended December 31, 2010 and 2009, respectively. Additionally, $1,796,368 was recorded in charges related to repricing derivative liabilities of the 2008 convertible debenture during the year ended December 31, 2009, prior to the July 29, 2009 modification, as a result of a settlement with a debenture holder in February 2009 (See Note 12).

Additional Settlement and Release:
Further, on August 30, 2010, an investor was granted a preliminary injunction against the Company, whereby the Company delivered to the investor 49,220,665 shares of its common stock. Further, on September 30, 2010, under the terms of a final settlement and mutual release with the same investor, the Company exchanged a new convertible debenture to the investor in exchange for the investor’s outstanding convertible debenture. The terms of the new convertible debenture are the same as the amended and restated debentures, except that the amounts under the debenture are due and payable on or before December 31, 2010 and June 30, 2011, and the conversion and redemption prices are subject to a floor price of $0.06 per share. Concurrently with the settlement and release, all common stock purchase warrants previously issued to the investor were cancelled (23,701,263 warrants in total) and the legal actions were dismissed. The Company recorded a loss on settlement in the amount of $3,132,300 during the year ended December 31, 2010 in its accompanying statement of operations.

During 2010, the debenture holders converted debt valued at $1,321,109 and redeemed debt valued at $7,652,512 for 13,292,170 and 107,523,903 shares of the Company's common stock, respectively. During 2009, the debenture holders converted debt valued at $6,467,231 and redeemed debt valued at $6,028,253 for 74,677,933 and 63,009,884 shares of the Company's, respectively. As of December 31, 2010, these debentures are fully retired

7. AMENDED CONVERTIBLE PROMISSORY NOTES

On August 25, 2009, the Company entered into an amendment to its convertible promissory notes with JMJ Financial, originally executed on February 14, 2008. The note has been amended as follows:

- Note A: The original issue discount has been increased by 10%, or $60,000, such that the new principal amount is $660,000.
- Note B: The original issue discount has been increased by 10%, or $120,000, such that the new principal amount is $1,320,000.

All other terms and conditions of the original convertible promissory note remain in full force and effect.

Terms of the Original Notes:
The Company issued and sold a $600,000 unsecured convertible note dated as of February 15, 2008 (“Note A”) to JMJ Financial, for a net purchase price of $500,000 (reflecting a 16.66% original issue discount) in a private placement. Note A bears interest at the rate of 12% per annum, and is due by February 15, 2010. At any time after the 180th day following the effective date of Note A, the holder may at its election convert all or part of Note A plus accrued interest into shares of the Company's common stock at the conversion rate of the lesser of: (a) $0.38 per share, or (b) 80% of the average of the three lowest trade prices in the 20 trading days prior to the conversion. Pursuant to the Use of Proceeds Agreement entered into in connection with the issuance of Note A, the Company is required to use the proceeds from Note A solely for research and development dedicated to adult stem cell research.

Effective February 15, 2008, in exchange for $1,000,000 in the form of a Secured & Collateralized Promissory Note (the “JMJ Note”) issued by JMJ Financial to the Company, the Company issued and sold an unsecured convertible note (“Note B”) to JMJ Financial in the aggregate principal amount of $1,200,000 or so much as may be paid towards the balance of the JMJ Note. Note B bears interest at the rate of 10% per annum, and is due by February 15, 2010. At any time following the effective date of Note B, the holder may at its election convert all or part of Note B plus accrued interest into shares of the Company’s common stock at the conversion rate of the lesser of: (a) $0.38 per share, or (b) 80% of the average of the three lowest trade prices in the 20 trading days prior to the conversion. In connection with the issuance of Note B, the Company entered into a Collateral and Security Agreement dated as of February 15, 2008 with JMJ Financial pursuant to which the Company granted JMJ Financial a security interest in certain of its assets securing the JMJ Note.

As long as any portion of this Notes remain outstanding, unless the holders of at least 67% in principal amount of the then outstanding debentures otherwise give prior written consent, the Company is not permitted to (a) guarantee or borrow any indebtedness, (b) enter into any liens, (c) amend its charter documents in any manner that materially and adversely affects any rights of the holders, (d) acquire more than a de minimis number of shares of its common stock equivalents other than as to conversion shares of warrant shares as permitted or required and repurchases of common stock or common stock equivalents of departing officers and directors of the Company, provided that such purchases do not exceed certain specified amounts, (e) repay any indebtedness, other than the debentures already issued on a pro-rata basis, other than regularly scheduled principal payments as such terms are in effect under this debenture, (f) pay cash dividends or distributions on any equity securities of the Company, (g) enter into any material transaction with any affiliate of the Company, unless such transaction is made on an arm’s-length basis, or (h) enter into any agreement with respect to any of the above.

The Note agreement does not limit the number of shares that the Company could be required to issue.

Impact of Modification:
The Company has considered the impact of ASC 470-50 “Debt-Modifications and Extinguishments” on the accounting treatment of the change in conversion price of the Notes. ASC 470-50 states that a transaction resulting in a significant change in the nature of a debt instrument should be accounted for as an extinguishment of debt. The difference between the reacquisition price and the net carrying amount of the extinguished debt should be recognized currently in income of the period of extinguishment. The Company has concluded that the issuance of the amendment to the February 15, 2008 convertible promissory notes constitutes a substantial modification.

During the year ended December 31, 2009, the Company recognized a gain on extinguishment of convertible debentures of $249,473 representing the difference between the fair value of the amended and restated convertible promissory notes and the carrying value of the original convertible promissory notes. The fair value of the amended convertible debentures at August 25, 2009 was $828,818, net of debt discounts of $29,968 that will be amortized over the remaining life of the amended and restated convertible debentures. The following table summarizes the convertible promissory notes:

December 31, 2008	
Fair value convertible promissory notes, December 31, 2008	$1,757,470
Year ended December 31, 2009	
Convertible promissory note conversions	$(1,269,026)
Additional procceds from convertible promissory notes	2,620,000
Change in fair value of embedded derivatives through August 15, 2009	(478,521)
Adjustment to bifurcate embedded derivatives upon adoption of ASC 815 on August 15, 2009	(558,949)
Accrued default interest on convertible promissory notes, December 31, 2008	194,420
Additional accrual of default interest through August 15, 2009	84,151
Accrued convertible promissory note interest through August 15, 2009	79,720
Gain on extinguishment on August 15, 2009	(249,473)
Debt discounts	2,409,199
Amortization of debt discounts	973,824
December 31, 2009 Balance, Amended convertible promissory notes	$5,562,815
Less: current portion	(685,233)
Non-current portion	$4,877,582

The Company has recorded the fair value of the embedded conversion option liability associated with the amended convertible promissory notes. The fair value of the embedded conversion option was valued using the Black-Scholes model, resulting in a fair value of $558,949 immediately prior to the August 15, 2009 modification. As of August 15, 2009, the convertible promissory notes were convertible at the option of the holders into a total of 7,934,211 shares just prior to modification and into a total of 8,644,737 shares just after the modification, subject to anti-dilution and other customary adjustments. The decrease in fair value of $496,955 was recorded through the results of operations as an adjustment to fair value of derivatives during the year ended December 31, 2009.

The assumptions used in the Black-Scholes option pricing model at August 15, 2009 are as follows: (1) dividend yield of 0%; (2) expected volatility of 185%, (3) risk-free interest rate of 0.26%, and (4) expected life of 0.48 years. The Company also recognized $50,057 in charges related to repricing derivative liabilities in the accompanying consolidated statements of operations during the year ended December 31, 2009 for the adjustment related to the changes in the terms of the conversion option liabilities at August 25, 2009. These notes were fully repaid at December 31, 2010, so the fair value of the embedded conversion option was $0 at December 31, 2010. The Company recognized a decrease in the fair value of the liability of $7,688,402 and $603,062 during the years ended December 31, 2010 and 2009, respectively.

During the year ended December 31, 2009, the Company converted the entire amounts owed under Note A and Note B.

Amendment to Convertible Promissory Notes with JMJ Financial:

On October 1, 2009, October 29, 2009, October 29, 2009 and October 30, 2009, the Company entered into Addendums ("Notes B1-B4") to Note B convertible promissory note, under the same terms and conditions as Note B. The following table summarizes the key terms of Notes B1-B4:

Note B Addendum	Effective Date	Maturity Date	Initial Available Consideration	Principal Sum	Interest Rate	Principal Outstanding December 31, 2009
Note B1	10/1/2009	10/1/2012	$ 1,120,000	$1,320,000	18 %	$1,320,000
Note B2	10/29/2009	10/29/2012	1,120,000	1,320,000	18 %	330,000
Note B3	10/29/2009	10/29/2012	1,120,000	1,320,000	18 %	117,857
Note B4	10/30/2009	1/19/2013	1,120,000	1,320,000	18 %	117,857
			$ 4,480,000	$5,280,000		$1,885,714

The conversion rate of Notes B1-B2 is the lesser of (a) $0.38, or (b) 80% of the average of the three lowest trade prices in the 20 trading days prior to the conversion. The conversion rate of Notes B3-B4 is the lesser of (a) $0.25, or (b) 80% of the average of the three lowest trade prices in the 20 trading days prior to the conversion.

The Company has recorded the fair value of the embedded conversion option liability associated with the Note B Addendums. The initial fair value of the embedded conversion option was valued using the Black-Scholes model, resulting in a fair value of $2,065,370. The increase in fair value of $18,966 was recorded through the results of operations as an adjustment to fair value of derivatives during the year ended December 31, 2009. The assumptions used in the Black-Scholes option pricing model between October 9 and December 16, 2009 are as follows: (1) dividend yield of 0%; (2) expected volatility of 180 - 185%, (3) risk-free interest rate of 1.27 - 1.52%, and (4) expected life of 2.79 - 3.22 years. These notes were fully retired at December 31, 2010.

2010 JMJ Convertible Promissory Notes

During the year ended December 31, 2010, the Company also issued three additional convertible promissory notes to JMJ Financial, for a total of $3,000,000 available to receive in cash, for a principal sum of $3,850,000, which includes an original issue discount of $850,000. The notes bear a one-time interest charge of 10% on the principal sum. The holder may at its election convert all or part of these notes into shares of the Company's common stock at the conversion rate of the lesser of: (a) $0.10 per share, or (b) 85% of the average of the three lowest trade prices in the 20 trading days prior to the conversion. During the year ended December 31, 2010, the Company received the entire $3,000,000 on these additional notes. Of the $3,850,000 borrowed, the Company converted $3,562,215 into 76,465,706 shares of common stock. The notes mature on March 30, 2013.

The initial fair value of the embedded conversion option liability associated with the funds received during the year ended December 31, 2010 was valued using the Black-Scholes model, resulting in an initial fair value of $5,944,408. The assumptions used in the Black-Scholes option pricing model at the dates the funds were received are as follows: (1) dividend yield of 0%; (2) expected volatility of 175-180%, (3) risk-free interest rate of 0.87 – 1.60%, and (4) expected life of 2.47 – 3.00 years.

The value of the conversion option liability underlying the 2010 notes at December 31, 2010 was $628,919. The Company recognized a gain from the decrease in the fair value of the conversion option liability in the amount of $3,254,094 during the year ended December 31, 2010, representing the change in fair value during the year.

The following table summarizes all JMJ Financial convertible promissory notes outstanding at December 31, 2010:

Convertible promissory notes, principal	$287,785
Debt discounts	(285,005)
Net convertible promissory notes	$2,780
Less current portion	(1,585)
Convertible promissory notes, long term	$1,195

As of December 31, 2010 and 2009, respectively, the convertible promissory notes were convertible at the option of the holders into a total of 2,877,850 and 38,898,466 shares, subject to anti-dilution and other customary adjustments. The fair value of the embedded conversion option was $628,919 and $2,471,729 at December 31, 2010 and 2009, respectively. The decrease in the fair value of this liability was $7,778,168 and $1,490,368 during the years ended December 31, 2010 and 2009, respectively, which was recorded through the results of operations as an adjustment to fair value of derivatives. The assumptions used in the Black-Scholes option pricing model at December 31, 2010 are as follows: (1) dividend yield of 0%; (2) expected volatility of 175%, (3) risk-free interest rate of 0.61%, and (4) expected life of 2.25 years.

During 2010, the debenture holder converted debt valued at $9,757,190 for 211,916,152 shares of common stock. During 2009, the debenture holder converted debt valued at $1,269,024 for 14,167,962 shares of common stock.

The Company recorded finance costs in the amount of $2,669,408 and $465,370, respectively, in its accompanying consolidated statement of operations for the years ended December 31, 2010 and 2009, representing the excess of the fair value of the conversion option feature over the face value of the JMJ promissory notes.

Interest expense from amortization of debt discounts for the years ended December 31, 2010, 2009 and 2008 was $6,410,552, $1,220,220 and $157,235, respectively. Default interest expense recognized for the years ended December 31, 2010, 2009 and 2008 was $0, $84,151 and $194,420, respectively.

8. 2009 CONVERTIBLE PROMISSORY NOTES

On November 12, 2009, the Company entered into a subscription agreement (the “Subscription Agreement”) with certain subscribers (the “Subscribers”). For the sale of certain original issue discount promissory notes (“Notes”). The Notes are convertible at the option of the holder into shares of the Company’s common stock at a conversion price of $0.10.

Pursuant to the Subscription Agreement, the Company also agreed to issue (i) one-and-one third Class A warrants (“Class A Warrants”) for each two shares of common stock underlying the Notes, to purchase shares of the Company’s common stock with a term of five years and an exercise price of $0.108, (ii) additional investment rights, exercisable until 9 months after the initial closing date of the Subscription Agreement (“Additional Investment Rights”), to purchase (a) original issue discount promissory notes (“AIR Notes”), with the same terms as the Notes, in the principal amount of up to the principal amount of the Notes to be purchased by the Subscribers, for a purchase price of up to the purchase price paid by the Subscribers for the Notes, with a conversion price of $0.10, and (b) one-and-one third Class B warrants (“Class B Warrants”) for each two shares of common stock underlying the AIR Notes, to purchase shares of the Company’s common stock (“First Close Warrants”).

The initial closing under the Subscription Agreement occurred on November 12, 2009, pursuant to which, the Company sold Notes (“First Close Notes”) in the principal amount of $1,662,000 for a purchase price of $1,385,000. In addition, on November 13, 2009, the Company sold Notes in the principal amount of $441,000 for a purchase price of $367,500 (including $67,500 previously owed to a subscriber for legal services). The closing that occurred on

November 13, 2009 was deemed part of the initial closing, such that, pursuant to the initial closing under the Subscription Agreement, the Company sold Notes in the aggregate principal amount of $2,103,000 for an aggregate purchase price of $1,752,500.

On February 18, 2010, the Company completed the second closing, issuing additional debentures ("Second Close Debentures"), under the same terms of the initial closing, in the principal amount of up to $2,076,451 for a purchase price of $1,730,375 (including $45,375 previously owed to a subscriber for legal services). Pursuant to the initial closing under the Subscription Agreement, the Company also issued an aggregate of 13,808,400 Class A Warrants ("Second Close Warrants").

The Company is be required to redeem the Notes monthly commencing in May 2010 under the first closing and September 2010 under the second closing, in the amount of 14.28% of the initial principal amount of the Notes, in cash or common stock at the Company's option (subject to the conditions set forth in the Notes), until the Notes are paid in full. The maturity date of the 2009 convertible promissory notes, first close is November 12, 2010, and March 1, 2011 under the second close.

First Close Warrants:
Pursuant to the initial closing under the Subscription Agreement, the Company also issued an aggregate of (i) 13,984,950 Class A Warrants, and (ii) Additional Investment Rights for the purchase of up to (a) $4,206,000 principal amount of AIR Notes for a purchase price of up to $3,505,000 and (b) 28,040,000 Class B Warrants. As of December 31, 2010, the Additional Investment Right expired with no additional investment.

The term of the "First Close" warrants is five years and is subject to anti-dilution and other customary adjustments. The initial fair value of the warrants was estimated at $1,345,539 using the Black-Scholes pricing model. The assumptions used in the Black-Scholes option pricing model at November 12 and 13, 2009 for all warrants issued in connection with these promissory notes are as follows: (1) dividend yield of 0%; (2) expected volatility of 185%, (3) risk-free interest rate of 2.28%, and (4) expected life of 5.0 years.

Second Close Warrants:
The term of the "second close" 13,808,400 warrants is five years from the initial close and is subject to anti-dilution and other customary adjustments. The initial fair value of the warrants was estimated at $1,175,007 using the Black-Scholes pricing model. The assumptions used in the Black-Scholes option pricing model at February 18, 2010 for all warrants issued in connection with these promissory notes are as follows: (1) dividend yield of 0%; (2) expected volatility of 180%, (3) risk-free interest rate of 0.34%, and (4) expected life of 4.73 years.

The warrants were valued at $4,096,346 at December 31, 2010 at fair value using the Black-Scholes model, representing a decrease in the fair value of the liability of $3,027,693 and $145,388 during the years ended December 31, 2010 and 2009, respectively, which was recorded through the results of operations as an adjustment to fair value of derivatives. The assumptions used in the Black-Scholes option pricing model at December 31, 2010 for all warrants issued in connection with these notes are as follows: (1) dividend yield of 0%; (2) expected volatility of 175%, (3) risk-free interest rate of 1.02%, and (4) expected life of 3.87 years.

Conversion Options:
The Company has bifurcated and recorded the fair value of the embedded conversion option liability associated with the convertible promissory notes.

First Close Notes—the fair value of the embedded conversion option liability was valued using the Black-Scholes model, resulting in an initial fair value of $1,357,408 at November 12 and 13, 2009.

The assumptions used in the Black-Scholes option pricing model under the first close are as follows: (1) dividend yield of 0%; (2) expected volatility of 185%, (3) risk-free interest rate of 0.32%, and (4) expected life of 1.0 year. The assumptions used in the Black-Scholes option pricing model under the second close are as follows: (1) dividend yield of 0%; (2) expected volatility of 180%, (3) risk-free interest rate of 0.34%, and (4) expected life 0.73 years.

At December 31, 2010 and 2009 respectively, the conversion option is exercisable for a total of 1,519,080 and 21,030,000 shares of common stock at a conversion price of $0.10 per share, subject to anti-dilution and other customary adjustments. The fair value of the embedded conversion option liability was $178,569 and $1,092,273 at December 31, 2010 and 2009, respectively.

The assumptions used in the Black-Scholes option pricing model at December 31, 2010 are as follows: (1) dividend yield of 0%; (2) expected volatility of 175%, (3) risk-free interest rate of 0.12%, and (4) expected life of 0.16 years. The change in fair value of the embedded conversion option of $1,914,845 and $265,135 was recorded through the results of operations as an adjustment to the fair value of derivatives for the years ended December 31, 2010 and 2009, respectively.

Second Close Debentures—the fair value of the embedded conversion option liability was valued using the Black-Scholes model, resulting in an initial fair value of $1,001,140 at February 18, 2010. The convertible debenture is convertible at the option of the holders into a total of 20,764,510 shares of common stock at a conversion price of $0.10 per share, subject to anti-dilution and other customary adjustments.

The assumptions used in the Black-Scholes option pricing model at February 18, 2010 are as follows: (1) dividend yield of 0%; (2) expected volatility of 180%, (3) risk-free interest rate of 0.34%, and (4) expected life of 0.73 years.

Interest expense for the years ended December 31, 2010 and 2009 was $3,878,952 and $281,272, respectively. The Company recorded finance costs in the amount of $468,272 and $950,448 in its accompanying consolidated statement of operations for the years ended December 31, 2010 and 2009, respectively, representing the excess of the fair value of the conversion option feature over the face value of the convertible promissory notes.

The following table summarizes the 2009 convertible promissory notes outstanding at December 31, 2010:

Convertible promissory notes, principal	$151,908
Debt discounts	(19,228)
Net convertible promissory notes	$132,680
Less current portion	(132,680)
Convertible promissory notes, long term	$-

During 2010, the debenture holders converted debt valued at $1,953,000 and redeemed debt valued at $2,074,543 for 19,529,999 and 36,787,197 shares of the Company's common stock, respectively.

9. SERIES A-1 REDEEMABLE CONVERTIBLE PREFERRED STOCK

On March 3, 2009, the Company entered into a $5 million credit facility (“Facility”) with a life sciences fund. Under the terms of the agreement, the Company may draw down funds, as needed, from the investor through the issuance of Series A-1 redeemable convertible preferred stock, par value $.001, at a basis of 1 share of Series A-1 redeemable convertible preferred stock for every $10,000 invested. The preferred stock pays dividends, in kind of preferred stock, at an annual rate of 10%, matures in four years from the initial drawdown date, and was 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 average of the closing bid price in the 5 trading days prior to the closing date, the investor may, at its option, and without penalty, decline to purchase the applicable put shares on the closing date.

The Company is required to keep available out of its authorized but unissued shares of common stock, such number of shares sufficient to effect a conversion of all then outstanding shares of the Series A-1 redeemable convertible preferred stock.

The Series A-1 redeemable convertible preferred stock has been classified within the mezzanine section between liabilities and equity in the consolidated balance sheets because it is considered conditionally redeemable. The embedded conversion option has been recorded as a derivative liability (See Section entitled "Conversion Option" in this footnote below) in the Company's consolidated balance sheets, and changes in the fair value each reporting period are reported in adjustments to fair value of derivatives in the consolidated statements of operations.

During the year ended December 31, 2009, the Company drew down $2,588,000 on this facility. The outstanding balance at December 31, 2010 of $1,130,165 is convertible into 1,506,887 shares of the Company's common stock. The Company values the conversion option initially when each draw takes place (see section entitles "Conversion Option" in this footnote below).

The following table summarizes the Series A-1 redeemable convertible preferred stock and embedded derivative outstanding at December 31, 2010 and 2009:

	December 31, 2010	December 31, 2009
Principal due	$1,130,165	$920,696
Accrued dividend	219,492	123,609
Debt discount	(77,216)	(136,110)
	1,272,441	908,195
Less current portion	-	-
Non-current portion	$1,272,441	$908,195
Aggregate liquidation value*	$1,349,657	$1,044,305

* Represents the sum of principal due and accrued dividends.

The dividends are accrued at a rate of 10% per annum, and the Company records the accrual as interest expense in its consolidated statements of operations in the period incurred. The Company recorded accrued dividends on the Series A-1 redeemable convertible preferred stock of $219,492 and $123,609 for the years ended December 31, 2010 and 2009, respectively.

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

Termination and Liquidation Rights
The Company may terminate this agreement and its right to initiate future draw-downs by providing 30 days advanced written notice to the investor, subject to certain limitations.

Upon any liquidation, dissolution or winding up of the Company, the holders of the Series A-1 redeemable 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 redeemable convertible preferred stock equal to $10,000, plus any accrued by unpaid dividends.

Conversion Option:
The embedded conversion option was valued at $212,447 and $525,986 at December 31, 2010 and 2009, respectively, at fair value using the Black-Scholes model. The decrease in the fair value of the embedded conversion option liability of $392,400 and $2,094,924 for the years ended December 31, 2010 and 2009, respectively, was recorded through the results of operations as an adjustment to fair value of derivatives.

The assumptions used in the Black-Scholes model to value the embedded conversion option at each draw date were as follows: (1) dividend yield of 0%; (2) expected volatility of 180 - 190%, (3) risk-free interest rate of 1.70 - 2.86%, and (4) expected life of 3.27 - 4.00 years.

The assumptions used in the Black-Scholes model to value the embedded conversion option at December 31, 2010 were as follows: (1) dividend yield of 0%; (2) expected volatility of 175%, (3) risk-free interest rate of 0.61%, and (4) expected life of 2.27 years.

Commitment fee and expenses--For providing investor relations services in connection with the Series A-1 redeemable convertible preferred stock credit facility, the Company issued a consultant 24,900,000 shares of its common stock on February 9, 2009. The Company valued the issuance of these shares at $4,731,000 based on a closing price of $0.19 on February 9, 2009 and recorded the value of the shares as deferred financing costs on the date they were issued. Beginning on the date of the first draw-down on April 6, 2009 (the loan maturity date is 4 years after the initial draw-down), the Company amortizes these fees over the term of the Series A-1 redeemable convertible preferred stock facility which represents the implied term of the investor relations contract.

The Company also incurred a non-refundable commitment fee to the holder of this convertible preferred stock facility in the amount of $250,000. The initial fee went into delinquency and was modified on October 19, 2009 (See Modification section in this footnote below).

Beginning on the date of the first draw-down on April 6, 2009 (the loan maturity date is 4 years after the initial draw-down), the Company amortizes the deferred issuance costs ratably over the term of the Series A-1 redeemable convertible preferred stock facility.

Interest expense from amortization of the debt discount and deferred costs for the years ended December 31, 2010 and 2009 was $137,753 and $3,778,850, respectively.

Modification of Series A-1 Convertible Redeemable Preferred Stock:
On October 19, 2009, the Company entered into two letter agreements with Volation, pursuant to which (i) the Company reduced the conversion price of its existing outstanding Series A-1 convertible preferred stock issued to Volation to $0.10 per share resulting in 22,880,000 shares of Common Stock upon conversion, (ii) the Company issued Volation 2,500,000 shares of its Common Stock at $0.10 per share in payment of an outstanding commitment fee, and (iii) Volation waived the delinquency in non-payment of the $250,000 commitment fee required pursuant to the preferred stock purchase agreement between the Company and Volation. The commitment fee was paid during the year ended December 31, 2010 by reducing the proceeds paid by the Series A-1 Preferred Stock investors by the amount of the commitment fee.

In connection with the modification, the Company calculated the fair value of the conversion option for the preferred stock immediately prior to and after the change in the conversion price. The change in fair value of the conversion option on the preferred stock was $2,241,197, which the Company recorded to charges related to repricing derivative liabilities during the year ended December 31, 2009.

During 2010, the Company issued 6,206,961 shares of common stock for the conversion of $620,696 of Series A-1 redeemable convertible preferred stock.

10. SERIES B PREFERRED STOCK

On November 2, 2009 (“Effective Date”), the Company entered into a preferred stock purchase agreement with Optimus Life Sciences Capital Partners, LLC (“Investor” or “Optimus”). Pursuant to the purchase agreement, the Company agreed to sell, and the Investor agreed to purchase, in one or more purchases from time to time in the Company’s 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 the Company’s common stock with an aggregate exercise price equal to 135% of the purchase price paid by the Investor, at an exercise price per share as follows:

- On the sixth (6th) Trading Day following the Tranche Notice Date, the Exercise Price of the Optimus Warrant shall be adjusted to equal the value weighted average price ("VWAP") for the 5 trading days beginning on and including the Tranche Notice Date (as so adjusted, the “Adjusted Exercise Price”); and

- If the Adjusted Exercise Price results in additional Warrant Shares being issuable to the Holder, such additional shares shall be delivered to the Holder within one Trading Day following the Adjustment Date. If the Adjusted Exercise Price results in less Warrant Shares being issuable to the Holder, the excess Warrant Shares shall be returned by the Holder to the Company within one Trading Day following on the Adjustment Date.

The Warrants were be issued in replacement of a five-year warrant to purchase 119,469,027 shares of common stock with an exercise price per share of $0.113 the Company issued on the Effective Date.

The Company agreed to pay to the Investor a commitment fee of $500,000, at the earlier of the closing of the first Tranche or the six month anniversary of the effective date, payable at the Company’s election in cash or common stock valued at 90% of the volume weighted average price of the Company’s common stock on the five trading days preceding the payment date. The $500,000 commitment fee was outstanding and was recorded in accrued expenses in the Company’s consolidated balance sheet at December 31, 2009. During 2010, the Company issued 50 shares of preferred stock as payment for the commitment fee.

During the year ended December 31, 2010, the Company delivered tranche notices to Optimus Life Sciences Capital Partners, LLC for delivery of a total of 1,000 shares under the Series B preferred stock for funding in the amount of $10,000,000 ($9,485,000 in cash proceeds, $500,000 of commitment fee applied, and $15,000 in legal fees).

During the year ended December 31, 2010, in connection with the funding, the Company issued 95,870,362 shares of its common stock upon exercise of the same number of warrants, which were granted simultaneously with the Company’s tranche notices. The Company received secured promissory notes in the amount of $13,500,000 to settle the warrant exercise during the year ended December 31, 2010.

Dividends
Commencing on the date of the issuance of any shares of Series B preferred stock, Holders of Series B preferred stock will be 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. Accrued dividends will be payable upon redemption of the Series B preferred stock. Accrued dividends were $196,986 at December 31, 2010.

Redemption Rights
Upon or after the fourth anniversary of the initial issuance date, the Company will have the right, at the Company’s option, to redeem all or a portion of the shares of the Series B preferred stock, at a price per shares equal to 100% of the Series B liquidation value. The preferred stock may be redeemed at the Company’s 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.

Liquidation Rights

The preferred shares shall, with respect to dividend, rights upon liquidation, winding-up or dissolution, rank: (i) senior to the Company's common stock, and any other class or series of preferred stock of the Company, except 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 of the Company.

If the Company determines to liquidate, dissolve or wind-up its business, it must redeem the Series B preferred stock at the prices set forth above. Upon any liquidation, dissolution or winding up of the Company the Holders of 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.

The Company has classified the Series B redeemable preferred stock in the equity section in its consolidated balance sheets.

Related Secured Promissory Notes Receivable:
In accordance with the terms of the Series B preferred stock agreement, Optimus issued to the Company a secured promissory note in consideration for receiving warrants under each tranche. The value of each secured promissory note equals the value of the warrants that Optimus received. Interest on the notes accrues at 2% per year, compounding annually if the interest remains unpaid at the end of each year. The note is secured by freely tradable marketable securities belonging to Optimus. Each promissory note matures on the fourth anniversary of its issuance.

In the event the Company redeems all or a portion of any shares of Series B preferred stock held by Optimus, the Company will be permitted to offset the full amount of such proceeds against amounts outstanding under the promissory notes. Accordingly, the Company included the discounted value of the secured promissory notes as a separate component of stockholders' deficit at December 31, 2010.

The value of the secured promissory notes in the accompanying consolidated balance sheets was $10,177,370, net of discounts of $3,322,630 at December 31, 2010, reflecting a face value of $13,500,000. The Company determined that a 10% discount is appropriate, in order to consistently reflect the Company's cost of borrowing under the terms of the underlying Series B preferred stock that permits offset. The Company recorded an initial discount on the promissory notes in the amount of $3,519,238 during the year ended December 31, 2010. The Company accretes interest at 10% over the respective four-year terms of the promissory notes.

During the year ended December 31, 2010, the Company accreted interest on the promissory note in the amount of $196,607, which was recorded in retained earnings during the period then ended. The Company recorded $196,986 in dividends on its Series B preferred stock during the year ended December 31, 2010.

As of December 31, 2010 and 2009, 1,000 and 0 shares of Series B preferred stock were outstanding, respectively.

11. SERIES C PREFERRED STOCK

On December 30, 2010, the Company entered into a securities purchase agreement with Socius CG II, Ltd., a Bermuda exempted company ("Socius"). Pursuant to the purchase agreement, the Company agreed to sell, and Socius agreed to purchase, in one or more purchases from time to time ("tranches") in the Company's sole discretion (subject to the conditions set forth therein), (i) up to 2,500 shares of Series C Preferred Stock (the "Preferred Shares") at a purchase price of $10,000 per share, for an aggregate purchase price of up to $25,000,000, and (ii) two-year warrants that would obligate Socius to purchase shares of the Company's common stock with an aggregate exercise price equal to 20% of the purchase price paid by Socius, at an exercise price per share equal to the closing bid price of the Company's common stock on the date the Company provides notice of such tranche. On each date that the Company delivers a tranche notice to Socius, Socius shall become obligated, pursuant to a right automatically vesting on such tranche notice date, to purchase that number of shares of common stock ("Additional Investment Shares") equal in dollar amount to 100% of the tranche amount set forth in the tranche notice at a price per share equal to the closing bid price on the tranche notice date. The purchase of such Additional Investment Shares must occur no later than sixty (60) calendar days following the tranche notice date.

Pursuant to the Purchase Agreement, on December 31, 2010, the Investor purchased 400 Preferred Shares and the Company received gross proceeds of $4,000,000. The warrants and common stock underlying this tranche are not exercisable or issuable, respectively, until the date a registration statement for the resale of all shares of common stock issuable pursuant to the purchase agreement is declared effective.

On December 30, 2010, in accordance with the purchase agreement, the Company filed a certificate of designations for the Series C preferred stock with the Secretary of State of the state of Delaware. As previously reported, pursuant to the Certificate of Designations, the preferred shares shall, with respect to dividend, rights upon liquidation, winding-up or dissolution, rank: (i) senior to the Company's common stock, and any other class or series of preferred stock of the Company (collectively, with any warrants, rights, calls or options exercisable for or convertible into such preferred stock, the "Junior Securities"); provided, however, the Series A-1 convertible preferred stock and Series B preferred stock (together, the "Senior Securities") shall rank senior in right of redemption, liquidation, and dividends; and (ii) junior to all existing and future indebtedness of the Company.

Dividends
Commencing on the date of the issuance of any shares of Series C preferred stock, holders of Series C preferred stock will be 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. Accrued dividends will be payable upon redemption of the Series C preferred stock.

Redemption Rights
Upon or after the fourth anniversary of the initial issuance date, the Company will have the right, at the Company's option, to redeem all or a portion of the shares of the Series C preferred stock, at a price per shares equal to 100% of the Series C liquidation value. The preferred stock may be redeemed at the Company's 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 C Liquidation Value"), or, at a price per share of : (x) 136% of the Series C Liquidation Value if redeemed prior to the first anniversary of the initial issuance date, (y) 127% 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 (z) 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.

Termination and Liquidation Rights
If the Company determines to liquidate, dissolve or wind-up its business, it must redeem the Series C preferred stock at the prices set forth above. Upon any liquidation, dissolution or winding up of the Company, the Holders of Series C 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 C preferred stock equal to $10,000, plus any accrued and unpaid dividends.

The Company has classified the Series C redeemable preferred stock in the equity section in its consolidated balance sheets.

12. WARRANT SUMMARY

Warrant Activity

A summary of warrant activity for the years ended December 31, 2010, 2009 and 2008 is presented below:

	Number of Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (000)
Outstanding, December 31, 2007	104,700,522	$0.29	3.55	$495
Granted	31,870,465	0.15		
Exercised	-	-		
Forfeited/Canceled	(7,173,036)	$0.25		
Outstanding, December 31, 2008	129,397,951	$0.26	3.23	$-
Granted	95,620,697	0.10		
Exercised	(3,019,527)	0.17		
Forfeited/Canceled	(3,373,333)	$1.47		
Outstanding, December 31, 2009	218,625,788	$0.13	4.35	$49
Granted	110,678,762	0.14		
Exercised	(188,874,727)	0.13		
Forfeited/Canceled	(5,498,581)	-		
Outstanding, December 31, 2010	134,931,242	$0.12	3.54	$14,347
Vested and expected to vest at December 31, 2010	134,931,242	$0.12	3.54	$14,347
Exercisable, December 31, 2010	134,931,242	$0.12	3.54	$14,347

The aggregate intrinsic value in the table above is before applicable income taxes and is calculated based on the difference between the exercise price of the warrants and the quoted price of the Company's common stock as of the reporting date.

The following table summarizes information about warrants outstanding and exercisable at December 31, 2010:

	Warrants Outstanding			Warrants Exercisable	
Exercise Price	Number of Shares	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price
$0.05	1,026,000	2.00	$0.05	1,026,000	$0.05
0.10 - 0.11	130,445,439	3.56	0.09	130,445,439	0.09
0.38 - 0.40	2,580,636	4.26	0.39	2,580,636	0.39
	486,250	0.39	0.92	486,250	0.92

0.85 - 0.96					
2.20	72,917	0.63	2.20	72,917	2.20
2.48 - 2.54	320,000	0.30	2.54	320,000	2.54
	134,931,242			134,931,242	

The Company recorded finance costs in the amount of $288,717 in its accompanying consolidated statement of operations for the year ended December 31, 2009, representing the value of warrants re-granted that had previously expired.

On January 22, 2010, the Company issued 1,000,000 warrants to an investor, to purchase the same number of shares of common stock. The term of these warrants is 4.92 years and is subject to anti-dilution and other customary adjustments. The initial fair value of the warrants was estimated at $95,464 using the Black-Scholes pricing model. The assumptions used in the Black-Scholes option pricing model at January 22, 2010 for all warrants issued in connection with these promissory notes are as follows: (1) dividend yield of 0%; (2) expected volatility of 180%, (3) risk-free interest rate of 2.37%, and (4) expected life of 4.92 years.

During the year ended December 31, 2010, the Company issued 95,870,362 warrants to Optimus in connection with its Series B preferred stock, which warrants were simultaneously exercised. See Note 10.

During the year ended December 31, 2010, the Company received $719,636 upon exercise of warrants into 6,663,300 shares of common stock.

13. STOCKHOLDERS' EQUITY TRANSACTIONS

The Company is authorized to issue two classes of capital stock to be designated respectively, preferred stock and common stock. The total number of shares of preferred stock the Company is authorized to issue is 50,000,000, par value $0.001 per share. On September 10, 2009, upon approval by a vote of the Company's stockholders, the Company increased its authorized shares of common stock, par value $0.001 from 500,000,000 to 1,750,000,000 shares, effective immediately. The total number of shares of common stock the Company is authorized to issue is 1,750,000,000, par value $0.001 per share. The Company had 113 and 92 shares of Series A-1 preferred Stock outstanding as of December 31, 2010 and 2009, respectively. The Company had 1,000 and zero shares of Series B preferred stock outstanding as of December 31, 2010 and 2009, respectively. The Company had 1,439,826,362 and 663,649,294 shares of common stock outstanding as of December 31, 2010 and 2009, respectively.

Effective as of April 1, 2008, Jonathan F. Atzen, the Company's Senior Vice President, General Counsel and Secretary, resigned from his positions with the Company and terminated his employment arrangement with the Company. Pursuant to the terms of an agreement between the Company and Mr. Atzen effective April 1, 2008, the Company agreed to (i) pay Mr. Atzen $48,333.33 in cash as a severance payment, (ii) issue a fully vested option to purchase an aggregate of 400,000 shares of common stock pursuant to the Company's 2005 Stock Incentive Plan, as amended (the "2005 Plan"), (iii) issue an aggregate of 936,692 shares of the common stock pursuant to the 2005 Plan, (iv) provide for the vesting of all outstanding stock options held by Mr. Atzen and (v) provide Mr. Atzen and his family with full healthcare and dental coverage for a period of 6 months as was provided to Mr. Atzen during his employment.

Effective as of March 17, 2008, Ivan Wolkind, the Company's Senior Vice President—Finance, Administration & Chief Accounting Officer, resigned from all positions with the Company and voluntarily terminated his employment arrangement with the Company for personal reasons. On April 2, 2008, the Company entered into a Consulting Agreement with Mr. Wolkind. Pursuant to the Consulting Agreement, Mr. Wolkind agreed for a period of 90 days to provide up to 20 hours per week of financial consulting services to the Company including but not limited to (i) assisting with general accounting and investor diligence, (ii) commenting on the structure of proposed financial transactions, (iii) responding to queries regarding ACT's corporate structure, and (iv) reviewing strategic and financial documents as appropriate. As consideration for the services to be provided, the Company agreed to pay Mr. Wolkind an aggregate of $45,834 of which was paid on April 2, 2008. As additional consideration for the services to be provided, the Company agreed to issue to Mr. Wolkind 238,719 shares of common stock pursuant to the 2005 Plan. On May 2, 2008, the consulting contract was terminated with no future payments due.

Between September 29, 2008 and January 20, 2009, certain vendors who had previously provided professional and other services to the Company, assigned invoices for services it asserted it rendered to us in the aggregate amount of $1,108,673 to Outboard Investments, Ltd. ("Outboard Investments"), Ice Capital Holdings, Ltd. ("Ice Capital Holdings"), Tuxedo Holdings, Ltd. ("Tuxedo Holdings") and Galleon Investments, Ltd. ("Galleon Investments"). Between the aforementioned dates, Outboard Investments, Ice Capital Holdings, Tuxedo Holdings and Galleon Investments filed actions against us in the Circuit Court of the Twelfth Judicial Circuit, Sarasota County, Florida. In the actions, these entities asserted that the Company failed to pay the $1,108,673 in principal plus interest due on the original invoices. After negotiations between the Company and Outboard Investments, Ice Capital Holdings, Tuxedo Holdings and Galleon Investments, between September 29, 2008 and January 20, 2009, the Company entered into settlement

agreements with each of the above parties pursuant to which the Company agreed to issue Outboard Investments, Ice Capital,Holdings, Tuxedo Holdings and Galleon Investments an aggregate of 260,116,283 shares of the Company's common stock in exchange for satisfaction of all claims totaling $1,108,673.

The following is a summary of invoices settled plus interest, shares of common stock issued in settlement and loss on settlements:

Year ended December 31, 2008			
	Invoices plus Interest	Shares of Common stock	Loss Recognized*
Outboard Investments	$82,316	16,463,302	$740,848
Ice Capital Holdings	269,759	102,236,813	2,339,443
Tuxedo Holdings	251,399	102,035,321	2,355,846
	$603,474	220,735,436	$5,436,137

Year ended December 31, 2009			
	Invoices plus Interest	Shares of Common stock	Loss Recognized*
Ice Capital Holdings	$209,721	26,533,978	$2,006,178
Galleon Investments	295,478	12,846,869	2,787,771
	$505,199	39,380,847	$4,793,949
Total	$1,108,673	260,116,283	$10,230,086

*The losses were calculated as the difference between the amount of accounts payable relieved and the value of the shares (based on the closing share price on the settlement date) that were issued to repay the accounts payable.

The Court held fairness hearings to review the proposed settlement agreements. After the hearings, the Court issued orders approving the settlement agreements and finding that, assuming the satisfaction of all the other applicable securities laws and regulations, the issuance of the shares to Outboard was exempt from registration under the Securities Act of 1933, as amended. Other than the claims for payment and the settlement agreements, the Company has not had and does not have any relationship with Outboard Investments, Ice Capital Holdings, Tuxedo Holdings or Galleon Investments nor has the Company entered into any other transactions with them either prior to or after the claim and settlement agreement.

On March 5, 2009, the Company settled a lawsuit originally brought by an investor in January 2009, who is an investor in the 2007 and 2008 debentures, and associated with the default on August 6, 2008 on all debentures. As a result of the lawsuit, the Company was required by court order to reduce the conversion price on convertible debentures held by this investor to $0.02 per share, effective immediately, so long as the Company has a sufficient number of authorized shares to honor the request for conversion. During the year ended December 31, 2009, the Company issued 4,847,050 shares of its common stock to this investor in conversion of approximately $97,000 of its 2006 debenture at $0.02 per share, and 1,252,950 shares of its common stock to this investor in conversion of approximately $25,000 of its 2007 debenture at $0.02 per share.

The Company calculated the fair value of the conversion option for the 2007 and April 2008 debentures immediately prior to and after the change in the conversion price, and evaluated the impact of the change in conversion price. The Company recorded the amount of $1,796,368 during the year ended December 31, 2009 in charges related to repricing

derivative liabilities as a result of this modification, representing the change in the fair value of the conversion option liability.

On June 30, 2009, an investor submitted a conversion notice in the principal amount of $150,000 into 7,500,000 shares of common stock at $0.02 per share. At that time, the Company did not have sufficient authorized shares to satisfy this conversion notice. On July 6, 2009, by means of a settlement between the two parties, the Company agreed to deliver the 7,500,000 shares of its common stock no later than September 25, 2009. The Company delivered the 7,500,000 shares on September 25, 2009. Further, the Company agreed to provide the investor with an additional $110,000 principal, which is to be upon the same terms and conditions as the original 2008 debenture. Accordingly, the Company recognized a loss on settlement in the amount of $110,000 during the year ended December 31, 2009 for the amount of principal that was added to the 2008 convertible debenture. Additionally, the Company recognized interest expense in the amount of $1,210,021, representing the fair value of the conversion option of the $110,000 on July 6, 2009. The full amount of $1,210,021 was recognized in interest expense in the accompanying consolidation statements of operations for the year ended December 31, 2009 as a result of the debenture’s default at the time.

During the year ended December 31, 2009, the Company issued 375,000 shares of its common stock in payment for legal services provided. The Company recorded professional fees in its accompanying statements of operations in the amount of $38,250 during the year ended December 31, 2009.

During the years ended December 31, 2010 and 2009, the Company issued 38,062,887 and 2,122,495 shares of its common stock, respectively, upon exercise of warrants.

During the year ended December 31, 2010, the Company issued a total of 107,051,697 shares of its common stock to its previous chief executive officer and chief scientific officer. Further, the Company is to issue an additional 12,421,101 shares of its common stock to the same officers. The Company recorded $10,752,552 in officer compensation expense during the year ended December 31, 2010 for the value of these shares.

During the year ended December 31, 2010, the Company issued a total of 16,773,597 shares of its common stock to its directors as compensation for services provided as directors. The Company recorded $1,560,213 in board compensation expense for the value of these shares in its consolidated statements of operations for the year ended December 31, 2010.

On February 19, 2010, the Company issued 250,000 shares of its common stock in connection with its Series A-1 financing issue costs described in Note 9.

During the year ended December 31, 2010, the Company issued a total of 95,870,362 shares of common stock upon exercise of warrants issued in connection with its Series B preferred stock. During the same period, the Company received promissory notes in the amount of $13,500,000 from Optimus, in consideration for warrants issued to Optimus. The promissory notes have been included as a separate component of stockholders' deficit at December 31. See Note 10.

In connection with the preliminary injunction discussed in Note 6, the Company delivered to the investor 49,220,665 shares of its common stock.

On December 22, 2010, Optimus CGII, Ltd. ("Optimus") purchased a claim previously brought against the Company in a civil action by Alexandria Real Estate-79/96 Charlestown Navy Yard ("ARE"). In that action, ARE alleged that it was unable to relet the premises and therefore seeking rent for the vacated premises since September 2008. ARE also sought certain clean-up and storage expenses. On December 23, 2010, Optimus and the Company settled the claim in the amount of $8,000,167. During December 2010, the Company issued 55,688,368 shares of its common stock to Optimus in full settlement of this claim. Accordingly, the Company recognized loss on settlement in the amount of $8,000,167 in its accompanying consolidated statements of operations for the year ended December 31, 2010. This settlement ended all claims previously brought against the Company by ARE, and Optimus as bona fide claimant.

On December 20, 2010, Optimus purchased a claim previously brought to the Company in connection with indebtedness to Ropes and Gray LLP for legal services performed between May 2007 and January 2010. On December 21, 2010, Optimus and the Company settled the claim in the full amount of indebtedness, including legal fees, for $2,486,256. During December 2010, the Company issued 17,146,254 shares of its common stock to Optimus in full settlement of this claim. The legal services received from Ropes and Gray LLP had been accrued during the years 2007-2010, in the periods in which these expenses were incurred. The amount due to Ropes and Gray for their services was $2,386,278, and the Company recognized the additional $99,978 as legal expenses during the year ended December 31, 2010. This settlement ended all claims previously brought to the Company by Ropes and Gray LLP, and Optimus as bona fide claimant.

In December 2010, the Company settled a claim brought against it by Optimus related to the Company’s inability to previously issue shares of its common stock under the Series B preferred stock warrants. The Company and Optimus settled on the issuance of shares of the Company’s common stock to Optimus worth $654,000, which was recognized in financing costs in the Company’s consolidated statements of operations during the year ended December 31, 2010. The Company is required to issue 3,222,786 to Optimus to settle this claim in full.

During 2010 and 2009, the Company issued 6,206,961 and 16,673,046 shares of its common stock, respectively, in conversion of its Series A-1 preferred stock.

During the year ended December 31, 2010, the Company issued 711,933 shares of its common stock in settlement of accounts payable in the amount of $55,168.

14. STOCK-BASED COMPENSATION

Stock Plans

The following table summarizes the Company's stock incentive plans as of December 31, 2010:

Stock Plan	Options/Shares Issued	Options Outstanding	Options/Shares Available For Grant
2004 Stock Plan	2,492,000	820,000	370,000
2004 Stock Plan II	1,301,161	1,071,161	230,000
2005 Plan	49,495,484	46,484,958	131,021,494
	53,288,645	48,376,119	131,621,494

On September 10, 2009, upon approval by a vote of the Company’s stockholders, the Company increased the number of shares of common stock issuable under the 2005 Plan to a total of 145,837,250 shares, issuable as options or shares of common stock.

Stock Option Activity

A summary of option activity for the years ended December 31, 2010, 2009 and 2008 is presented below:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (000)
Outstanding, December 31, 2007	11,978,861	$0.78	7.16	$255
Granted	11,875,734	0.21		
Exercised	(1,200,000)	0.05		
Forfeited/canceled	(8,169,015)	0.53		
Outstanding, December 31, 2008	14,485,580	$0.51	7.71	$-
Granted	14,501,273	0.10		
Exercised	-	-		
Forfeited/canceled	(500,734)	0.51		
Outstanding, December 31, 2009	28,486,119	$0.32	8.09	$33
Granted	19,890,000	0.11		
Exercised	-	-		
Forfeited/canceled	-	-		
Outstanding, December 31, 2010	48,376,119	$0.23	7.56	$3,825
Vested and expected to vest at December 31, 2010	46,177,161	0.24	7.48	3,619
Exercisable, December 31, 2010	31,461,060	0.29	6.69	1,762

The aggregate intrinsic value in the table above is before applicable income taxes and is calculated based on the difference between the exercise price of the options and the quoted price of the Company's common stock as of the reporting date.

A summary of the status of unvested employee stock options as of December 31, 2010 and changes during the periods ended December 31, 2010, 2009 and 2008, is presented below:

	Shares	Weighted Average Grant Date Fair Value Per Share
Unvested at December 31, 2007	783,814	$0.46
Granted	10,735,621	0.21
Vested	(2,372,518)	0.39
Forfeited	(4,377,758)	0.26
Unvested at December 31, 2008	4,769,159	$0.23
Granted	14,501,273	0.10
Vested	(9,011,977)	0.13
Forfeited	-	-
Unvested at December 31, 2009	10,258,455	$0.13
Granted	19,890,000	0.10
Vested	(13,233,396)	0.11

Forfeited	-	-
Unvested at December 31, 2010	16,915,059	$0.12

As of December 31, 2010, total unrecognized stock-based compensation expense related to nonvested stock options was approximately $1,675,000, which is expected to be recognized over a weighted average period of approximately 9.43 years.

The following table summarizes information about stock options outstanding and exercisable at December 31, 2010.

	Options Outstanding			Options Exercisable	
Exercise Price	Number of Shares	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price
$0.05	820,000	3.62	$0.05	820,000	$0.05
0.09	12,390,000	9.10	0.09	2,710,314	0.09
0.10 - 0.14	22,001,273	5.86	0.07	16,272,106	0.10
0.21	5,811,669	6.86	0.21	4,305,462	0.21
0.25 - 0.76	1,071,161	4.00	0.25	1,071,161	0.25
0.85	5,604,099	4.09	0.85	5,604,100	0.85
1.35 - 2.48	677,917	4.86	2.04	677,917	2.04
	48,376,119			31,461,060	

The assumptions used in calculating the fair value of options granted using the Black-Scholes option- pricing model for options granted during the years ended December 31, 2010, 2009 and 2008 are as follows:

	2010	2009	2008
Risk-free interest rate	2.3 – 2.8%	2.3 – 3.4%	2.5%
Expected life of the options	5 - 7 years	5 - 10 years	4 years
Expected volatility	175 - 180%	185%	148%
Expected dividend yield	0%	0%	0%

15. COMMITMENTS AND CONTINGENCIES

The Company entered into a lease for office and laboratory space in Worcester, Massachusetts commencing December 2004 and expiring March 31, 2010. On January 29, 2010, the Company signed a new lease to move from its Worcester facility to a new 10,607 square-foot facility in Marlboro, Massachusetts. The lease term is from April 1, 2010 through June 30, 2015. Monthly base rent in 2010 was $12,596. The Company's rent at its Los Angeles, California site was on a month-to-month basis after May 2008. On March 1, 2009, the Company vacated its site in Los Angeles, California and moved to another site in Los Angeles. The term on this new lease is through February 28, 2012. Monthly base rent is $2,170. Annual minimum lease payments are as follows:

For the
year ended

December 31, 2010	
2011	$156,816
2012	155,127
2013	157,779
2014	160,431
2015	80,878
Thereafter	-
	$711,031

Rent expense recorded in the financial statements for the years ended December 31, 2010, 2009 and 2008 was approximately $281,000, $134,000 and $2,183,000, respectively.

Employment Agreement with Robert Lanza—On October 1, 2009 (the "Effective Date"), the Company entered into an employment agreement with Robert Lanza, the Company's chief scientific officer since October 2007. Pursuant to the agreement, the parties agreed as follows:

- Robert P. Lanza will continue to serve as the Company's chief scientific officer, for a term of two years commencing on the Effective Date, subject to earlier termination as provided in the agreement. The term under the employment agreement may be extended by mutual written agreement.
- The Company will pay Mr. Lanza a base salary of $375,000 per annum, which may be increased during the term at the sole discretion of the Company's board of directors. The Company may also pay Mr. Lanza annual bonuses in the Company's sole discretion.
- The Company will issue to Mr. Lanza 30,192,203 shares of free trading common stock from the Company's 2005 Employee Incentive Plan (approved by the Board of Directors in January 2010). There remain 12,421,101 shares of stock to be issued to Mr. Lanza under this agreement.
- If Mr. Lanza's employment under the Agreement is terminated by the Company without cause (as defined therein), the Company will pay Mr. Lanza severance of one year's base salary.

Employment Agreement with William M. Caldwell, IV and Passing-- On February 22, 2010, the Company entered into an employment agreement with William M. Caldwell, IV, who was the Company's chief executive officer and chairman from January 2005 until his passing on December 13, 2010. Pursuant to the Employment Agreement, the parties agreed as follows:

- Mr. Caldwell would continue to serve as the Company's chief executive officer, for a term of two and 1/3 years commencing on October 1, 2009, subject to earlier termination as provided therein.
- The Company would pay Mr. Caldwell an initial base salary of $480,000 per annum, which base salary would increase annually by not less than the annual increase in the consumer price index, subject to increase during the term by a greater amount at the sole discretion of the Company's board of directors.
- Within 10 days of execution of the employment agreement, Mr. Caldwell received a retention bonus of $100,000.
- Commencing in the 2010 calendar year, the Company would pay Mr. Caldwell an annual bonus based on the performance of the Company's common stock, as well as additional bonuses in the Company's sole discretion.
    - On February 4, 2010, the Company awarded Mr. Caldwell 85,325,595 shares of common stock.
- If Mr. Caldwell's employment under the Employment Agreement is terminated by the Company without cause, or by Mr. Caldwell for good reason, the Company would pay Mr. Caldwell severance of two years' base salary.

On December 13, 2010, Mr. Caldwell passed away. The Company's Board has appointed Gary Rabin to serve as the Company's interim Chairman and Chief Executive Officer until a permanent replacement is named.

Employment Agreement with Gary Rabin--On December 14, 2010, the Company entered into an employment agreement with Gary Rabin to serve as Interim Chief Executive Officer, Chief Financial Officer and Chairman of the Board. Pursuant to the Employment Agreement, the parties agreed as follows:

- Mr. Rabin will serve in this capacity until the date on which a new Chief Executive Officer commences full-time employment with the Company or, if sooner, the date on which Mr. Rabin's employment is otherwise terminated in accordance with this agreement.
    - The Company will pay Mr. Rabin an annual salary at the rate of $480,000 per year.
- Within 10 days of execution of the employment agreement, Mr. Rabin received a one-time fully earned cash signing bonus of $40,000.
    - The Company will pay Mr. Rabin an annual performance bonus between 30% and 150% of his base salary.
-

The Company issued Mr. Rabin 5,000,000 shares of its restricted common stock and a non-qualified option to purchase another 5,000,000 shares of the Company's common stock, with an exercise price of $0.14 per share.

The shares and options fully vest on the earliest to occur of (1) January 1, 2012, the New CEO start date, or the occurrence of a change in control. The Company valued the compensation in the amount of $700,000, representing the fair value of the 5,000,000 shares of common stock issued at $0.14 per share based on the grant date share price, and $686,896, representing the fair value of the 5,000,000 options granted to Mr. Rabin. These amounts will be recognized in compensation expense ratably over the vesting period.

Legal Proceedings

On October 1, 2007 Gary D. Aronson brought suit against the Company with respect to a dispute over the interpretation of the anti-dilution provisions of our warrants issued to Mr. Aronson on or about September 14, 2005. John S. Gorton initiated a similar suit on October 10, 2007. The two cases have been consolidated. The plaintiffs allege that the Company breached warrants to purchase securities issued by the Company to these individuals by not timely issuing stock after the warrants were exercised, failing to issue additional shares of stock in accordance with the terms of the warrants and failing to provide proper notice of certain events allegedly triggering Plaintiffs' purported rights to additional shares. The Plaintiffs withdrew their case the day before the trial date. The Company sought attorney fees relating to the Company defending the case over the past 2.5 years. The court denied the motion and the Company has appealed.

On December 22, 2010, Optimus CGII, Ltd. (“Optimus”) purchased a claim previously brought against the Company in a civil action by Alexandria Real Estate-79/96 Charlestown Navy Yard (“ARE”). In that action, ARE alleged that it was unable to relet the premises and therefore seeking rent for the vacated premises since September 2008. ARE also sought certain clean-up and storage expenses. On December 23, 2010, Optimus and the Company settled the claim in the amount of $8,000,167. During December 2010, the Company issued 55,688,368 shares of its common stock to Optimus in full settlement of this claim. Accordingly, the Company recognized loss on settlement in the amount of $8,000,167 in its accompanying consolidated statements of operations for the year ended December 31, 2010. This settlement ended all claims previously brought against the Company by ARE, and Optimus as bona fide claimant.

The Company has been named as a third party defendant in this action, filed September 16, 2009, in which the plaintiff alleges that Alexandria Real Estate (“Alexandria”) improperly charged a trustee holding approximately $146,000 of funds in a Company account that Bristol claimed as collateral. Alexandria brought a third party complaint against the Company for indemnification. The case has been dismissed as of December 31, 2010.

On March 9, 2009, plaintiffs filed a complaint and summons in the Supreme Court of the State of New York, County of New York against the Company and its subsidiary Mytogen, Inc. Plaintiffs’ complaint alleges, among other things, that the Company has breached the terms of certain contracts with plaintiffs; namely, convertible debentures and a consulting agreement. Plaintiffs sought preliminary and permanent injunctive relief directing the Company to deliver to plaintiff Bristol Investment Fund, Ltd. (“Bristol”) 2.5 million shares of its common stock, declaring a conversion price of $0.02 for the convertible debentures held by plaintiffs, and directing the Company to honor plaintiff’s future conversion requests. Plaintiffs also sought compensatory damages in an amount to be determined at trial, but alleged in the complaint to exceed $1.5 million. On August 30, 2010, an investor was granted a preliminary injunction against the Company, whereby the Company delivered to the investor 49,220,665 shares of its common stock. Further, on September 30, 2010, under the terms of a final settlement and mutual release with the same investor, the Company exchanged a new convertible debenture to the investor in exchange for the investor’s outstanding convertible debenture. The terms of the new convertible debenture are the same as the amended and restated debentures, except that the amounts under the debenture are due and payable on or before December 31, 2010 and June 30, 2011, and the conversion and redemption prices are subject to a floor price of $0.06 per share. Concurrently with the settlement and release, all common stock purchase warrants previously issued to the investor were cancelled (23,701,263 warrants in total) and the legal actions were dismissed. The Company recorded a loss on settlement in the amount of $3,132,300

during the year ended December 31, 2010 in its accompanying statement of operations.

The Company has entered into employment contracts with certain executives and research personnel. The contracts provide for salaries, bonuses and stock option grants, along with other employee benefits. The employment contracts generally have no set term and can be terminated by either party. There is a provision for payments of three months to one year of annual salary as severance if we terminate a contract without cause, along with the acceleration of certain unvested stock option grants.

16. INCOME TAXES

The items accounting for the difference between income taxes computed at the federal statutory rate and the provision for income taxes were as follows:

	2010	2009	2008
Statutory federal income tax rate	(34) %	(34) %	(34) %
State income taxes, net of federal taxes	(6) %	(6) %	(6) %
Non-includable items	18 %	(25) %	8 %
Increase in valuation allowance	22 %	65 %	32 %
Effective income tax rate	-	-	-

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

	2010	2009
Deferred tax assets:		
Net operating loss carryforwards	$36,704,171	$28,666,867
Depreciation	175,487	84,159
Capitalized R&D expenses	559,375	175,309
Deferred revenue	1,595,743	1,826,336
Losses from joint venture	64,498	133,414
Shares issued in settlement of accounts payable	-	4,102,264
Professional fees paid in stock	1,101,535	575,524
Deferred interest and finance charges	-	-
Stock-based compensation	1,412,064	1,341,125
Reversal of unpaid liabilities	1,184,298	1,582,754
Valuation allowance	(42,797,172)	(38,487,752)
Net deferred tax asset	$-	$-

The Company files income tax returns in the U.S. federal jurisdiction, and various state jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local income tax examinations by tax authorities for years before 2003.

At December 31, 2010, the Company had federal and state net operating loss carry forwards available to offset future taxable income of approximately $93 million and $84 million respectively. These carry forwards will begin to expire in the years ending December 31, 2025 and December 31, 2015, respectively. These net operating losses are subject to various limitations on utilization based on ownership changes in the prior years under Internal Revenue Code Section 382. The Company is in the process of analyzing the impact of the ownership changes but management does not believe they will have a material impact on the Company’s ability to utilize the net operating losses in the future.

The Company periodically evaluates the likelihood of the realization of deferred tax assets, and adjusts the carrying amount of the deferred tax assets by the valuation allowance to the extent the future realization of the deferred tax assets is not judged to be more likely than not. The Company considers many factors when assessing the likelihood of future realization of its deferred tax assets, including its recent cumulative earnings experience by taxing jurisdiction, expectations of future taxable income or loss, the carryforward periods available to the Company for tax reporting purposes, and other relevant factors.

At December 31, 2010, based on the weight of available evidence, including cumulative losses in recent years and expectations of future taxable income, the Company determined that it was more likely than not that its deferred tax assets would not be realized and have a $47.0 million valuation allowance associated with its deferred tax assets.

The Company adopted the provisions of ASC 740. ASC 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition.

As a result of the implementation of ASC 740, the Company reduced its net operating loss carryforward by $1,550,000. This reduction of the net operating loss carryforward translated into a reduction of the gross deferred tax asset of $658,500, with a corresponding reduction of the valuation allowance against that deferred tax asset. Due to the offsetting effect of the reduction of the valuation allowance, the adoption of FIN 48 had no impact on the Company's balance sheets or statements of operations.

The following table summarizes the activity related to its unrecognized tax benefits:

	Total
Balance at January 1, 2010	$658,500
Increase related to prior period tax positions	-
Increase related to current year tax positions	-
Expiration of the statute of limitations for the assessment of taxes	-
Other	-
Balance at December 31, 2010	$658,500

The components of income tax expense are as follows:

	2010	2009	2008
Current federal income tax	$-	$-	$-
Current state income tax	-	-	-
Deferred taxes	4,309,420	3,520,340	15,414,416
Valuation allowance	(4,309,420)	(3,520,340)	(15,414,416)
	$-	$-	$-

Future changes in the unrecognized tax benefit will have no impact on the effective tax rate due to the existence of the valuation allowance. The Company estimates that the unrecognized tax benefit will not change significantly within the next twelve months. The Company will continue to classify income tax penalties and interest as part of general and administrative expense in its consolidated statements of operations. There were no interest or penalties accrued as of December 31, 2010, 2009 or 2008.

The following table summarizes the open tax years for each major jurisdiction:

Jurisdiction	Open Tax Years
Federal	2003 - 2008
States	2003 - 2008

17. RELATED PARTY TRANSACTIONS

Dr. Shapiro, one of the Company's directors, may be deemed the beneficial owner of the securities owned by The Shapiro Family Trust. Refinanced bridge debt consisted of $70,000 in unsecured convertible notes previously issued and sold to The Shapiro Family Trust on March 21, 2008. The net outstanding amount of principal plus interest of the Notes was converted into the debt within the 2008 debenture on a dollar-for-dollar basis.

Gary Rabin, intereim Chief Executive Officer, Chief Financial Officer and Chairman of the Board of Directors, may be deemed the beneficial owner of the securities owned by PDPI, LLC, in which he holds a partnership interest. Refinanced debt consisted of $60,000 in an unsecured note previously issued and sold to PDPI, LLC, and another $61,000 assumed by PDPI, LLC, and consisted of amounts owed by a third party which were rolled over into the 2008 Debenture.

18. GRANT RECEIVED

On November 2, 2010, the Company received a $977,917 grant under the Patient Protection and Affordable Care Act of 2010 (PPACA). The grant was related to four of the Company's projects: the Blastomere Program, the Myoblast Program, the RPE Program for Stargardt's Disease, and the iPS Program. The grants were for $244,479.25 each, for a total grant of $977,917, and are exempt from federal income taxes. The Company recognized $977,917 as a grant reimbursement in its accompanying consolidated statements of operations during the year ended December 31, 2010.

19. SUBSEQUENT EVENTS

On February 9, 2011, the Company entered into a settlement agreement with Transition Holdings Ltd. ("Transition"), in a dispute over the $3,500,000 received in 2008 and 2009 (see Note 3). The Company and Transition disputed the nature of the consideration provided to the Company. The Company agreed to deliver to Transition 7,413,000 shares of its common stock, issuable in consideration of all monies previously delivered to the Company by Transition in the aggregate amount of $3,500,000. Upon issuance of the shares, all other agreements between the Company and Transition, including licenses, are deemed cancelled, null and void, and of no force or effect. During February 2011, the Company removed the remaining $3,205,856 in deferred license fees by issuing 7,413,000 shares of its common stock.

On February 11, 2011, the Company entered into a settlement agreement with Gemini Master Fund, Ltd. ("Gemini"). The two parties disputed the number of shares of common stock to be issued upon exercise of warrants held by Gemini. In settlement, the Company agreed to deliver Gemini 20,000,000 shares of its common stock, issuable upon cashless exercise of all warrants previously issued by the Company to Gemini. Upon issuance of the shares to Gemini,

all other agreements between the Company and Gemini, including any agreements between the Company and any entity controlled by Gemini or their principals, are hereby deemed cancelled, null and void, and of no force or effect. The Company has recognized this warrant exercise during February 2011.

The Company renewed its lease for its Los Angeles office through February 28, 2012. No other terms changed, and monthly rent remains $2,170.

20. SELECTED QUARTERLY DATA (UNAUDITED)

	Quarterly Periods Ended			
	March 31, 2010	June 30, 2010	September 30, 2010	December 31, 2010
Revenue	$205,158	$205,158	$205,158	$109,570
Gross profit	$138,508	$138,508	$138,508	$92,920
Loss from operations	$(14,975,316)	$(1,124,886)	$(5,406,563)	$(10,821,866)
Other income (expense)	$(2,874,317)	$4,055,285	$7,342,278	$(30,567,947)
Net income (loss)	$(17,849,633)	$2,930,399	$1,935,715	$(41,389,813)
Basic and diluted earnings (loss) per share	$(0.03)	$0.00	$0.00	$(0.03)

	Quarterly Periods Ended			
	March 31, 2009	June 30, 2009	September 30, 2009	December 31, 2009
Revenue	$293,976	$242,995	$248,141	$630,867
Gross profit (loss)	$155,224	$165,648	$140,092	$454,116
Loss from operations	$(5,685,570)	$(1,733,166)	$(1,124,287)	$(2,279,631)
Other income (expense)	$(13,314,306)	$(27,703,638)	$(79,987)	$15,162,377
Net income (loss)	$(18,999,876)	$(29,436,804)	$(1,204,274)	$12,882,746
Basic and diluted earnings (loss) per share	$(0.04)	$(0.06)	$(0.00)	$0.02

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures.

Our Chief Executive Officer (Principal Executive Officer and Principal Financial Officer) has evaluated our disclosure controls and procedures as of December 31, 2010 and have concluded that these disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms and is accumulated and communicated to our management, including the Chief Executive Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Management's Report on Internal Control Over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation under the framework in Internal Control – Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2010.

Our internal control over financial reporting as of December 31, 2010, has been audited by SingerLewak LLP, an independent registered public accounting firm, as stated in their report which is included in Item 8 of this report and is incorporated by reference herein.

(c) Changes in Internal Controls Over Financial Reporting.

There were no changes in our internal control over financial reporting that occurred during the fourth quarter of 2010 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Advanced Cell Technologies, Inc. and subsidiary

We have audited Advanced Cell Technology, Inc. and subsidiary's internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Advanced Cell Technology, Inc. and subsidiary's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, Advanced Cell Technology, Inc. and subsidiary maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Advanced Cell Technology, Inc. and subsidiary as of December 31, 2010 and 2009 and the related consolidated statements of operations, stockholders' deficit and cash flows for each of the three years in the period ended December 31, 2010, and our report dated March 16, 2011 expressed an unqualified opinion.

SingerLewak LLP

Los Angeles, California
March 16, 2011

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Our executive officers, key employees and directors are described below. There are no family relationships among our executive officers or directors.

Name	Age	Position
Gary Rabin	45	Interim Chief Executive Officer and Chairman of the Board of Directors
Robert P. Lanza M.D.	54	Chief Scientific Officer
Alan C. Shapiro, Ph.D.	65	Member of the Board of Directors
Erkki Ruoslahti, M.D., Ph.D.	70	Member of the Board of Directors

Gary Rabin has served as a director since December 2007. Mr. Robin was appointed Interim Chief Executive Officer and Chairman of the Board on December 14, 2010. Mr. Rabin has a twenty year career in finance that primarily encompasses investment management and capital raising targeting small-cap and emerging growth companies. Currently, he is the Managing Partner of GR Advisors LLC, a long/short hedge fund focused on the media and communications industry. Until July 2007, he was a Portfolio Manager at MAC Investment Management, LLC ("MAC"), which he joined in November 2005. MAC is a long/short fundamental equity hedge fund concentrating on growth-oriented stocks including technology, communications and healthcare. Previously, he was a Managing Director and Portfolio Manager at Marketus Associates, a long/short hedge fund where he focused on communications, healthcare services, energy and special situations. Prior to that, he was Managing Director and Co-Head of the Media and Telecom Investment Banking Group at CIBC World Markets ("CIBC"), where he was responsible for all corporate finance and M&A, financial restructurings, and principal investing activities (both debt and equity) within the sector. Before joining CIBC, Mr. Rabin served in an operating capacity at a broadband services company when he was Chief Strategy Officer of CAIS Internet, Inc. ("CAIS"). At CAIS, he was responsible for raising over $500 million of financing commitments in both the public equity markets and from his relationships at Kohlberg, Kravis Roberts & Co., Qwest Communications, Cisco, Nortel, 3Com and Microsoft. Mr. Rabin has also started and served as Managing Director and Head of the Global Telecom Investment Banking Group at ING Barings Furman Selz, and was a founder of the telecom group at UBS Securities. He began his career in finance in 1987, and concentrated on energy, utilities, and metals until 1993. Throughout his career, Mr. Rabin has been responsible for building and developing businesses. Mr. Rabin earned an AB in Economics from the University of Michigan. Mr. Rabin’s long career as a senior manager in both the investment banking community and as a senior financial executive qualifies him to be a member of the Board of Directors of Advance Cell Technology, Inc.

Robert P. Lanza, M.D. has been our Chief Scientific Officer since October 2007. Dr. Lanza has over 20 years of research and industrial experience in the areas of tissue engineering and transplantation medicine. Before joining us in 1998, from 1990 to 1998, Dr. Lanza was Director of Transplantation Biology at BioHybrid Technologies, Inc., where he oversaw that company's xenotransplantation and bioartificial pancreas programs. He has edited or authored sixteen books, including Principles of Tissue Engineering (2d ed. co-edited with R. Langer and J. Vacante), Yearbook of Cell and Tissue Transplantation, One World The Health & Survival of the Human Species in the Twenty-First Century, and Xeno: The Promise of Transplanting Animal Organs into Humans (co-authored with D.K.C. Cooper). Dr. Lanza received his B.A. and M.D. Degrees from the University of Pennsylvania, where he was both a University Scholar and Benjamin Franklin Scholar. Dr. Lanza is not an officer or director of any other reporting company.

Alan C. Shapiro, Ph.D. has served as director since 2005. He adds more than 30 years' experience in corporate and international financial management to the Company. Dr. Shapiro is currently the Ivadelle and Theodore Johnson Professor of Banking and Finance at the Marshall School of Business, University of Southern California, where he previously served as the Chairman of the Department of Finance and Business Economics, Marshall School of Business. Prior to joining the University of Southern California, Dr. Shapiro taught as an Assistant Professor at the University of Pennsylvania, Wharton School of Business, and has been a visiting professor at Yale University, UCLA, the Stockholm School of Economics, University of British Columbia, and the U.S. Naval Academy. Dr. Shapiro has published over 50 articles in such academic and professional journals as the Journal of Finance, Harvard Business Review, and the Journal of Business, among many others. He frequently serves as an expert witness in cases involving valuation, economic damages, international finance, takeovers, and transfer financing through Trident Consulting Group LLC. He received his B.A. in Mathematics from Rice University, and a Ph.D. in Economics from Carnegie Mellon University. Dr. Shapiro is a trustee of Pacific Corporate Group's Private Equity Fund. Dr. Shapiro’s board experience on multiple public company boards, his recognized expertise as a highly sought after financial advisor and his career as a professor and Chair in the field of Finance and Administration qualifies him as a valued member of Advanced Cell Technology’s Board of Directors.

Erkki Ruoslahti, M.D., Ph.D. has served as a director since November 2005. Dr. Ruoslahti joined The Burnham Institute in 1979 and served as its President from 1989 to 2002. Dr. Ruoslahti is the recipient of the 2005 Japan Prize for his work in cell biology. Dr. Ruoslahti's other honors include the Gairdner Prize, and membership in the U.S. National Academy of Sciences, Institute of Medicine, and American Academy of Arts and Sciences. He is a Knight of the Order of the White Rose of Finland. Dr. Ruoslahti earned his M.D. and Ph.D. from the University of Helsinki in Finland. After postdoctoral training at the California Institute of Technology, he held various academic appointments in Finland and at City of Hope National Medical Center in Duarte, California. Dr. Ruoslahti's research has been the basis of several drugs currently on the market or in clinical trials. He has been a founder and director of several biotechnology companies. Dr. Ruoslahti is not an officer or director of any other reporting company. Based upon his scientific background and years as a senior operations manager in the scientific research and development community, Dr. Ruoslahti is uniquely qualified to be a member of Advanced Cell Technology’s Board of Directors.

CORPORATE GOVERNANCE

General

We believe that good corporate governance is important to ensure that the Company is managed for the long-term benefit of our stockholders. This section describes key corporate governance practices that we have adopted.

Board of Directors Meetings and Attendance

The Board of Directors has responsibility for establishing broad corporate policies and reviewing our overall performance rather than day-to-day operations. The primary responsibility of our Board of Directors is to oversee the management of our company and, in doing so, serve the best interests of the company and our stockholders. The Board of Directors selects, evaluates and provides for the succession of executive officers and, subject to stockholder election, directors. It reviews and approves corporate objectives and strategies, and evaluates significant policies and proposed major commitments of corporate resources. Our Board of Directors also participates in decisions that have a potential major economic impact on our company. Management keeps the directors informed of company activity through regular communication, including written reports and presentations at Board of Directors and committee meetings.

We have no formal policy regarding director attendance at the annual meeting of stockholders. The Board of Directors held one meeting in 2010. All board members were present at the meeting.

Board Committees

Our Board of Directors has established an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. The members of each committee are appointed by our Board of Directors, upon recommendation of the Nominating Committee, and serve one-year terms. Each of these committees operates under a charter that has been approved by the Board of Directors. The charter for each committee is available on our website. The Audit Committee met three times during 2010. The Compensation Committee met once during 2010. The Nominating Committee met once during 2010.

Audit Committee

The Audit Committee's responsibilities include:

- Monitoring the integrity of the Company's financial reporting process and systems of internal controls regarding finance, accounting and legal compliance.
- Monitoring the independence and performance of the Company's internal and independent auditors.
- Monitoring compliance by the Company with legal and regulatory requirements.
- Facilitating open communication among the Company's independent auditors, internal auditors, employees, management, and the Board.

Dr. Shapiro, Dr. Ruoslahti and Mr. Rabin serve on our Audit Committee. Dr. Shapiro serves as chair of the Audit Committee. The Board of Directors has determined that Dr. Shapiro is an "audit committee financial expert" as defined in Item 401(e) of Regulation S-B. The Board has determined that Dr. Shapiro meets the additional independence requirements of Rule 10A-3 under the Securities Exchange Act of 1934.

Compensation Committee

The Compensation Committee's responsibilities include:

- Reviewing and recommending approval of the compensation of our executive officers,

- Overseeing the evaluation of our senior executives,
- Reviewing and making recommendations to the Board of Directors regarding incentive compensation and equity-based plans,
- Administering our stock incentive plans, and
- Reviewing and making recommendations to the Board of Directors regarding director compensation.

The members of the Compensation Committee are Dr. Shapiro, Dr. Ruoslahti and Mr. Rabin.

Nominating Committee

The Nominating Committee's responsibilities include:

- Identifying individuals qualified to become board members;
- Recommending to the Board the persons to be nominated for election as directors and to each of the board's committees;
- Reviewing and making recommendations to the Board with respect to senior management succession planning; and
- Overseeing an annual evaluation of the Board.

The members of the Nominating Committee are Dr. Shapiro, Dr. Ruoslahti and Mr. Rabin.

Changes in Nominating Procedures

None.

Director Candidates

The process followed by the Nominating Committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the Nominating Committee and the Board.

In considering whether to recommend any particular candidate for inclusion in the Board's slate of recommended director nominees, the Nominating Committee applies certain criteria, including

- The candidate's honesty, integrity and commitment to high ethical standards,
- Demonstrated financial and business expertise and experience,
- Understanding of our company, its business and its industry,
- Actual or potential conflicts of interest, and
- The ability to act in the interests of all stockholders.

The Nominating Committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a significant breadth of experience, knowledge and abilities that will allow our Board to fulfill its responsibilities.

The Nominating Committee will consider director candidates recommended by stockholders or groups of stockholders who have owned more than 5% of our common stock for at least a year as of the date the recommendation is made. Stockholders may recommend individuals to the Nominating Committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least a year as of the date such recommendation is made, to the Nominating Committee, c/o Corporate Secretary, Advanced Cell Technology, Inc., 381 Plantation Street, Worcester,

Massachusetts. Assuming that appropriate biographical and background material have been provided on a timely basis, the Committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others.

Communicating with the Directors

The Board will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. The chair of the Audit Committee is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors as he considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chair of the Audit Committee considers to be important for the directors to know. In general, communications relating to corporate governance and corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to the Board should address such communications to the Board of Directors, c/o Corporate Secretary, Advanced Cell Technology, Inc., 33 Locke Drive, Marlborough, Massachusetts, 01752. You should indicate on your correspondence that you are an Advanced Cell Technology, Inc. stockholder.

Anyone may express concerns regarding questionable accounting or auditing matters or complaints regarding accounting, internal accounting controls or auditing matters to the Audit Committee by calling (508) 756-1212. Messages to the Audit Committee will be received by the chair of the Audit Committee and our Corporate Secretary. You may report your concern anonymously or confidentially.

Board Leadership Structure and Role in Risk Oversight

Although we have not adopted a formal policy on whether the Chairman and Chief Executive Officer positions should be separate or combined, we have traditionally determined that it is in the best interests of the Company and its shareholders to combine these roles. Mr. Caldwell served as our Chairman from January 2005 until December 13, 2010. From December 14, 2010 and currently, Gary Rabin serves as our Interim Chairman and Chief Executive Officer. Due to the small size and early stage of the Company, we believe it is currently most effective to have the Chairman and Chief Executive Officer positions combined.

Our Audit Committee is primarily responsible for overseeing our risk management processes on behalf of our board of directors. The Audit Committee receives and reviews periodic reports from management, auditors, legal counsel, and others, as considered appropriate regarding our company's assessment of risks. In addition, the Audit Committee reports regularly to the full Board of Directors, which also considers our risk profile. The Audit Committee and the full Board of Directors focus on the most significant risks facing our company and our company's general risk management strategy, and also ensure that risks undertaken by our Company are consistent with the Board's appetite for risk. While the Board oversees our company's risk management, management is responsible for day-to-day risk management processes. We believe this division of responsibilities is the most effective approach for addressing the risks facing our company and that our Board leadership structure supports this approach.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires the Company's directors, executive officers and persons who own more than 10% of the Company's stock (collectively, "Reporting Persons") to file with the SEC initial reports of ownership and changes in ownership of the Company's common stock. Reporting Persons are required by SEC regulations to furnish the Company with copies of all Section 16(a) reports they file. To the Company's knowledge, based solely on its review of the copies of such reports received or written representations from certain Reporting Persons that no other reports were required, the Company believes that during its fiscal year ended December 31, 2010, all Reporting Persons timely complied with all applicable filing requirements, except that Form 4s were not timely filed for the Company's officers and directors and have since been filed.

Code of Ethics

We have adopted a code of business conduct and ethics that applies to our directors, officers (including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) as well as our employees. A copy of our code of business conduct and ethics is available on our website at www.advancedcell.com under "Investors—Corporate Governance." We intend to post on our website all disclosures that are required by applicable law, the rules of the Securities and Exchange Commission or OTCBB listing standards concerning any amendment to, or waiver from, our code of business conduct and ethics.

ITEM 11. EXECUTIVE COMPENSATION

COMPENSATION DISCUSSION AND ANALYSIS

This section describes the compensation program for our executive officers. In particular, this section focuses on our 2010 compensation program and related decisions.

The Board of Directors has established a Compensation Committee, the majority of which are independent outside directors which approves all compensation and awards to executive management. The members of the Compensation Committee have extensive executive level experience in other companies and bring a perspective of reasonableness to compensation matters with our Company. In addition, the Compensation Committee compares executive compensation practices of similar companies at similar stages of development.

The objectives of our compensation program are as follows:

Reward performance that drives substantial increases in shareholder value, as evidenced through both future operating profits and increased market price of our common shares; and
Attract, hire and retain well-qualified executives.

The compensation level of our executives generally reflects their unique position and incentive to positively affect our future operating performance and shareholder value. Part of the compensation of our executives is from equity compensation, primarily through stock option grants or restricted stock awards.

Specific salary and bonus levels, as well as the amount and timing of equity incentive grants, are determined informally and judgmentally, on an individual-case basis, taking into consideration each executive's unique talents and experience as they relate to our needs. With respect to equity compensation, the Compensation Committee approves all option grants, generally based on the recommendation of the president and chief executive officer. Executive compensation is paid or granted pursuant to each executive's compensation agreement. Compensation adjustments are made occasionally based on changes in an executive's level of responsibility or on changed local and specific executive employment market conditions. Based on these factors the Compensation Committee approved the execution of employment agreement with the Company’s only two executive officers.

With respect to the cash bonus awarded to Mr. Caldwell in 2010, $100,000 was awarded. The Board approved the award of $100,000 as a bonus because this was the amount that the Board thought was fair in light of Mr. Caldwell’s recent contributions to the Company and one that he would also find acceptable. With respect to the cash bonus awarded to Mr. Rabin, $40,000 was awarded as a signing bonus in connection with the execution of the Employment Agreement between the Company and Mr. Rabin, dated December 14, 2010. The Board approved the award because the board thought that this bonus award coupled with the other compensation provided for in Mr. Rabin’s employment agreement would create a compensation package that Mr. Rabin would find acceptable.

With respect to the 5,000,000 stock options and 5,000,000 shares of the Company’s common stock awarded to Mr. Rabin, the exercise price was the price of the Company’s common stock on the day that Board approved the grant of the options. With respect to the amount of the stock and options the Board approved the grant because it believed that this was fair in light of the contributions of Mr. Rabin, and the Board believed the shares would provide sufficient incentive for Mr. Rabin to perform services as Interim Chairman and Chief Executive Officer.

With respect to the cash bonus awarded to Dr. Lanza in 2010, $146,875 was awarded. The Board approved the award of $100,000 as a bonus because this was the amount that the Board thought was fair in light of Mr. Lanza’s recent

contributions to the Company and one that he would also find acceptable. The balance of the bonus awarded to Dr. Lanza was awarded to him as part of the bonuses awarded to all employees that participated in the filing of the IND application multiplied by 1.5, which equaled $46,875.

Risk Management Considerations

In response to the ongoing global economic recession, in 2010 the compensation committee considered the incentives under our executive compensation program and whether they introduced or encouraged excessive risk taking or other behaviors by our executives that could have a negative impact on our business. The compensation committee determined that our executive compensation program provides an appropriate balance of incentives and that it does not encourage our executives to take excessive risks or otherwise create risks that are reasonably likely to have a material adverse effect on us.

Summary Compensation Table

The following table summarizes the annual compensation paid to our named executive officers for the three years ended December 31, 2010, 2009 and 2008:

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	Option Awards ($)	All Other Comp ($)		Total ($)
William M. Caldwell, IV Chief Executive Officer, Principle Financial Officer, and Chairman of the Board of Directors	2010	586,667	240,000	8,035,254	-	-		8,861,921
	2009	417,500	140,000	-	210,866	1,879	(1)	770,245
	2008	350,000	-	-	-	995	(1)	350,995
Gary Rabin Interim Chief Executive Officer	2010	18,461	40,000	-	686,896	115,692	(3)	861,049
Robert P. Lanza, M.D., Chief Scientific Officer	2010	375,000	50,000	2,717,298	-	-		3,142,298
	2009	311,250	81,250	-	441,665	1,524	(1)	835,689
	2008	290,000	35,000	-	168,237	636	(1)	493,873
Jonathan F. Atzen Sr. Vice President, General Counsel and Secretary (2)	2008	78,077	-	93,669	1,598	3,001	(2)	176,345

Please see the assumptions relating to the valuation of our stock option awards which are contained in Notes to audited Financial Statements included in this 10K.

(1) This amount represents a life insurance premium paid by the Company for the named executive officer.

(2) Effective as of March 7, 2008, Mr. Atzen resigned from his positions at the Company and terminated his employment arrangement with the Company. This amount in 2008 represents $2,670 in payments made to Mr. Atzen as part of his $1,000 monthly car allowance through his termination date and $331 in life insurance premiums paid by the Company for Mr. Atzen. This amount in 2007 represents $12,000 in payments made to Mr. Atzen as part of his $1,000 monthly car allowance and $360 in life insurance premiums paid by the Company for Mr. Atzen.

(3) This amount represents the amount earned by Mr. Rabin in his capacity as a director for the Company until December 14, 2010.

Employment Agreements

Employment Agreement with William M. Caldwell, IV On February 22, 2010, the Company entered into an employment agreement with William M. Caldwell, IV, who was the Company's chief executive officer and chairman from January 2005 to December 13, 2010. Pursuant to the Employment Agreement, the parties agreed as follows:

- Mr. Caldwell would serve as the Company's chief executive officer, for a term of two and 1/3 years commencing on October 1, 2009, subject to earlier termination as provided therein. The term under the Employment Agreement would renew automatically for additional one year terms unless either party would provide written notice of intent not to renew the employment agreement at least 90 days prior to such automatic renewal.

- The Company agreed to pay Mr. Caldwell an initial base salary of $480,000 per annum, which base salary would increase annually by not less than the annual increase in the consumer price index, and could be increased during the term by a greater amount at the sole discretion of the Company's board of directors.

- Within 10 days of execution of the employment agreement, Mr. Caldwell received a retention bonus of $100,000.

- Commencing in the 2010 calendar year, the Company agreed to pay Mr. Caldwell an annual bonus based on the performance of the Company's common stock. The Company could also pay Mr. Caldwell additional bonuses in the Company's sole discretion.

- The Company issued to Mr. Caldwell restricted common stock in the amount of 89,280,595.

- If Mr. Caldwell's employment under the Employment Agreement were to be terminated by the Company without cause, or by Mr. Caldwell for good reason, the Company would pay Mr. Caldwell severance of two years' base salary.

Employment Agreement with Gary Rabin

Effective December 14, 2010, the Company entered into an employment agreement with Gary Rabin, Chief Executive Officer, Chief Financial Officer, and Chairman of the Board. Pursuant to the Employment Agreement, the parties agreed as follows:

- Mr. Rabin's employment is on at "at will" basis. The Company shall pay Executive an annua1 salary at the rate of four hundred eighty thousand ($480,000) per year.
- Within ten (10) days following the execution of the Agreement, but not prior to January 3, 2011, Mr. Rabin received signing bonus of $40,000.
- The Company shall pay Mr. Rabin a performance bonus. The target amount of the performance bonus shall be $480,000 (i.e., 100% of Base Salary) per year. However, the performance bonus shall be no less than $144,000 (i.e., 30% of Base Salary) per year and no more than $720,000 (i.e., 150% of Base Salary) per year. The actual amount of the performance bonus shall be determined by the Compensation Committee of the Board during each

calendar year quarter based on the performance of the Company and Mr. Rabin, with reference to the performance goals and/or metrics established by the Compensation Committee in consultation with Mr. Rabin with respect to such performance bonus period.

- On January 3, 2011, the Company granted Mr. Rabin Five Million (5,000,000) shares of restricted common stock of the Company.
- On December 29, 2010, the Company issued Mr. Rabin a non-qualified option to purchase Five Million (5,000,000) shares of common stock of the Company with an exercise price of $0.14.
- If Mr. Rabin's employment under the Employment Agreement were to be terminated by the Company without cause, the Company will pay Mr. Rabin severance of one year's base salary and any unpaid performance bonus pro-rated to the termination date.

Employment Agreement with Robert P. Lanza, M.D. On October 1, 2009, the Company entered into an employment agreement (the "Agreement") with Robert P. Lanza, the Company's chief scientific officer since October 2007. Pursuant to the Agreement, the parties agreed as follows:

- Robert P. Lanza will continue to serve as the Company's chief scientific officer, for a term of two years commencing on October 1, 2009, subject to earlier termination as provided therein. The term under the Agreement may be extended by mutual written agreement.

- The Company will pay Mr. Lanza a base salary of $375,000 per annum, which may be increased during the term at the sole discretion of the Company's board of directors. The Company may also pay Mr. Lanza annual bonuses in the Company's sole discretion.

- The Company will issue to Mr. Lanza 30,270,203 shares of free trading common stock from the Company's 2005 Employee Incentive Plan.

- If Mr. Lanza's employment under the Agreement is terminated by the Company without cause, the Company will pay Mr. Lanza severance of one year's base salary.

Stock Option Grants Under Our Stock Option Plans

During 2010, there were no stock option awards granted to our executive officers under our stock option plans.

Outstanding Equity Awards at Fiscal Year-End

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date ($)
William M. Caldwell, IV	651,161 (1)	-	0.25	12/31/2014
Chief Executive Officer and	1,903,112 (1)	-	0.85	1/31/2015
Chairman of the Board of Directors	2,554,273 (2)	-	0.098	11/13/2019
Gary Rabin	-	5,000,000 (7)	0.140	12/29/2020
Interim Chief Executive Officer				
and Chairman				
Robert P. Lanza, M.D.,	750,000 (3)	-	0.05	8/12/2014
Chief Scientific Officer	500,000 (4)	-	0.85	1/31/2015
	250,000 (3)	-	2.20	9/15/2015
	2,916,667 (5)	1,083,333	0.21	2/17/2018
	5,350,000 (6)	-	0.098	11/13/2019

(1) These options held by Mr. Caldwell vested in full as of December 31, 2008.

(2) These options held by Mr. Caldwell vest as follows: 50% of the shares vest immediately with the remaining vesting at 1/12 per month.

(3) These options held by Dr. Lanza vested in full as of December 31, 2006.

(4) These options held by Dr. Lanza vested in full as of January 31, 2009.

(5) These options held by Dr. Lanza vest in equal monthly installments over 48 months.

(6) These options held by Dr. Lanza vest as follows: 50% of the shares vest immediately with the remaining vesting at 1/12 per month.

(7) These options held by Mr. Rabin vest at the earlier (i) January 1, 2012, or (ii) the new CEO start date.

Option Exercises and Stock Vested

There were no exercises of stock options for the named executive officers in the year ended December 31, 2010. During 2010, Mr. Caldwell was issued 85,325,595 shares of restricted stock with a one year restriction. During 2010, Mr. Lanza was issued 20,000,000 shares of stock which vested immediately.

Pension Benefits

We do not have any plan which provides for payments or other benefits at, following, or in connection with retirement.

Non-qualified Deferred Compensation

We do not have any defined contribution or other plan which provides for the deferral of compensation on a basis that is not tax-qualified.

DIRECTOR COMPENSATION

Name and Principal Position	Year	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)	All Other Comp ($)	Total ($)
Alan C. Shapiro, Ph.D.	2010	33,375	-	-	-	33,375
Erkki Ruoslahti, M.D., Ph.D.	2010	56,583	-	-	-	56,583

Director Compensation Arrangements

Non-executive members of the Company's Board of Directors receive (1) an initial grant of 100,000 shares of common stock, (2) an annual grant of 100,000 shares of common stock (this number has been increased to 200,000 for 2008), (3) an annual retainer of $40,000 (payable quarterly) and (4) a cash payment for attendance at each board meeting in the amount of $1,500 for in-person meetings and $1,000 for telephonic meetings. Regarding members of the Company's Audit Committee, the Chair receives a payment of $1,500 per meeting and the regular members receive $1,000 per meeting. With respect to the Company's Compensation Committee and the Company's Nominating and Corporate Governance Committee, the Chair receives a payment of $1,125 per meeting and the regular members receive $750 per meeting. Each director is entitled to receive payment of the directors' fees in the form of shares of the Company's Common Stock valued at 150% of the actual directors' fees due and payable. The fee structure for the directors was established and approved by the Compensation Committee and ratified by the full Board of Directors.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Beneficial Ownership of Directors, Officers and 5% Stockholders

The following table sets forth certain information regarding the beneficial ownership of our Common Stock as of March 11, 2011. On such date, 1,506,715,382 shares of Common Stock were outstanding. Beneficial ownership is determined in accordance with the applicable rules of the Securities and Exchange Commission and includes voting or investment power with respect to shares of our Common Stock. The information set forth below is not necessarily indicative of beneficial ownership for any other purpose, and the inclusion of any shares deemed beneficially owned in this table does not constitute an admission of beneficial ownership of those shares. Unless otherwise indicated, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of Common Stock, except, where applicable, to the extent authority is shared by spouses under applicable state community property laws.

The following table sets forth information regarding beneficial ownership of our capital stock as of March 11, 2011 by:

- Each person, or group of affiliated persons, known to us to be the beneficial owner of more than 5% of the outstanding shares of our Common Stock,
- Each of our directors and named executive officers, and
- All of our directors and executive officers as a group.

Name and Address (1) of Beneficial Owner	Number of Shares Beneficially Owned		Percentage	
5% or Greater Stockholders				
None				
Directors and Named Executive Officers				
William M. Caldwell, IV**	95,415,414	(1)	6.31	%
Robert P. Lanza, M.D.	34,569,982	(2)	2.75	%
Alan C. Shapiro	19,129,775	(3)	1.32	%
Erkki Ruoslahti	2,744,119		*	
Gary Rabin	7,037,430	(4)	*	
Directors and Executive Officers as a Group (5 Persons)	158,896,720		10.38	%

* Less than 1%
** Mr. Caldwell passed away on December 13, 2010

(1) Includes 5,108,546 shares subject to stock options that are currently exercisable or exercisable within 60 days of February 7, 2011 that are held directly by Mr. Caldwell. Also includes 1,026,000 shares issuable upon exercise of certain warrants held by Andwell, LLC, which are 100% owned by Mr Caldwell.

(2) Includes 9,616,667 shares subject to stock options that are currently exercisable or exercisable within 60 days of February 7, 2011.

(3) Includes (i) 16,011,435 shares subject to convertible debentures, board fees, common stock grant held by The Shapiro Family Trust and of which Dr. Shapiro may be deemed the beneficial owner, (ii) 3,018,340 shares subject to warrants in connection with the 2005-2008 convertible debentures, and (iii) 100,000 shares subject to stock options that are currently exercisable or exercisable within 60 days of February 7, 2011

(4) Includes indirect ownership of 1,239,501 shares issued to PDPI, LLC on December 22, 2010, upon exercise of certain warrants, which such number of shares represents Mr. Rabin's proportional interest in the total number of shares held by PDPI, LLC, based on his 33.33% equity interest in the entity. Mr. Rabin disclaims beneficial ownership in the shares held by PDPI, LLC.

Item 13.Certain Relationships and Related Transactions, and Director Independence.

None of the following parties has, during the year ended December 31, 2010, had any material interest, direct or indirect, in any transaction with us or in any presently proposed transaction that has or will materially affect us, other than as noted in this section:

- Any of our directors or officers,
- Any person proposed as a nominee for election as a director,
- Any person who beneficially owns, directly or indirectly, shares carrying more than 5% of the voting rights attached to our outstanding shares of common stock,
- Any of our promoters, and
- Any relative or spouse of any of the foregoing persons who has the same house as such person.

All references to share numbers in this section are on a pre-reverse split basis.

Board Determination of Independence

The Company complies with the standards of "independence" prescribed by rules set forth by the National Association of Securities Dealers ("NASD"). Accordingly, a director will only qualify as an "independent director" if, in the opinion of our Board of Directors, that person does not have a material relationship with our company which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. A director who is, or at any time during the past three years, was employed by the Company or by any parent or subsidiary of the Company, shall not be considered independent. Accordingly, Dr. Alan Shapiro and Dr. Erkki Ruoslahti meet the definition of "independent director" under Rule 4200(A)(15) of the NASD Manual; Mr. Rabin does not.

Item 14. Principal Accounting Fees and Services

The following table summarizes the fees of our current independent registered public accounting firm, SingerLewak LLP, billed to us for each of the last two fiscal years for audit services and billed to us in each of the last two years for other services:

Fee Category	2010	2009	2008
Audit Fees	$ 215,000	$ 213,859	$ 212,838
Audit Related Fees	$ 33,102	$ 12,000	$ 46,222
Tax Fees	$ -	$ -	$ -
All Other Fees	$ -	$ -	$ -

Audit fees consist of aggregate fees billed for professional services rendered for the audit of the Company's annual financial statements and review of the interim financial statements included in quarterly reports or services that are normally provided by the independent auditor in connection with statutory and regulatory filings or engagements for the fiscal years ended December 31, 2010, 2009 and 2008.

Audit related fees consist of aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements and are not reported under "Audit Fees." These fees include review of registration statements and participation at meetings of the audit committee.

Tax fees consist of aggregate fees billed for professional services for tax compliance, tax advice and tax planning.

All other fees consist of aggregate fees billed for products and services provided by the independent auditor, other than those disclosed above. These fees include services related to certain accounting research and assistance with a regulatory matter.

The Company's policy is to pre-approve all audit and permissible non-audit services provided by the independent auditors. These services may include audit services, audit-related services, tax services and other services. Pre-approval is generally provided for up to one year and any pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. The independent auditors and management are required to periodically report to the audit committee regarding the extent of services provided by the independent auditors in accordance with this pre-approval, and the fees for the services performed to date. To the extent that additional services are necessary beyond those specifically budgeted for, the audit committee and management pre-approve such services on a case-by-case basis. All services provided by the independent auditors were approved by the Audit Committee.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

The following is a list of the Financial Statements included in Item 8 of Part II of this Report.

(a)(2) Financial Statement Schedules

Schedules not included herein are omitted because they are inapplicable or not required or because the required information is given in the financial statements and notes thereto.

(b)

The exhibits required by this item and included in this report or incorporated herein by reference are as follows:

Exhibit Number	Description
2.1	Agreement and Plan of Merger between the Compny, A.C.T. Acquisition Corp. and ACT, dated as of January 3, 2005 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 4, 2005 (File No. 000-50295) and incorporated by reference herein).
2.2	Agreement and Plan of Merger between Advanced Cell Technology, Inc., a Nevada corporation, and Advanced Cell Technology, Inc., a Delaware corporation, dated as of November 18, 2005 (previously filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 (File No. 000-50295) and incorporated by reference herein).
2.2	Agreement and Plan of Merger between Advanced Cell Technology, Inc., a Delaware corporation, and ACT, dated as of November 18, 2005 (previously filed as Exhibit 2.2 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 (File No. 000-50295) and incorporated by reference herein).
3.1	Certificate of Incorporation of the Company (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 (File No. 000-50295) and incorporated by reference herein).
3.1.1	Certificate of Amendment to Articles of Incorporation dated April 1, 2004 (previously filed as Exhibit 3.1.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
3.1.2	Certificate of Amendment to Articles of Incorporation dated December 30, 2004 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 4, 2005 (File No. 000-50295) and incorporated by reference herein).
3.1.3	Certificate of Amendment to Articles of Incorporation dated June 23, 2005 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on June 22, 2005 (File No. 000-50295) and incorporated by reference herein).
3.1.4	Certificate of Amendment to Articles of Incorporation dated July 6, 2005 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on July 7, 2005 (File No. 000-50295) and incorporated by reference herein).
3.15	Certificate of Amendment to Certificate of Incorporation dated September 15, 2009 (previously filed)

3.16	Certificate of Designation of Series B Preferred Stock 2005 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 12, 2009 (File No. 000-50295) and incorporated by reference herein).
3.17	Certificate of Designation of Series C Preferred Stock (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).
3.2	Bylaws of the Company (previously filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 (File No. 000-50295) and incorporated by reference herein).
3.2.1	Amendment to Bylaws of the Company (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 29, 2004 (File No. 000-50295) and incorporated by reference herein).
4.1	Specimen Stock Certificate (previously filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on November 21, 2005 (File No. 000-50295) and incorporated by reference herein).
4.2	Form of $0.05 Warrant to Purchase Common Stock of ACT. ACT issued warrants in this form for the purchase of an aggregate of 900,000 shares, including a warrant to purchase 250,000 shares of ACT common stock to Andwell, LLC, an entity affiliated with William Caldwell, IV, the Chief Executive Officer and a director of the Company (previously filed as Exhibit 4.2 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.3	Form of $0.25 Warrant to Purchase Common Stock of ACT. ACT issued warrants in this form for the purchase of an aggregate of 1,954,000 shares, including (i) a warrant to purchase 236,000 shares of ACT common stock to Andwell, LLC, an entity affiliated with William Caldwell, IV, the Chief Executive Officer and a director of the Company, (ii) a warrant to purchase 75,000 shares of ACT common stock to Rocket Ventures, an entity affiliated with Jonathan Atzen, a Senior Vice President and the General Counsel of the Company (previously filed as Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.4	$0.25 Warrant to Purchase Common Stock of the Company issued to Gunnar Engstrom (previously filed as Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.5	Form of $0.85 Warrant to Purchase Common Stock of ACT (previously filed as Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.6	

	Form of $1.27 Warrant to Purchase Common Stock of ACT (previously filed as Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.7	Form of $2.00 Warrant to Purchase Common Stock of ACT (previously filed as Exhibit 4.7 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.8	Form of Subscription Agreement to Purchase Series A Convertible Preferred Units of ACT (previously filed as Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.9	Form of Share Purchase Agreement to purchase common stock of Two Moons Kachinas Corp. ("TMOO"), the predecessor to the Company (previously filed as Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.10	Form of Lock-Up Agreement entered into by certain sellers of TMOO common stock (previously filed as Exhibit 4.10 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.11	Form of Lock-Up Agreement entered into by certain buyers of TMOO common stock (previously filed as Exhibit 4.11 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
4.12	Investor's Rights Agreement between ACT and Avian Farms, Inc. dated December 31, 1998 (previously filed as Exhibit 4.12 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
9.1	Form of Voting Agreement for shares of common stock of ACT held by certain parties effective as of January 31, 2005 (previously filed as Exhibit 9.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000- 50295) and incorporated by reference herein).

10.1	Exclusive Development and License Agreement between GTC Biotherapeutics (f/k/a as Genzyme Transgenics Corporation) and ACT dated June 8, 1999 (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000- 50295) and incorporated by reference herein).
10.2	Exclusive License Agreement dated April 16, 1996 between the University of Massachusetts and ACT as amended on September 1, 1997, May 31, 2000 and September 19, 2002 (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.3	Materials and Research Data License Agreement dated January 26, 2001 between Wake Forest University and ACT (previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.3.1	July 1, 2002 Assignment to Wake Forest University Health Sciences (previously filed as Exhibit 10.3.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.4	Exclusive License Agreement dated February 1, 2002 between the University of Massachusetts and ACT (previously filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.5	Non-Exclusive Sublicense Agreement between ACT and Infigen, Inc. dated August 1, 2003 (previously filed as Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.6	Non-Exclusive License Agreements, dated January 1, 2001 between ACT and PPL Therapeutics (Scotland) Limited (previously filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.7	Nonexclusive License Agreement dated May 1, 2001 between ACT and Immerge BioTherapeutics, Inc. (previously filed as Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.8	Nonexclusive License and Sponsored Research Agreement dated June 29, 2001 between ACT and Charles River Laboratories, Inc. (previously filed as Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.9	

	Non-Exclusive Sublicense Agreement between Cyagra, Inc., ACT, ACT Group and Goyaike, S.A. dated November 20, 2001 (previously filed as Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.10	Exclusive Sublicense Agreement between ACT, ACT Group and Cyagra, Inc. dated June 28, 2002 (previously filed as Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.11	Non-Exclusive License Agreement dated November 8, 2002 between ACT and Merial Limited (previously filed as Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.12	Non-Exclusive Sublicense Agreement between ACT and Infigen, Inc. dated August 1, 2003 (previously filed as Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.13	Exclusive License Agreement dated October 22, 2003 between ACT and Exeter Life Sciences, Inc. (previously filed as Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.13.1	Letter of Intent between ELS and ACT dated March 16, 2003 (previously filed as Exhibit 10.13.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.13.2	Sponsored Research Agreement (previously filed as Exhibit 10.13.2 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.14	Non-Exclusive License Agreement dated January 4, 2002 between ACT and Genetic Savings & Clone (previously filed as Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.15	Non-Exclusive License Agreement dated February 3, 2004 between ACT and Pureline Genetics (previously filed as Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.16	Non-Exclusive License Agreement dated February 3, 2004 between ACT and First Degree Genetics (previously filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.17	Non-Exclusive License Agreement dated February 3, 2004 between ACT and One Degree Genetics (previously filed as Exhibit 10.17 to the

	Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.18	Option to License Intellectual Property dated December 31, 2003 between ACT and PacGen Cellco, LLC (previously filed as Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.18.1	First Amendment to Option to License Intellectual Property dated February 13, 2004 (previously filed as Exhibit 10.18.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.19	Exclusive License Agreement (Infigen IP) dated May 14, 2004 between ACT and PacGen Cellco, LLC (previously filed as Exhibit 10.19 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.19.1	First Amendment to Exclusive License Agreement (Infigen IP) dated August 25, 2005.
10.20	Exclusive License Agreement (UMass IP) dated May 14, 2004 between ACT and PacGen Cellco, LLC (previously filed as Exhibit 10.20 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.20.1	First Amendment to Exclusive License Agreement (UMass IP) dated August 25, 2005, previously filed and incorporated by reference herein.
10.21	Exclusive License Agreement (ACT IP) dated May 14, 2004 between ACT and PacGen Cellco, LLC (previously filed as Exhibit 10.21 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.21.1	First Amendment to Exclusive License Agreement (ACT IP) dated August 25, 2005, previously filed and incorporated by reference herein.
10.22	Agreement to Amend ACT/CELLCO License Agreements dated September 7, 2004 ACT and PacGen Cellco, LLC (previously filed as Exhibit 10.22 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.23	Indemnification Agreement of David Merrell to certain buyers of TMOO common stock dated December 31, 2004 (previously filed as Exhibit 10.23 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.24	Convertible Promissory Note to ACT Group, Inc. dated July 12, 2002 in the amount of $1,000,000 (previously filed as Exhibit 10.24 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.25	Promissory Note issued by ACT to Pierce Atwood LLP dated January 2005 in the amount of $150,000 (previously filed as Exhibit 10.25 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.26	Promissory Note issued by ACT to Pierce Atwood dated July 1, 2003 in the amount of $339,000 (previously filed as Exhibit 10.26 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.27	Promissory Note issued by ACT to Rothwell, Figg, Ernst & Manbeck, P.C. dated July 8, 2003 in the amount of $272,108 (previously filed as Exhibit 10.27 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.28	Forbearance and Stock Purchase Agreement Among Avian Farms, Inc., ACT Group, Inc., ACT and Cima Biotechnology, Inc., dated July 16, 1999, as amended December 23, 1999 (previously filed as Exhibit 10.28 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.29	Securityholders' Agreement among ACT, ACT Group, Cyagra, Inc. and Goyaike S.A. dated November 20, 2001 (previously filed as Exhibit 10.29 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.30.1	Securityholders' Agreement among ACT, ACT Group, Cyagra, Inc. and Goyaike S.A. dated July 1, 2002 (previously filed as Exhibit 10.30.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.30.2	Collaboration Agreement and Technology License (previously filed as Exhibit 10.30.2 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.30.3	Separation Agreement among ACT, ACT Group, Cyagra, Inc. and Goyaike S.A. (previously filed as Exhibit 10.30.3 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.31	Membership Interest Exchange and Asset Sale Agreement dated May 31, 2000, by and among ACT and Hematech, LLC, et al. (previously filed as Exhibit 10.31 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.31.1	Buyout Option Agreement dated May 31, 2000 between Hematech, LLC and ACT (previously filed as Exhibit 10.31.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.32	Space Sublease Agreement dated November, 2004, between BioReliance and ACT, for 381 Plantation Street, Worcester, MA 01605 (previously filed as Exhibit 10.32 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.33	Advanced Cell Technology, Inc. 2004 Stock Option Plan. Pursuant to this option plan, ACT issued options to purchase an aggregate 2,604,000 shares, including (i) options to purchase 1,500,000 shares of ACT common stock to Michael West, the Chairman of the Board of Directors and the Chief Scientific Officer of the Company, and (ii) options to purchase 750,000 shares of ACT common stock to Robert Lanza, the Vice President of Medical and Scientific Development of the Company (previously filed as Exhibit 10.33 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000- 50295) and incorporated by reference herein).
10.34	Advanced Cell Technology, Inc. 2004 Stock Option Plan II. Pursuant to this option plan, ACT issued options to purchase an aggregate 1,301,161 shares, including (i) options to purchase 651,161 shares of ACT common stock to William Caldwell, IV, the Chief Executive Officer and a director of the Company, and (ii) options to purchase 240,000 shares of ACT common stock to Robert Peabody, a director of the Company (previously filed as Exhibit 10.34 to the Registrant's Quarterly Report on Form 10- QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.35	A.C.T. Holdings, Inc. 2005 Stock Option Plan (previously filed as Appendix A to the Registrant's preliminary proxy statement on Form PRE-14A filed on May 10, 2005 (File No. 000-50295) and incorporated by reference herein).
10.36	Form of Incentive Stock Option Agreement (previously filed as Exhibit 10.36 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.37	Form of Nonqualified Stock Option Agreement (previously filed as Exhibit 10.37 to the Registrant's Quarterly Report on Form 10- QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.38	Employment Agreement between ACT and William M. Caldwell, IV dated December 31, 2004 (previously filed as Exhibit 10.38 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.39	Employment Agreement between ACT and Michael D. West dated December 31, 2004 (previously filed as Exhibit 10.39 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.39.1	Amendment No. 1 to Employment Agreement between ACT and Michael D. West dated August 1, 2005 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 5, 2005 (File No. 000-50295) and incorporated by reference herein).
10.40	Employment Agreement between ACT and Robert Lanza dated February 1, 2005 (previously filed as Exhibit 10.40 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.41	Employment Agreement between the Registrant, ACT and James G. Stewart dated March 13, 2005 (previously filed as Exhibit 10.41 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.41.1	Amendment to Employment Agreement between the Registrant and James G. Stewart dated September 16, 2005 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 22, 2005 (File No. 000-50295) and incorporated by reference herein).
10.42	Employment Agreement between ACT and Robert Peabody dated February 9, 2005 (previously filed as Exhibit 10.42 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.43	Employment Agreement between ACT and Jonathan Atzen dated April 1, 2005 (previously filed as Exhibit 10.43 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.44	Employment Agreement between ACT and Irina Klimanskaya dated October 1, 2003 (previously filed as Exhibit 10.44 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.45	Employment Agreement between ACT and Sadhana Agarwal dated April 1, 2004 (previously filed as Exhibit 10.45 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.46	Employment Agreement between ACT and James Murai dated February 17, 2005 (previously filed as Exhibit 10.46 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.47	Employment Agreement between ACT and David Larocca dated February 9, 2005 (previously filed as Exhibit 10.47 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.48	Consulting Agreement between ACT and William M. Caldwell, IV dated October 1, 2004 (previously filed as Exhibit 10.48 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.49	Consulting Agreement between ACT and Jonathan Atzen dated January 14, 2005 (previously filed as Exhibit 10.49 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.50	Consulting Agreement between ACT and Stephen Price dated December 31, 2004 (previously filed as Exhibit 10.50 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.50.1	Consulting Agreement between ACT and Stephen Price dated April 28, 2005 (previously filed as Exhibit 10.50.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.51	Consulting Agreement between ACT and Chad Griffin dated April 1, 2005 (previously filed as Exhibit 10.51 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.52	Consulting Agreement between ACT and James Stewart dated January 14, 2005 (previously filed as Exhibit 10.52 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.53	Settlement Agreement between ACT and Gunnar Engstrom dated January 28, 2005 (previously filed as Exhibit 10.53 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.54	Confidentiality and Nondisclosure Agreement dated February 3, 1999 between ACT and Robert Lanza, M.D. (previously filed as Exhibit 10.54 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.55	Consulting Agreement dated September 29, 1997 between ACT and Dr. James Robl (previously filed as Exhibit 10.55 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.56	Consulting Agreement dated January 23, 1998 between ACT and Dr. James Robl (previously filed as Exhibit 10.56 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.57	Final Settlement Agreement dated August 6, 1999 between Infigen, Inc., ACT and Steven Stice (previously filed as Exhibit 10.57 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.58	Letter Agreement dated April 20, 2000 between ACT and Dr. Steven L. Stice (previously filed as Exhibit 10.58 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.59	

Master Laboratory Services Agreement dated as of January 4, 2001 between White Eagle Laboratories, Inc. and ACT (previously filed as Exhibit 10.59 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.60	Master Study Agreement dated as of December 4, 2000 between Biomedical Research Models, Inc. and ACT (previously filed as Exhibit 10.60 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.61	Agreement Relating to the Transfer of Biological Materials dated as of February 3, 2000 between Wake Forest University and ACT (previously filed as Exhibit 10.61 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.62	Materials Transfer Agreement dated February 16, 2000 between ACT, B.C. Cancer Agency and Dr. Peter Lansdorp (previously filed as Exhibit 10.62 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.63	Materials Transfer Agreement dated January 19, 2000 between ACT, IPK and Anna Wobus (previously filed as Exhibit 10.63 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.64	Materials Transfer Agreement dated February 23, 2000 between ACT, Philip Damiani and Carlos T. Moraes (previously filed as Exhibit 10.64 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.65	Material Transfer Agreement dated January 6, 1997 between ACT, University of Massachusetts, University of Colorado and Curtis R. Freed (previously filed as Exhibit 10.65 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000- 50295) and incorporated by reference herein).
10.66	Material Transfer Agreement dated March 20, 2000 between ACT, Charlotte Farin and Peter Farin (previously filed as Exhibit 10.66 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.67	Sponsored Research Agreement dated as of May 15, 2000 between Carl H. Lindner, Jr. Family Center for Research of Endangered Wildlife (CREW) and ACT (previously filed as Exhibit 10.67 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.68	Sponsored Research Agreement dated as of August 9, 2000 between Cornell University and ACT (previously filed as Exhibit 10.68 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).

10.69	Sponsored Research Agreement dated as of December 1, 1999 between ACT and the University of Massachusetts Amherst (previously filed as Exhibit 10.69 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.69.1	Amendment No. 1 to Agreement dated December 1, 1999 (previously filed as Exhibit 10.69.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.70	Sponsored Research Agreement dated August 1, 1999 between ACT and UMass (D. Good) (previously filed as Exhibit 10.70 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.71	Term Sheet for Non-Exclusive License Agreement dated as of December 23, 2000 between Immerge BioTherapeutics, Inc. and ACT, as amended by First Amendment to Term Sheet dated March 14, 2001 (previously filed as Exhibit 10.71 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.72	Withdrawal, Termination, Assignment and Assumption Agreement dated March 14, 2001 by and among ACT, BioTransplant, Inc., Immerge BioTherapeutics, Inc. and Infigen, Inc. (previously filed as Exhibit 10.72 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.73	Consulting Agreement between ACT and Karen Chapman dated January 15, 2005 (previously filed as Exhibit 10.73 to the Registrant's Quarterly Report on Form 10-QSB filed on May 23, 2005 (File No. 000-50295) and incorporated by reference herein).
10.74	Research Collaboration Agreement between ACT and The Burnham Institute dated May 23, 2005 (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-QSB filed on August 15, 2005 (File No. 000-50295) and incorporated by reference herein).
10.75	Securities Purchase Agreement dated September 15, 2005 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.76	Registration Rights Agreement dated September 15, 2005 (previously filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.77	Form of Common Stock Purchase Warrant (previously filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).

10.78	Form of Amortizing Convertible Debenture (previously filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.79	Form of Lock-up Agreement (previously filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.80	Settlement Agreement dated September 14, 2005 (previously filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.81	Form of Convertible Promissory Note (Unsecured) (previously filed as Exhibit 10.7 to the Registrant's Current Report on Form 8- K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.82	Form of Warrant to Purchase Securities (previously filed as Exhibit 10.8 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.83	Agreement between Advanced Cell Technology, Inc., Advanced Cell, Inc. and A.C.T. Group, Inc. dated September 15, 2005 (previously filed as Exhibit 10.9 to the Registrant's Current Report on Form 8-K filed on September 19, 2005 (File No. 000-50295) and incorporated by reference herein).
10.84	Agreement between Capital Financial Media, LLC and Advanced Cell Technology, Inc., dated February 9, 2006 (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-QSB filed on May 15, 2006 (File No. 000-50295) and incorporated by reference herein).
10.85	Sublease Agreement between Avigen, Inc. and Advanced Cell Technology, Inc., dated November 29, 2005. (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-QSB filed on May 15, 2006 (File No. 000-50295) and incorporated by reference herein).
10.86	Exclusive Sublicense Agreement between Advanced Cell Technology, Inc. and TranXenoGen, Inc., dated March 29, 2006 (previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-QSB filed on May 15, 2006 (File No. 000-50295) and incorporated by reference herein).
10.87	Non-Exclusive License Agreement between Kirin Beer Kabushiki Kaisha, Aurox, LLC, Hematech, LLC, and Kirin SD, Inc., and Advanced Cell Technology, Inc., dated May 9, 2006 (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-QSB filed on August 11, 2006 (File No. 000-50295) and incorporated by reference herein).
10.88	Exclusive License Agreement between Kirin Beer Kabushiki Kaisha, Aurox, LLC, Hematech, LLC, and Kirin SD, Inc., and Advanced Cell

	Technology, Inc., dated May 9, 2006 (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-QSB filed on August 11, 2006 (File No. 000-50295) and incorporated by reference herein).
10.89	Purchase Agreement between Kirin SD, Inc. and Advanced Cell Technology, Inc., dated May 9, 2006(previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-QSB filed on August 11, 2006 (File No. 000-50295) and incorporated by reference herein).
10.90	Consulting Agreement between Advanced Cell Technology, Inc. and James G. Stewart, dated August 17, 2006 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 18, 2006 (File No. 000-50295) and incorporated by reference herein).
10.91	Securities Purchase Agreement dated August 30, 2006 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 8, 2006 (File No. 000-50295) and incorporated by reference herein).
10.92	Registration Rights Agreement dated September 15, 2005 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 8, 2006 (File No. 000-50295) and incorporated by reference herein).
10.93	Form of Common Stock Purchase Warrant (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 8, 2006 (File No. 000-50295) and incorporated by reference herein).
10.94	Form of Amortizing Convertible Debenture (previously filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on September 8, 2006 (File No. 000-50295) and incorporated by reference herein).
10.95	Form of Lock-up Agreement (previously filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on September 8, 2006 (File No. 000-50295) and incorporated by reference herein).
10.96	Amendment No. 1, dated as of January 11, 2007, to the Securities Purchase Agreement, dated August 30, 2006, the Amortizing Convertible Debenture, dated September 6, 2006, and the Registration Rights Agreement, dated August 30, 2006 (previously filed as Exhibit 10.97 to the Registrant's Registration Statement on Form SB-2 filed on January 26, 2007 (File No. 333-140265) and incorporated by reference herein).
10.97	Amendment No. 1, dated as of January 11, 2007, to the Securities Purchase Agreement, the Amortizing Convertible Debenture, and the Registration Rights Agreement, each dated August 30, 2006 (previously filed as Exhibit 10.97 to the Registrant's Registration Statement on Form SB-2 filed on January 26, 2007 (File No. 333-140265) and incorporated by reference herein).
10.98	

	Patent Assignment Agreement between Advanced Cell Technology, Inc. and Infigen, Inc., dated February 5, 2007 (previously filed as Exhibit 10.98 to the Registrant's Post-Effective Amendment No. 3 to its Registration Statement on Form SB-2 filed on March 28, 2007 and incorporated by reference herein).
10.99	Employment Agreement between Advanced Cell Technology, Inc. and Pedro Huertas, M.D., Ph.D., dated February 5, 2007 (previously filed as Exhibit 10.99 to the Registrant's Post-Effective Amendment No. 3 to its Registration Statement on Form SB-2 filed on March 28, 2007 and incorporated by reference herein).

10.100	Research Services Agreement between Advanced Cell Technology, Inc. and Oregon Health & Science University, dated February 5, 2007 (previously filed as Exhibit 10.100 to the Registrant's Post-Effective Amendment No. 3 to its Registration Statement on Form SB-2 filed on March 28, 2007 and incorporated by reference herein).
10.101	Agreement and Plan of Merger by and among Advanced Cell technology, Inc., ACT Acquisition Sub, Inc., Mytogen, Inc. and certain shareholders of Mytogen, Inc., dated as of July 31, 2007 (previously filed as exhibit 10.101 to the Amendment No. 1 to the Registrant's 10-KSB for the year ended December 31, 2007 filed with the SEC on June 30, 2008 and incorporated by reference herein).
10.102	Escrow Agreement by and among Advanced Cell Technology, Inc. and certain former shareholders of Mytogen, Inc., dated as of September 20, 2007 (previously filed as exhibit 10.102 to the Amendment No. 1 to the Registrant's 10-KSB for the year ended December 31, 2007 filed with the SEC on June 30, 2008 and incorporated by reference herein)
10.103	Securities Purchase Agreement dated August 31, 2007 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.104	Registration Rights Agreement dated August 31, 2007 (previously filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.105	Form of Common Stock Purchase Warrant (previously filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.106	Form of Amortizing Convertible Debenture (previously filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.107	Form of Security Agreement dated August 31, 2007 (previously filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.108	Form of Subsidiary Guaranty dated August 31, 2007 (previously filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.109	

	Form of Lock-up Agreement (previously filed as Exhibit 10.7 to the Registrant's Current Report on Form 8-K filed on September 7, 2007 (File No. 000-50295) and incorporated by reference herein).
10.110	Amended and Restated Consulting Agreement, dated as of September 19, 2007 by and between Advanced Cell Technology, Inc., through its wholly owned subsidiary Mytogen, Inc., and Dib, LLC. (previously filed as Exhibit 10.110 to the Registrant's Registration Statement on Form SB-2 filed on October 1, 2007 and incorporated by reference herein).
10.111	Employment Agreement, dated as of September 20, 2007, by and between Advanced Cell technology, Inc., and Jonathan Dinsmore. (previously filed as Exhibit 10.111 to the Registrant's Registration Statement on Form SB-2 filed on October 1, 2007 and incorporated by reference herein).
10.112	Nomination Agreement, dated September 20, 2007, by and between Advanced Cell Technology, Inc. and Anthem Ventures Fund, LP. (previously filed as Exhibit 10.112 to the Registrant's Registration Statement on Form SB-2 filed on October 1, 2007 and incorporated by reference herein).
10.113	Securities Purchase Agreement dated March 31, 2008, by and among the Company and the investors party thereto (previously filed as Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.114	Security Agreement dated March 31, 2008, by and among the Company and the investors party thereto (previously filed as Exhibit 10.2 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.115	Form of Common Stock Purchase Warrant issued in connection with March 31, 2008 Securities Purchase Agreement (previously filed as Exhibit 10.3 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.116	Form of Amortizing Convertible Debenture issued in connection with March 31, 2008 Securities Purchase Agreement (previously filed as Exhibit 10.4 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.117	Subsidiary Guarantee dated March 31, 2008 (previously filed as Exhibit 10.5 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.118	Convertible Note, dated as of March 17, 2008, issued by the Company to PDPI LLC (previously filed as Exhibit 10.6 to the Registrant’s Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.119	

	Bridge Note, dated as of March 17, 2008, issued by the Company to The Shapiro Family Trust Dated September 25, 1989 (previously filed as Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.120	License Agreement, dated as of February 25, 2008, by and between the Company and Pharming Technologies B.V (previously filed as Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.121	Convertible Promissory Note A, dated as of February 15, 2008, issued by the Company to JMJ Financial (previously filed as Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.122	Convertible Promissory Note B , dated as of February 15, 2008, issued by the Company to JMJ Financial, and Amendment to Convertible Promissory Note B, dated as of March 17, 2008 (previously filed as Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.123	Secured & Collateralized Promissory Note, dated as of February 15, 2008, issued by JMJ Financial to the Company (previously filed as Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).
10.124	Collateral & Security Agreement, dated as of February 15, 2008, by and between the Company and JMJ Financial (previously filed as Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q filed on July 15, 2008 and incorporated herein by reference).

10.125	Consent, Amendment and Exchange Agreement, dated as of July 29, 2009, by and between the Company and the holders named on the signature pages thereto (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 4, 2009 and incorporated herein by reference).
10.126	Consent, Amendment and Exchange Agreement, dated as of July 29, 2009, by and between the Company and the senior noteholders named on the signature pages thereto (previously filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on August 4, 2009 and incorporated herein by reference).
10.127	Preferred Stock Purchase Agreement, dated November 2, 2009, between Advanced Cell Technology, Inc, and Optimus Capital Partners, LLC, dba Optimus Life Sciences Capital Partners, LLC (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.128	Warrant, dated November 2, 2009 (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.129	Subscription Agreement, dated November 12, 2009 (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.130	Form of Class A Warrant (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.131	Form of Class B Warrant (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.132	Form of Additional Investment Right (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.133	Employment Agreement, dated October 1, 2009, between the Company and Robert P. Lanza (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 17, 2009 and incorporated herein by reference).
10.134	Form of Note (previously filed as exhibit to the Registrant's S-1 filed on November 18, 2009 and incorporated herein by reference)
10.135	Employment Agreement, dated February 18, 2010, between the Company and William Caldwell
10.136	Promissory Note, dated January 19, 2010, issued to JMJ Financial (previously filed as exhibit 10.1 to the Registrant's Quarterly Report on Form

	10-Q filed on May 7, 2010 and incorporated herein by reference).
10.137	Promissory Note, dated March 30, 2010, in principal amount of $600,000, issued to JMJ Financial (previously filed as exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on May 7, 2010 and incorporated herein by reference).
10.138	Promissory Note, dated March 30, 2010, in principal amount of $1,200,000, issued to JMJ Financial (previously filed as exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on May 7, 2010 and incorporated herein by reference).
10.139	Promissory Note, dated March 30, 2010, in principal amount of $1,700,000, issued to JMJ Financial (previously filed as exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q filed on May 7, 2010 and incorporated herein by reference).
10.140	Letter Agreement, dated March 30, 2010, between the Company and JMJ Financial (previously filed as exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q filed on May 7, 2010 and incorporated herein by reference).
10.141	Registration Rights Agreement, dated March 30, 2010, between the Company and JMJ Financial (previously filed as exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q filed on November 9, 2010 and incorporated herein by reference).
10.142	Settlement Agreement and Mutual Release between the Company and Bristol Investment Fund, Ltd and Bristol Capital, LLC (previously filed as exhibit 99.1 to the Registrant's Quarterly Report on Form 10-Q filed on May 7, 2010 and incorporated herein by reference).
10.143	Form of Warrant for Series C Preferred transaction (previously filed as exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on January 3, 2011 and incorporated herein by reference).
10.144	Form of Initial Warrant for Series C Preferred transaction (previously filed as exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on January 3, 2011 and incorporated herein by reference).
10.145	Securities Purchase Agreement, dated as of December 30, 2010, by and among Advanced Cell Technology, Inc. and Socius CG II Ltd. (previously filed as exhibit 99.1 to the Registrant's Current Report on Form 8-K filed on January 3, 2011 and incorporated herein by reference).
10.146	Letter Agreement, dated December 30, 2010, by and among Advanced Cell Technology, Inc. and Optimus CG II, Ltd. (previously filed as exhibit 99.2 to the Registrant's Current Report on Form 8-K filed on January 3, 2011 and incorporated herein by reference).
10.147	

	Employment Agreement, dated December 14, 2010, between the Company and Gary Rabin.
10.148	Settlement Agreement and Mutual Release between the Company and Transition Holdings, Ltd. dated February 9, 2011.
10.149	Settlement Agreement and Mutual Release between the Company and Gemini Master Fund, Ltd. dated February 11, 2011.
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification of the Principal Executive Officer and Principal Financial Officer Pursuant to Rule 13a-14 of the Securities Exchange Act of 1934
32.1	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Section 1350

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ADVANCED CELL TECHNOLOGY, INC.

Dated: March 17, 2011 By: /s/ Gary Rabin
Gary Rabin
Interim Chief Executive Officer and Chairman
(Principal Executive Officer, Principle Financial Officer and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

/s/ Gary Rabin Gary Rabin Interim Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer	March 17, 2011
/s/ Erkki Ruoslahti, M.D., Ph.D. Erkki Ruoslahti, M.D., Ph.D. Director	March 17, 2011
/s/ Alan Shapiro Alan Shapiro Director	March 17, 2011