BIOTIME INC
Form 10-K
March 15, 2011

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

o 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 1-12830

BioTime, Inc.
(Exact name of registrant as specified in its charter)

California	94-3127919
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1301 Harbor Bay Parkway, Suite 100
Alameda, California 94502
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (510) 521-3390

Securities registered pursuant to Section 12(b) of the Act
Title of class Common Shares, no par value

Securities registered pursuant to Section 12(g) of the Act:
None

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

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 o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the registrant is 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.

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

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

The approximate aggregate market value of voting common shares held by non-affiliates computed by reference to the price at which common shares were last sold as of June 30, 2010 was $123,743,749. Shares held by each executive officer and director and by each person who beneficially owns more than 5% of the outstanding common shares have been excluded in that such persons may under certain circumstances be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of common shares outstanding as of March 1, 2011 was 47,357,360

Documents Incorporated by Reference
Portions of Proxy Statement for 2011 Annual Meeting of Shareholders are incorporated by reference in Part III

BioTime, Inc.

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PART I

Statements made in this Form 10-K that are not historical facts may constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those discussed. Words such as “expects,” “may,” “will,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates,” and similar expressions identify forward-looking statements. See Note 1 to Financial Statements.

References to “we” means BioTime, Inc. and its subsidiaries unless the context otherwise indicates.

Item 1. Business

Overview

We are a biotechnology company engaged in two areas of biomedical research and product development. Initially we developed blood plasma volume expanders and related technology for use in surgery, emergency trauma treatment, and other applications. Currently we are focused on regenerative medicine, an emerging field of therapeutic product development based on recent discoveries in stem cell research.

Our lead blood plasma expander product, Hextend®, is a physiologically balanced intravenous solution used in the treatment of hypovolemia, a condition caused by low blood volume, often from blood loss during surgery or injury. Hextend maintains circulatory system fluid volume and blood pressure, and keeps vital organs perfused during surgery and trauma care.

“Regenerative medicine” refers to an emerging field of therapeutic product development that may allow all human cell and tissue types to be manufactured on an industrial scale. Historically speaking, this has never been possible in the past, and was made possible by the first isolation of human embryonic stem (“hES”) cells and creation of induced pluripotent stem (“iPS”) cells. These cells are called “pluripotent stem cells” because they have the unique property of being able to branch out into each and every kind of cell in the human body such as the cell types that make up the brain, the blood, the heart, the lungs, the liver, and other tissues. Unlike adult-derived stem cells that have limited potential to become different cell types, pluripotent stem cells may have vast potential to supply an array of new regenerative therapeutic products, especially those targeting the large and growing markets associated with age-related degenerative disease. Unlike pharmaceuticals that require a molecular target, therapeutic strategies in regenerative medicine are generally aimed at simply regenerating the disease cells and tissues, and therefore may have broader applicability in clinical practice.

Our efforts include the development and sale of products designed for therapeutic as well as research applications. In the field of regenerative medicine in particular, we offer advanced human stem cell products that can be used by researchers at universities and at companies in the bioscience and biopharmaceutical industries. Research products generally can be marketed without regulatory approval, and are therefore relatively near-term business opportunities, especially when compared to therapeutic products.

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During 2010, we added three subsidiaries to our corporate family. In May 2010, we acquired ES Cell International Pte. Ltd. ("ESI"), a Singapore-based company at the forefront of advances in human embryonic stem cell technology and one of the earliest distributors of hES cell lines. In June, we formed OrthoCyte Corporation to develop treatments for orthopedic disorders. Through our acquisition of ESI, we also became a minority shareholder in Cell Cure Neurosciences, Ltd., an Israel-based company developing innovative stem cell treatments for neural and retinal diseases. During October 2010, we became the majority shareholder in Cell Cure Neurosciences through an additional equity investment made in conjunction with investments by two other Cell Cure Neurosciences shareholders.

In December 2010, our subsidiary Embryome Sciences, Inc. was renamed ReCyte Therapeutics, Inc. following an equity financing of $4 million, including a $2.5 million investment by private investors and a $1.5 million investment on our part. We retained an ownership interest of approximately 95% of the outstanding shares of ReCyte Therapeutics. The new equity funding will be used to finance the development of cell-based therapeutic products for cardiovascular and blood diseases. The research product business conducted through Embryome Sciences will instead be conducted by BioTime. Our subsidiary, ESI, markets other stem cell research products such as human embryonic stem cell lines produced under good manufacturing practice ("GMP") - compliant conditions.

In January 2011, we acquired the assets of Cell Targeting, Inc. ("CTI"), a biotechnology company - focused on technologies to "paint" molecules on the surface of cells that cause the cells to adhere to particular tissues, such as those afflicted with disease. CTI and its collaborators have produced several such tissue-specific and disease-specific cell modification agents with the potential to raise cell therapy products to a new level of performance. We will initially provide this technology to our majority-owned subsidiary OncoCyte Corporation for use in the development of genetically modified hES-derived vascular progenitors designed to target and destroy malignant tumors.

In February 2011, we signed an agreement to merge Glycosan BioSystems, Inc. (Glycosan), a Salt-Lake City, Utah based biotechnology company, with OrthoCyte Corporation. Glycosan has been a leader in developing, manufacturing, and marketing proprietary biocompatible hydrogels that mimic the extracellular matrix in which cells reside. We intend to initially use the Glycosan technology in the development of therapeutic products for use in the treatment of osteoarthritis. Glycosan's hydrogels may have other applications when combined with the diverse and scalable cell types our scientists have isolated from hES cells. In addition, we may elect to seek regulatory approval for the use of one Glycosan hydrogel, HyStem-Rx, as a stand alone cell delivery device in countries outside of the United States.

Hextend® and PentaLyte® are registered trademarks of BioTime, Inc., and ESpan™, and ESpy™ are trademarks of BioTime, Inc. ReCyte™ is a trademark of ReCyte Therapeutics, Inc. ACTCellerate™ is a trademark licensed to us by Advanced Cell Technology, Inc.

We were incorporated in 1990 in the state of California. Our principal executive offices are located at 1301 Harbor Bay Parkway, Alameda, California 94502. Our telephone number is (510) 521-3390.

We make available free of charge on or through our Internet website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after they are electronically filed with, or furnished to, the Securities and Exchange Commission. Our Internet website address is www.biotimeinc.com. Information on our website is not incorporated by reference and does not form a part of this report. Copies of our annual reports on Form 10-K will be furnished without charge to any person who submits a written request directed to the attention of our Secretary, at our offices located at 1301 Harbor Bay Parkway, Alameda, California 94502.

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Business Strategy

One of our aims is to develop cell replacement therapies for age-related degenerative disease. The degenerative diseases of aging are an attractive business opportunity because the elderly comprise a large and growing segment of our population, and because many age related diseases appear to be caused by the inherent limited capacity of aged human cells to regenerate damaged tissues in the body. This latter characteristic means that age related diseases may be best treated with cell replacement therapies. The restoration of functionality in tissues through cell replacement therapy may eliminate the high costs associated with years of palliative care.

Our effort in regenerative medicine also includes research on more than 140 purified, scalable, and novel human embryonic progenitor cell types produced from hES cells. This research has included extensive gene expression studies of the unique properties of the cells, as well as conditions that cause the cells to differentiate into many of the cell types in the body. We have filed patent applications on the compositions of these cells, the media in which they can be expanded, and a variety of uses of the cells, including drug discovery and cell replacement therapies. This novel manufacturing technology may provide BioTime with a competitive advantage in producing highly purified, identified, and scalable cell types for potential use in therapy.

We have organized several subsidiaries to undertake our cell replacement therapeutic programs. We will partly or wholly fund these subsidiaries, recruit their management teams, assist them in acquiring technology, and provide general guidance for building the subsidiary companies. We may license patents and technology to the subsidiaries that we do not wholly own under agreements that will entitle us to receive royalty payments from the commercialization of products or technology developed by the subsidiaries. We believe that having subsidiaries that focus on particular disease applications or research products will facilitate the optimization of scientific and commercial collaborations, thereby improving the probability that a subsidiary company will eventually become an industry leader. Due to the expectation of eventual separation of a subsidiary from the parent company, high-quality executives are likely to be more attracted to managing subsidiary companies than to heading divisions within a larger company. The organization of our regenerative medicine business into subsidiaries has also facilitated our ability to obtain financing for our regenerative medicine programs.

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The following table shows our subsidiaries, their respective principal fields of business, our percentage ownership, and the country where their principal business is located:

Subsidiary	Field of Business	BioTime Ownership	Country
ReCyte Therapeutics, Inc.	Blood and vascular diseases including coronary artery disease iPS cell banking	95.15%	USA
OncoCyte Corporation	Cancer	74%	USA
OrthoCyte Corporation	Orthopedic diseases, including osteoarthritis	100%	USA
ES Cell International Pte. Ltd.	Stem cell products for research, including clinical GMP cell lines	100%	Singapore
BioTime Asia, Ltd.	Ophthalmologic, skin, musculo-skeletal system, and hematologic diseases. Stem cell products for research	81%	Hong Kong
Cell Cure Neurosciences, Ltd.	Age-related macular degeneration Multiple sclerosis Parkinson’s disease	53.6%	Israel

The joint ownership of subsidiaries with other investors will allow us to fund the expensive development costs of therapeutics in a manner that spreads the costs and risk and reduces our need to obtain more equity financing of our own that could be dilutive to our shareholders. In some cases, the co-investors in our subsidiaries may include other participants in the pharmaceutical or biotechnology industry and their affiliates. An example of this would be our investment in Cell Cure Neurosciences, which was made in concert with investments from Teva Pharmaceutical Industries, Ltd. and HBL-Hadasit Bio-Holdings, Ltd.

Another tenet of our business strategy is the development and sale of advanced human stem cell products and technologies that can be used by researchers at universities and other institutions, at companies in the bioscience and biopharmaceutical industries, and at other companies that provide research products to companies in those industries. By providing products and technologies that will be used by researchers and drug developers at larger institutions and corporations, we believe that we will be able to commercialize products more quickly and inexpensively than would be possible with the development of therapeutic products alone.

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Stem Cells and Products for Regenerative Medicine Research

Because hES and iPS cells have the ability to transform into any cell type in the human body (a property called pluripotency), they may provide a means of producing a host of new products of interest to medical researchers. It is likely that hES and iPS cells could be used to develop new cell lines designed to rebuild cell and tissue function lost due to degenerative disease or injury that would benefit those performing research in therapeutic product development. hES and iPS cell-derived lines that display novel cell signaling pathways may be used in screening assays for the discovery of new drugs. Since embryonic stem cells can now be derived through the use of iPS cell technology from patients with particular degenerative diseases, stem cells are increasingly likely to be utilized in a wide array of future research programs aim to model disease processes in the laboratory and to restore the function of organs and tissues damaged by degenerative diseases such as heart failure, stroke, Parkinson's disease, macular degeneration, and diabetes, as well as many other chronic conditions.

Human Embryonic Stem Cell Lines for Research Use

During November and December 2010, we signed agreements with the California Institute for Regenerative Medicine ("CIRM") and the University of California system to distribute five research-grade and GMP compliant hES cell lines to California-based researchers. We believe that making the GMP-grade cell lines available to researchers may streamline the translation of basic science into therapies.

Initially, we are providing research-grade cell lines free of charge to CIRM-funded and California-based researchers until April 30, 2011. After that date, researchers will purchase the research-grade cells from us at a price of $2,600 per ampoule.

We plan to make the GMP-grade cell lines, along with certain documentation and complete genomic DNA sequence information, available by November 2011. We will charge a price for the GMP-grade cell lines that covers our production and delivery costs. Although no royalties will be payable to us by researchers who acquire the cell lines for research use, researchers who desire to use the GMP cell lines for therapeutic or diagnostic products, or for any other commercial purposes, may do so only after signing commercialization agreements acceptable to us. Commercialization agreements under this program will entitle us to receive royalties on net sales not to exceed 2% of net sales, reducible to 1.5% if the researcher must pay any other royalties in connection with the commercialization of their product.

Human Embryonic Progenitor Cells

Through our subsidiary ReCyte Therapeutics, Inc. we acquired a license from Advanced Cell Technology, Inc. ("ACT") to use ACTCellerate™ technology, and the rights to market more than 140 novel human cell types made using that process. ACTCellerate™ allows the rapid isolation of novel, highly purified human embryonic progenitor cells ("hEPCs"), which are cells that are intermediate in the developmental process between embryonic stem cells and fully differentiated cells. hEPCs are expected to possess the ability to become a wide array of cell types with potential applications in research, drug discovery, and human regenerative stem cell therapies. hEPCs are relatively easy to manufacture on a large scale and in a purified state, which may make it more advantageous to work with these cells than with hES or iPS cells directly.

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- Commercial Distribution of ACTCellerate™ hEPC lines.

In 2009, ReCyte Therapeutics entered into an agreement under which Millipore Corporation became a worldwide distributor of ACTCellerate™ hEPC lines. Millipore's initial offering of our ACTCellerate™ products consists of six novel progenitor cell lines and optimized ESpan™ growth media for the in vitro propagation of each progenitor cell line, which are being marketed and distributed on a worldwide basis. The ACTCellerate™ hEPC lines and ESpan™ growth media products distributed by Millipore may also be purchased directly from us on our website Embryome.com. In addition to the products that we are co-marketing with Millipore, we now offer 92 other ACTCellerate™ hEPC lines for sale on Embryome.com, and we anticipate adding additional cell lines and related ESpan™ growth media and differentiation kits over time. In 2011, BioTime may also undertake new efforts including collaborations with other companies that provide online biomedical database services to increase awareness of the molecular markers and of its diverse cell types and thereby aggressively market is research product portfolio. This effort may include substantially expanding the content and improving the efficiency of our embryome map database that is available at our website, www.embryome.com.

We also plan to market additional cell types manufactured with our proprietary PureStem™ technology. PureStem™ cell lines are produced by the exogenous expression of specific transcription factors that regulate the differentiation of diverse cell types from hES or iPS cells. This technology when combined with ACTCellerate™ is expected to expand our offering of new human cell types for research and potentially therapeutic applications.

In December 2010, our subsidiary BioTime Asia, Limited signed an agreement with Shanghai Genext Medical Technology Co., Ltd. to sell ACTCellerate™ hEPC lines and related ESpan™ growth media to the medical and biological research communities in China, Taiwan, Hong Kong, and Macau on an exclusive basis. The marketing agreement includes provisions for an initial stocking inventory and annual milestones to maintain exclusivity.

- CIRM Grant TR-1276

On April 29, 2009, CIRM awarded us a $4,721,706 grant for a stem cell research project related to our ACTCellerate™ technology. Our grant is titled "Addressing the Cell Purity and Identity Bottleneck through Generation and Expansion of Clonal Human Embryonic Progenitor Cell Lines."

Our CIRM-funded research addresses the need for industrial scale production of purified therapeutic cells. Purity and precise identification of the desired therapeutic cells are essential for cell therapy; because unlike a drug that may persist in the body for a matter of hours or days, a cell can persist in the body for an entire lifetime. Current methodologies for preparing cell therapeutics from hES or iPS cells typically involve complex and difficult derivation processes that result in heterogenous populations of cells, only a portion of which are the intended therapeutic agent. The pluripotency that allows hES cells to differentiate into all types of cells also poses the problem of assuring that all hES cells in a cultured batch differentiate into the desired type of body cell. Contamination of hES or iPS derived cells with the wrong cells could lead to diseases or disorders resulting from normal but inappropriate tissue growth or tumor formation. However, because our hEPCs are clonal, meaning that they are derived from a single cell, they have the potential to grow as a highly purified and identified cell line. For this reason, this CIRM-funded research is of direct benefit to us in manufacturing cell types for both the research markets and potential therapeutic product candidates.

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Our grant-funded research includes three major aims, the first of which is to characterize the commercial scalability and stability of clonal hEPC lines. The production of hEPCs for human therapeutic use will require a means of ascertaining whether the cells being used are capable of large-scale expansion in a manner compatible with current commercial cell culture technologies. We have performed long-term stability studies of hEPCs using commercial-type culture processes, and have documented the phenotypic stability of these lines by demonstrating that, even after extensive expansion, lines such as OTX-CP07, a line with the potential to become cartilage, maintains the ability to fully differentiate, as evidenced by the expression of mRNA and protein markers. Importantly, we have shown that hEPCs generally maintain their genotypic stability during culture expansion. Many cell types, including hES cells, tend to gain or lose chromosomes or parts of chromosomes during extended in vitro culturing. We have evaluated the genetic karytoype of hEPCs during commercial-scale expansion and have generally observed the maintenance of normal chromosomal content. These results are consistent with our premise that hEPCs represent a stable cellular platform for producing cellular therapeutic products.

Our second major objective covered by the CIRM grant is to define hEPC surface markers for which molecular affinity reagents can be developed that will in turn enable us to purify hEPCs from hES or iPS cultures. We are currently performing research to define a molecular signature of cell-surface markers unique to a given hEPC line. This would then allow us to develop antibodies and other affinity reagents for these markers that could be used to purify the target hEPCs intended for therapy. Our initial approach towards identifying cell-surface markers relies on several independent strategies. We have estimated the expression of cell-surface proteins by microarray analysis of mRNA expression levels. Use of this approach to review cell-surface expression across the entire genome will enable the identification of unique combinations of protein markers that would constitute a unique signature for a specific cell line. We have also begun mapping cell-surface protein expression directly on hEPCs using large collections of commercially available antibodies, and we have begun testing these antibodies as affinity reagents for purifying target hEPCs. Finally, we are working with Mandala Biosciences, LLC to identify peptide reagents that exhibit specificity for cell-surface targets on hEPCs and that could be used directly as affinity reagents. This peptide reagent strategy proposes to map the surface markers on hEPC lines such that a molecular signature specific to a given hEPC line can be identified. The molecular signature will be the key to verifying the correct phenotypic identity of cells intended to be used in therapy, and will facilitate purification of hEPCs from any hES or iPS cell line.

The third objective of the CIRM research project is to evaluate the biological potential of hEPCs using medium-throughput differentiation tests and protocols. We believe that hEPCs represent a biological state midway between the pluripotent hES cell and a fully differentiated adult cell. As such, hEPCs often display the ability to differentiate into multiple cell types, depending on exposure to particular culture conditions, biological inducers and protein factors. Working with our collaborators in the lab of Dr. Evan Snyder at the Sanford-Burnham Medical Research Institute in La Jolla, California, we are applying standardized regimens to hEPCs and then measuring the differentiation of these treated hEPC cultures using microarray-based assessment of mRNA. By reviewing the molecular markers that are induced by the treatment, we can deduce the differentiation fate of the cells. When performed on a large-scale, these “fate space screens” are allowing us to define the biological potential of the ACTCellerate™ cell lines and identify new opportunities for developing cell lines with therapeutic potential.

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Ultimately, the overall CIRM funded project is expected to provide well-characterized hEPCs that are precursors of therapeutic cells such as kidney, blood vessel, muscle, cartilage, and skin cells, among other cell types. We are currently in the second year of our CIRM funding for this research project. The CIRM funding for this research project will continue until August 31, 2012. We received the first two quarterly payments from CIRM, totaling $790,192, during the second half of 2009 and four additional quarterly payments, totaling $1,575,523, during the year ended December 31, 2010.

Clinical Grade hES Cell Lines

The development of clinical-grade human therapeutic products requires high standards of quality control. The detailed procedures for all aspects of production and product testing (i.e., aspects that could potentially exert an impact on the safety and quality of a product) are commonly referred to as "Current Good Manufacturing Practice" or "cGMP." The United States Food and Drug Administration ("FDA") enforces cGMP regulations with respect to the manufacturing of human therapeutics for use in the United States, and virtually every country across the globe maintains some analogous standards for quality control in the manufacture of human therapeutic products.

In 2007, ESI announced the world's first hES cell lines derived according to the principles of cGMP. ESI and scientists from Sydney IVF, Australia's leading center for infertility and in vitro fertilization ("IVF") treatment, also published a scientific report, The Generation of Six Clinical-Grade Human Embryonic Stem Cell Lines (Cell Stem Cell 1: 490-494). The paper outlined the procedures used to document the production of clinical-grade hES cell lines derived on human feeder cells obtained from an FDA approved source, produced in a licensed cGMP facility, with donor consent and medical screening of donors. Combined with our ACTCellerate technology that allows for the derivation of a wide array of hEPCs with high levels of purity and scalability, and site-specific homeobox gene expression, we believe that ESI's clinical-grade master cell banks may be used to generate clonal clinical-grade embryonic progenitor cell lines- of great interest to the biopharmaceutical industry. We expect that the acquisition of ESI's clinical-grade hES cell bank will save years of development time and thereby accelerate the development of clinical-grade progenitor cells for potential use as research and therapeutic products.

We are currently offering research-grade ESI hES cell lines in the United States under our agreement with CIRM, and we plan to make the clinical-grade lines available in November 2011.

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hES Cells Carrying Genetic Diseases

ReCyte Therapeutics, has signed an agreement for the Reproductive Genetics Institute of Chicago, Illinois to source an array of hES cell lines carrying inherited genetic diseases such as cystic fibrosis and muscular dystrophy. Study of these cell lines may enable researchers to better understand the mechanisms involved in causing the disease states, which may in turn expedite the search for potential treatments. We intend to sublicense these cell lines from ReCyte Therapeutics to BioTime in order to offer these hES cell lines for sale online at Embryome.com at a future date.

ESpan™ Cell Growth Media

We are marketing a line of cell-growth media products called ESpan™. These growth media are optimized for the growth of hEPC types. Cells need to be propagated in liquid media, in both the laboratory setting, where basic research on stem cells is performed, and in the commercial sector where stem cells will be scaled up for the manufacture of cell-based therapies or for the discovery of new drugs. We expect that rather than propagating hES cells in large quantities, many end users will instead propagate cells using media optimized for the propagation of hEPCs created from hES cells. Some of our ESpan™ products are currently marketed through Millipore and Genext.

ESpy™ Cell Lines

Additional new products that we have targeted for development are ESpy™ cell lines, which will be derivatives of hES cells and will emit beacons of light. The ability of the ESpy cells to emit light will allow researchers to track the location and distribution of the cells in both in vitro and in vivo studies.

Subsidiaries Focused on Stem Cell-Based Therapies for Specific Diseases

OncoCyte: Cell-Based Therapies Targeting Cancer.

Formed in 2009, OncoCyte Corporation is developing cellular therapeutics for cancer therapy that will take advantage of the unique biology of vascular endothelial precursor cells. Vascular biology encompasses many potential therapeutic applications, including those for cancer, peripheral vascular disease, and cardiac disease. The goal of our research efforts in OncoCyte is to derive vascular endothelial cells that can be engineered to deliver a toxic payload to the developing blood vessels of a tumor to specifically remove malignant tumors while not affecting nearby normal tissues in the body.

The progression of human solid tumors almost always requires the development of a support network of blood vessels to provide nutrients to the expanding tumor mass. The developing tumor vasculature affords an attractive target for anti-cancer therapeutics. Drugs targeting the growth of blood vessels have shown some efficacy in specific cancer applications. However, there is clear need for additional therapeutic approaches that can be used to treat advanced, metastatic cancers. OncoCyte intends to develop a new class of cellular therapeutics that would specifically target the development of tumor vasculature in advanced cancers as an entry point for the delivery of regulated tumoricidal activities.

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OncoCyte is currently working on the development of reproducible protocols to manufacture vascular progenitor cells from hES and iPS cells. OncoCyte has developed a derivation protocol that can produce populations of vascular progenitor cells with levels of purity and efficiency that appear to surpass any results described to date in the published literature. Importantly, OncoCyte's methods appear to be compliant with commercial manufacturing processes. OncoCyte has expanded and banked large numbers of vascular progenitor cells derived from multiple hES cell lines, including clinical-grade stem cells provided by our subsidiary ESI.

In concert with the protocol development, OncoCyte has established a broad range of support assays to monitor and measure vascular progenitor cell differentiation processes. These tools have allowed OncoCyte to begin in vivo experiments monitoring the incorporation of endothelial cells into developing mouse vasculature, and most recently, incorporation into the developing vasculature of human tumor xenografts. OncoCyte has also performed research on transgenes that may allow the cells to destroy tumors. In this strategy, the engineered vascular progenitor cells will be injected into the circulation of an animal bearing a human tumor graft. The incorporation of the cells into the tumor, and the safety and efficacy of the cells with respect to tumor-specific destruction will be studied with the aim of supporting potential human clinical trials.

On January 28, 2011, we acquired the assets of Cell Targeting, Inc. ("CTI"), including technology that uses peptides selected for their ability to adhere to diseased tissues. By coating or "painting" these peptides onto the surfaces of therapeutic cells using techniques that do not modify the cell physiology, CTI has produced tissue-specific and disease-specific cell modification agents with the potential to elevate cell therapy products to a new level of performance. We will initially provide this technology to OncoCyte for use in the development of genetically modified hES-derived vascular progenitors designed to target and destroy malignant tumors.

OncoCyte has received $4.0 million in equity financing from private investors. We believe that OncoCyte has sufficient capital to carry out its research and development plan during 2011. We may provide additional financing for OncoCyte, or obtain financing from third parties, based on our evaluation of progress made in its research and development program, any changes to or the expansion of the scope and focus of its research, and our projection of future costs.

We presently own 74% of the OncoCyte common stock outstanding. The other shares of OncoCyte common stock are owned by two private investors. OncoCyte has adopted a stock option plan under which it may issue up to 4,000,000 shares of its common stock to officers, directors, employees, and consultants of OncoCyte and BioTime. As of December 31, 2010, options to purchase 1,000,000 shares of OncoCyte common stock had been granted.

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OrthoCyte: Cartilage Repair Using Embryonic Progenitor Cells

OrthoCyte Corporation is our wholly owned subsidiary developing cellular therapeutics for orthopedic disorders. OrthoCyte's lead project is the development of hEPC lines for cartilage repair, including osteoarthritis. OrthoCyte has identified several ACTCellerate™ cell lines that display potential to differentiate into diverse types of cartilage, and these lines are showing promising results in animal preclinical testing for effectiveness of cartilage repair. Our current goal is to demonstrate safety and efficacy of the cells using in vivo models of articular disease. If our studies in animal models prove successful, we would plan to initiate an IND filing with the FDA for this application.

Cartilage defects and disease affect our aging population. In particular osteoarthritis and spinal disc degeneration have a significant impact on the mobility and health of an aging population. Current non-surgical treatments tend to target the reduction of pain and inflammation, as opposed to repair of tissue damage and reversal of deterioration. To date, the development of cell-based therapeutics to treat damaged cartilage has met with mixed success. Autologous chondrocytes have been tested as a means of providing cartilage-producing cells, but this approach is hampered by a multi-step process that first requires the harvesting of chondrocytes from donor tissues, followed by in vitro culture expansion of the harvested cells. Primary chondrocytes have very limited capacity for in vitro expansion and typically lose their biological characteristics within a short period of in vitro culture. Mesenchymal stem cells have been tested extensively as a source of cellular therapeutics for cartilage treatment, but success has remained limited, partly as a result of the hypertrophy of these cells inducing bone and fibrous tissue instead of permanent cartilage.

During our initial micro-array assessment of ACTCellerate-generated hEPC lines, we identified several cell lines that displayed molecular markers consistent with the production of permanent human cartilage. We believe that hEPC lines are ideally suited for cartilage applications, due to their inherent biological stability, their capacity for expansion in culture, and their lack of markers of hypertrophy. We have confirmed this chondrogenic potential by directly measuring cartilage production from these cell lines. Moreover, we have demonstrated that these cell lines can be combined with commonly used hydrogel support matrices to formulate a combination product for treating cartilage deficits. OrthoCyte has compiled proprietary animal preclinical data on two therapeutic product candidates designated as OTX-CP03 and OTX-CP07, which were formulated in hydrogel manufactured by Glycosan BioSystems, Inc. ("Glycosan"), and which showed initial evidence of safety and efficacy in animal models of joint disease. In the next 12 months, we intend to demonstrate the utility of hEPCs in advanced in vivo models of cartilage repair and will expand the number of available cell lines.

On February 11, 2011, we and OrthoCyte entered into an Agreement and Plan of Merger (the "Merger Agreement") with Glycosan pursuant to which Glycosan agreed to merge with OrthoCyte. Established in 2006, Glycosan has been a leader in developing, manufacturing, and marketing proprietary biocompatible hydrogels that mimic the extracellular matrix (ECM). The ECM is an important and complex mixture of macromolecules that holds cells together in tissues and organs and performs many other important functions. Glycosan's products have the demonstrated ability to support the growth and directed differentiation of stem cells and are designed as implantable, resorbable matrices for tissue engineering, regenerative medicine, and for research applications involving the laboratory culture of human cells. We expect to utilize the Glycosan technology in forthcoming stem cell-based therapeutic products and to continue the marketing of the Glycosan products for research use. We may seek regulatory approval for the use of one Glycosan hydrogel, HyStem-Rx, as a stand-alone cell delivery device in countries outside of the United States.

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Glycosan's technology was invented by Glenn D. Prestwich, Ph.D., Presidential Professor of Medicinal Chemistry at the University of Utah, and was assigned to the University of Utah. Glycosan holds a license from the University to use the patents to that technology outside the United States in 27 member states of the European Union, Canada, Australia, and Japan exclusively for all uses except veterinary use, and within the United States exclusively for cosmetics, reagents and platforms for in vitro cell and tissue culture, platforms and services for in vitro drug toxicology and efficacy testing, in materials for preserving or extending the useful life of human organs and tissues, and for in vivo xenograft models using human tissues. Also within the United States, the licensed fields of use include the co-exclusive use of the patent rights to make, use, and sell products and methods in which living tissue or cells are incorporated outside the body into a polymer platform, at a facility other than the "point-of-care" facility, for subsequent implant in patients for therapeutic use.

Glycosan manufactures Extracel, PEGgel, and HyStem hydrogel products for basic laboratory research use, and sells those products directly and through arrangements with distributors in the United States and abroad. Glycosan has recently completed pre-clinical development of HyStem-Rx for potential use as an implantable cell delivery matrix. The formulations and performance of Glycosan's Extracel, Hystem, and HyStem-Rx hydrogels are identical, but HyStem-Rx is manufactured and tested to be of a much higher level of purity. The use of HyStem-Rx as an implantable cell delivery matrix in humans will require approval by the United States FDA and comparable regulatory agencies in foreign countries, which has not yet been obtained. Approval of the device for human therapeutic use might also create an expanded market for the device to other developers of therapeutic tissue transplant products.

We expect that the merger will be completed shortly after March 18, 2011. The obligations of BioTime, OrthoCyte, and Glycosan to consummate the merger are subject to the satisfaction of certain conditions, including approval of the merger by the Glycosan stockholders. Through the merger, Glycosan stockholders will receive, in the aggregate, approximately 332,906 BioTime common shares, and warrants to purchase approximately an additional 206,612 BioTime common shares at an exercise price of $10 per share. The warrants will expire on May 3, 2014.

We presently own a 100% equity interest in OrthoCyte. We plan to provide additional equity capital to OrthoCyte. OrthoCyte has adopted a stock option plan under which it may issue up to 4,000,000 shares of its common stock to officers, directors, employees, and consultants of OrthoCyte and BioTime. As of December 31, 2010, options to purchase 2,300,000 shares of OrthoCyte common stock had been granted.

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Cell Cure Neurosciences

Through our acquisition of ESI, we acquired control of ESI's equity interest in Cell Cure Neurosciences, an Israel-based biotechnology company focused on the development of cell therapies for retinal and neural degenerative diseases. In October 2010, we, along with Teva Pharmaceutical Industries, Ltd. ("Teva") and HBL-Hadasit Bio-Holdings ("HBL"), invested $7.1 million in Cell Cure Neurosciences. These funds will be used primarily to develop OpRegen™, a proprietary formulation of embryonic stem cell-derived retinal pigment epithelial ("RPE") cells. OpRegen will address the unmet medical needs of people suffering from age-related macular degeneration (AMD), the leading cause of blindness in the aging population.

The U.S. Centers for Disease Control and Prevention estimate that about 1.8 million people in the United States have advanced-stage AMD, while another 7.3 million have an earlier stage of AMD and are at risk of vision impairment from the disease. Most people are afflicted with the dry form of the disease, for which there is currently no effective treatment. One of the most promising future therapies for age-related AMD is the replacement of the layer of damaged RPE cells that support and nourish the retina. In the past, RPE cells have been obtained from other regions of the diseased eye, or from fetal and adult donor tissue and various cell lines. However, the lack of a reliable and ample supply of healthy RPE cells has hindered the development of RPE transplantation as a therapeutic approach to AMD. RPE cells derived from hES cells may prove to be the best source of RPE cells for transplantation, provided the technology can be developed for producing RPE cells from hES cells in homogeneous, large quantities.

Until now, researchers have had to rely on the spontaneous differentiation of hES cells into RPE cells, but that differentiation occurs in only a few hES cell lines. To achieve the full potential of hES cells for the production of RPE cells, a reliable, driven differentiation method is required. Cell Cure Neurosciences is using a new method developed by scientists at Hadassah University Hospital that drives the differentiation of hES cells into RPE cells. These researchers have shown in a small animal model of AMD that RPE cells produced using this method can preserve vision when transplanted in the subretinal space.

Cell Cure Neurosciences' research and development is conducted at Hadassah University Hospital, through research and consulting agreements with HBL's affiliate Hadasit Medical Research Services and Development, Ltd. ("Hadasit"), under the direction of Professor Benjamin E. Reubinoff, Cell Cure Neurosciences' Chief Scientific Officer; Professor Eyal Banin, Cell Cure Neurosciences' Director of Clinical Affairs; and Professor Tamir Ben Hur.

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Cell Cure Neurosciences and Teva have entered into a Research and Exclusive License Option Agreement (the "Teva License Option Agreement") under which Teva has an option to obtain an exclusive worldwide license to complete the clinical development of, and to manufacture, distribute and sell OpRegen™ as well as OpRegen-Plus™. OpRegen-Plus™ is another proprietary product that Cell Cure Neurosciences is developing for the treatment of age-related macular degeneration, but in which the RPE cells are supported on or within a membrane instead of in suspension. OpRegen-Plus™ is at an earlier stage of laboratory development than OpRegen™

If Teva exercises the option, it will pay Cell Cure Neurosciences $1,000,000. Thereafter, Teva will bear all costs and expense of clinical trials and of obtaining regulatory approvals required to market the product. Teva will make the milestone payments to Cell Cure Neurosciences as the clinical development and commercialization of the product progress. Milestone payments will be made upon the first use of the product in a Phase II clinical trial; the first use of the product in a Phase III clinical trial; the first commercial sale of the product in the United States, and the first commercial sale of the product in a European Union country. If all of the milestones are met, Cell Cure Neurosciences will receive a total of $28.5 million in milestone payments, in addition to the $1,000,000 option payment, for the first approved medical indication of OpRegen™. Cell Cure Neurosciences would be entitled to receive certain additional milestone payments upon the first commercial sale of OpRegen™ for each additional medical indication in the United States or a European Union nation. In addition to milestone payments, Teva will pay Cell Cure Neurosciences royalties on the sale of the product, at rates ranging from 6% to 10% of the net sale price of OpRegen™ depending upon the total amount of annual sales. The royalty payments will be reduced by 50% with respect to sales in any country in which a generic equivalent product is being sold by a third party unrelated to Teva.

If Teva exercises its option to license OpRegen-Plus™, Teva and Cell Cure Neurosciences would enter into an additional license agreement on substantially the same terms as the OpRegen™ license, including the milestone payments for the first medical indication of OpRegen-Plus™, additional milestone payments for the first sale of the product for additional indications, royalties on net sales, and a share of any OpRegen-Plus™ sublicense payments the Teva might receive.

If Teva sublicenses its rights to a third party, Teva will pay Cell Cure Neurosciences a share of any payments of cash or other consideration that Teva receives for the sublicense, excluding (i) gross receipts for commercial sales that are subject to royalty payments to Cell Cure Neurosciences; (ii) amounts received from a sublicensee solely to finance research and development activities to be performed by or on behalf of Teva; or (iii) payments received in reimbursement for patent expenses incurred after the grant of the sublicense.

A portion of milestone payments, royalties, and sublicensing payments received by Cell Cure Neurosciences would be shared with BioTime's subsidiary ESI and with Hadasit, which have licensed to Cell Cure Neurosciences certain patents and technology used in the development of OpRegen™ and OpRegen-Plus™. Those patents will be sublicensed to Teva under the Teva Option Agreement.

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If Teva exercises its option and commercializes OpRegen™ or OpRegen-Plus™, its obligation to pay royalties on sales of those products will expire on a country by country and indication by indication basis with respect to a product on the later of: (i) fifteen (15) years after the first commercial sale of the product for the applicable indication for use in that country, or (ii) the expiration in that country of all valid patent claims covering the applicable indication for use of the product. The patent expiration dates cannot be presently determined with certainty, but certain patents licensed to Cell Cure Neurosciences by ESI and Hadasit for use in the development of OpRegen™ and OpRegen-Plus™ will expire in 2023 and 2022, respectively.

The Teva License Option Agreement will terminate if (a) Teva does not exercise its option within 60 days after an investigational new drug application filed by Cell Cure Neurosciences becomes effective for a Phase I clinical trial of a product covered by the Teva License Option Agreement, or (b) Teva determines not to continue funding of the research and development of a product after Cell Cure Neurosciences has expended its designated budget plus certain cost over-runs. Teva may also terminate the Teva License Option Agreement at any time by giving Cell Cure Neurosciences 30-day notice. Either party may terminate the license if the other party commits a material breach of its obligations and fails to cure the breach within 45 days after notice from the other party, or if the other party becomes subject to bankruptcy, insolvency, liquidation, or receivership proceedings.

Cell Cure Neurosciences' cell therapy products under development for the treatment of neurodegenerative diseases include (a) neural progenitor cells designed to replace the dopamine producing cells destroyed in Parkinson's disease, and (b) Cell Cure Neurosciences' NeurArrest™ neural cells that target and modulate the immune system's self-destruction of the myelin coating of nerve cells in multiple sclerosis.

Parkinson's is an age-related disease caused by the loss of a certain type of cell in the brain. According to the Parkinson's Disease Foundation, Parkinson's disease affects approximately 1 million people in the United States and more than 4 million people worldwide. The median age for the onset of all forms of Parkinson's disease is 62, and the number of new cases is rising rapidly with the aging of the baby-boomer population. There is currently no cure for the disease.

While not a classic age-related disease, multiple sclerosis is also on the rise and the National Multiple Sclerosis Society estimates that there are about 400,000 persons with multiple sclerosis in the United States. Most people are diagnosed with the disease between the ages of 20 and 50.

To advance its programs for the development of treatments for neurodegenerative diseases such as Parkinson's disease and multiple sclerosis, Cell Cure Neurosciences has entered into an Additional Research Agreement with Hadasit pursuant to which Hadasit will perform research services for Cell Cure Neurosciences over a period of five years. Cell Cure Neurosciences will pay Hadasit $300,000 per year for the research services over the course of the five-year term of the Additional Research Agreement. Hadasit will be entitled to receive a royalty on the sale of any products developed under the agreement and commercialized by Cell Cure Neurosciences. The amount of the royalty will be determined by future agreement between Hadasit and Cell Cure Neurosciences, taking into consideration their respective contributions to the development of the product, or if they fail to agree, the royalty terms will be determined by a third-party expert.

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We have entered into a Third Amended and Restated Shareholders Agreement with Cell Cure Neurosciences, Teva, HBL, and ESI pertaining to certain corporate governance matters and rights of first refusal among the shareholders to purchase on a pro rata basis any additional shares that Cell Cure Neurosciences may issue. Under the agreement, the shareholders also granted each other a right of first refusal to purchase any Cell Cure Neurosciences shares that they may determine to sell or otherwise transfer in the future. The number of members on the Cell Cure Neurosciences board of directors will be set at seven , whereby we will be entitled to elect four directors, HBL will be entitled to elect two directors, and Teva will be entitled to elect one director. These provisions were also included in an amendment to Cell Cure Neurosciences' Articles of Association.

ReCyte Therapeutics—Treatment of Blood and Vascular Diseases and Disorders

ReCyte Therapeutics is developing therapeutic products for cardiovascular and blood diseases. The National Academy of Sciences has estimated that a potential 58 million Americans afflicted with cardiovascular disease and 30 million with autoimmune disorders could potentially benefit from stem cell-based therapies. Combined, this target population in the United States is one of the largest and fastest growing markets due to the aging of the baby-boomer population.

ReCyte Therapeutics will directly target these markets by utilizing its proprietary ReCyte™ iPS cell technology to reverse the developmental aging of human cells, then to generate embryonic vascular and blood progenitors from the ReCyte cell lines for therapeutic use in age-related vascular and blood disorders such as coronary disease and heart failure. To accomplish this, ReCyte Therapeutics will begin by developing iPS cells into primitive angioblasts, which are cells believed to be capable of reconstituting and repairing age-related changes in the vascular system. The young angioblasts will be tested in preclinical mouse models of accelerated aging to assess the safety and efficacy of the cells in the repair of ischemic tissue. We anticipate these phases of ReCyte Therapeutics' product development will be conducted over a period of approximately 28 months. However, the development of any therapeutic uses of the cells will require testing and approval by regulatory agencies such as the FDA.

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In 2011, ReCyte Therapeutics intends to begin to build a near-term revenue business by offering a service to reverse the developmental aging of human cells, and to generate blood and vascular progenitors, for cell banking purposes. Neither service in the cell banking business is expected to require lengthy FDA approval. To implement these services, ReCyte plans to develop a manufacturing process for the large-scale reprogramming of human skin cells by resetting telomere length and simultaneously resetting the cell's stage of development to the embryonic state. The reversal of the aging of a human cell has been demonstrated in the laboratory and is described in an article entitled "Spontaneous Reversal of Developmental Aging in Normal Human Cells Following Transcriptional Reprogramming" in the peer-reviewed journal Regenerative Medicine. The object of this aspect of ReCyte Therapeutics' research and development will be to build a cost-effective manufacturing platform that will be the basis of the cell banking service for reprogrammed human cells and for blood and vascular progenitors generated through ReCyte Therapeutics' technology.

With the capital obtained from a recent $2.5 million private equity financing, ReCyte Therapeutics will also begin preclinical studies to support future clinical trials of this new class of human therapeutics for vascular and blood disorders. These latter therapeutic uses of the cells will require testing and approval by regulatory agencies such as the FDA.

We presently own 95.15% of the ReCyte Therapeutics common stock outstanding. The other shares of ReCyte Therapeutics common stock outstanding are owned by two private investors. ReCyte Therapeutics has adopted a stock option plan under which it may issue up to 4,000,000 shares of its common stock to officers, directors, employees, and consultants of ReCyte Therapeutics and BioTime. As of December 31, 2010, options to purchase 1,000,000 shares of ReCyte Therapeutics common stock had been granted.

BioTime Asia—Therapeutic and Research Products for Certain Asian Markets

BioTime Asia will initially seek to develop the therapeutic products for the treatment of ophthalmologic, skin, musculoskeletal system, and hematologic diseases, including the targeting of genetically modified stem cells to tumors as a novel means of treating currently incurable forms of cancer. BioTime Asia will focus on markets in the People's Republic of China, including Hong Kong and Macau, but it may also offer research products in other Asian countries.

We have engaged the services of Dr. Daopei Lu to aid BioTime Asia in arranging and managing clinical trials of therapeutic stem cell products. Dr. Lu is a world-renowned hematologist and expert in the field of hematopoietic stem cell transplants who pioneered the first successful syngeneic bone marrow stem cell transplant in the People's Republic of China to treat aplastic anemia and the first allogeneic peripheral blood stem cell transplant to treat acute leukemia. Nanshan Memorial Medical Institute Limited ("NMMI"), a private Hong Kong company, has entered into an agreement with us under which NMMI became a minority shareholder in BioTime Asia, acquiring a 19% interest, and agreed to provide BioTime Asia with its initial laboratory facilities and an agreed number of research personnel, and will arrange financing for clinical trials.

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We will license to BioTime Asia the rights to use certain stem cell technology, and will sell to BioTime Asia stem cell products for therapeutic use and for resale as research products. To the extent permitted by law, BioTime Asia will license back to us for use outside of the People's Republic of China any new technology that BioTime Asia might develop or acquire.

NMMI may increase its percentage ownership interest in BioTime Asia to up to 39% if (a) NNMI fulfills is contractual obligations to provide research facilities and personnel and loans to fund clinical trials of new therapeutic products, and (b) BioTime Asia achieves certain milestones pertaining to pre-clinical development, successful completion of clinical trials of therapeutic products, and raising additional capital through public or private offerings of BioTime Asia capital stock.

Either we or NMMI may terminate the agreement if (a) certain clinical trial milestones are not met, including the commencement of the first clinical trial of a therapeutic stem cell product within two years, or (b) BioTime Asia's gross sales of products are less than $100,000,000 during any fiscal year after the sixth anniversary of the agreement, or (c) the other party breaches the agreement. We also have the right to purchase NMMI's shares of BioTime Asia if they fail to provide BioTime Asia with the laboratory and research personnel required by their agreement with us.

We presently own 81% of the BioTime Asia common stock outstanding. The other shares of BioTime Asia common stock outstanding are owned by NMMI. BioTime Asia has adopted a stock option plan under which it may issue up to 1,600 ordinary shares to officers, directors, employees, and consultants of BioTime Asia and BioTime. As of December 31, 2010, options to purchase 400 BioTime Asia ordinary shares had been granted.

Licensed Stem Cell Technology and Stem Cell Product Development Agreements

We have obtained the right to use stem cell technology that we believe has great potential in our product development efforts, and that may be useful to other companies that are engaged in the research and development of stem cell products for human therapeutic and diagnostic use.

Wisconsin Alumni Research Foundation

We have entered into a Commercial License and Option Agreement with Wisconsin Alumni Research Foundation ("WARF"). The WARF license permits us to use certain patented and patent pending technology belonging to WARF, as well as certain stem cell materials, for research and development purposes, and for the production and marketing of "research products" and "related products." "Research products" are products used as research tools, including in drug discovery and development. "Related products" are products other than research products, diagnostic products, or therapeutic products. "Diagnostic products" are products or services used in the diagnosis, prognosis, screening or detection of disease in humans. "Therapeutic products" are products or services used in the treatment of disease in humans.

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Under the WARF license agreement, we paid WARF a license fee of $225,000 in cash and $70,000 worth of our common shares. A maintenance fee of $25,000 will be due annually on March 2 of each year during the term of the WARF License beginning March 2, 2010. We also paid WARF $25,000 toward reimbursement of the costs associated with preparing, filing, and maintaining the licensed WARF patents.

We will pay WARF royalties on the sale of products and services under the WARF license. The royalty will be 4% on the sale of research products and 2% on the sale of related products. The royalty is payable on sales by us or by any sublicensee. The royalty rate is subject to certain reductions if we also become obligated to pay royalties to a third party in order to sell a product.

We have an option to negotiate with WARF to obtain a license to manufacture and market therapeutic products, excluding products in certain fields of use. The issuance of a license for therapeutic products would depend upon our submission and WARF's acceptance of a product development plan, and our reaching agreement with WARF on the commercial terms of the license such as a license fee, royalties, patent reimbursement fees, and other contractual matters.

The WARF license shall remain in effect until the expiration of the latest expiration date of the licensed patents. However, we may terminate the WARF license prior to the expiration date by giving WARF at least 90 days written notice, and WARF may terminate the WARF license if we fail to make any payment to WARF, fail to submit any required report to WARF, or commit any breach of any other covenant in the WARF license, and we fail to remedy the breach or default within 90 days after written notice from WARF. The WARF license may also be terminated by WARF if we commit any act of bankruptcy, become insolvent, are unable to pay our debts as they become due, file a petition under any bankruptcy or insolvency act, or have any such petition filed against us which is not dismissed within 60 days, or if we offer our creditors any component of the patents or materials covered by the WARF license.

ESI also holds a license from WiCell Research Institute, Inc., an affiliate of WARF, permitting ESI to use certain patents and patent pending technology, as well as certain stem cell materials, for research and development purposes, and for the production and marketing of research products. ESI will pay WiCell a 4% royalty on the sale of products under the WiCell license. The royalty rate is subject to reduction if ESI also become obligated to pay royalties to a third party in order to sell a product. ESI will also pay WiCell 10% of any royalties that ESI receives from any purchaser of a research product sold under an agreement that requires the ESI customer to pay royalties to ESI based on the sale of products produced by the ESI customer using the ESI research product.

ESI may terminate the WiCell license by giving WiCell at least 90 days written notice, and WiCell may terminate the license if ESI fails to make any payment to WiCell, fails to submit any required report to WiCell, or commits any breach of any other covenant in the WiCell license, and ESI fails to remedy the breach or default within 90 days after written notice from WiCell. The WiCell license may also be terminated by WiCell if ESI commits any act of bankruptcy, become insolvent, is unable to pay its debts as they become due, files a petition under any bankruptcy or insolvency act, or has any such petition filed against it which is not dismissed within 60 days, or if ESI offers its creditors any component of the patents or materials covered by the WiCell license.

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ACTCellerate™ Technology

We have entered into a license agreement with ACT under which we acquired exclusive world-wide rights to use ACT's "ACTCellerate™" technology for methods to accelerate the isolation of novel cell strains from pluripotent stem cells. The licensed rights include pending patent applications, know-how, and existing cells and cell lines developed using the technology.

The licensed technology is designed to provide a large-scale and reproducible method of isolating clonally purified hEPC lines, many of which may be capable of extended propagation in vitro. Initial testing suggests that the technology may be used to isolate at least 140 distinct clones that contain many previously uncharacterized cell types derived from all germ layers that display diverse embryo- and site-specific homeobox gene expression. Despite the expression of many oncofetal genes, none of the human embryonic progenitor cell lines tested led to tumor formation when transplanted into immunocompromised mice. The cell lines studied appear to have a finite replicative lifespan but have longer telomeres than most fetal- or adult-derived cells, which may facilitate their use in the manufacture of purified lineages for research and human therapy. Information concerning the technology was published in the May 2008 edition of the journal Regenerative Medicine.

We have the right to use the licensed technology and cell lines for research purpose and for the development of therapeutic and diagnostic products for human and veterinary use. We also have the right to grant sublicenses.

We paid ACT a $250,000 license fee and will pay an 8% royalty on sales of products, services, and processes that utilize the licensed technology. Once a total of $1,000,000 of royalties has been paid, no further royalties will be due.

ACT may reacquire royalty-free, worldwide licenses to use the technology for retinal pigment epithelial cells, hemangioblasts, and myocardial cells, on an exclusive basis, and for hepatocytes, on a non-exclusive basis, for human therapeutic use. ACT will pay us $5,000 for each license that it elects to reacquire.

The term of the licenses from ACT expire on the later of July 9, 2028 or the expiration of the last to expire of the licensed patents. The patent expiration dates cannot be presently determined with certainty because the patents are pending. ACT may terminate the license agreement if we commit a breach or default in the performance of our obligations under the agreement and fail to cure the breach or default within the permitted cure periods. We have the right to terminate the license agreement at any time by giving ACT three months prior notice and paying all amounts due ACT through the effective date of the termination.

iPS Cell Technology

We have entered into a license agreement and a sublicense agreement with ACT under which we acquired worldwide rights to use an array of ACT technology and technology licensed by ACT from affiliates of Kirin Pharma Company, Limited ("Kirin"). The ACT license and Kirin sublicense permit the commercialization of products in human therapeutic and diagnostic product markets.

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The licensed technology covers iPS methods to transform cells of the human body, such as skin cells, into an embryonic state in which the cells will be pluripotent. Because iPS technology does not involve human embryos or egg cells, and classical cloning techniques are not employed, the use of iPS technology may eliminate some ethical concerns that have been raised in connection with the procurement and use of human embryonic stem cells in scientific research and product development.

The portfolio of licensed patents and patent applications covers methods to produce iPS cells that do not carry viral vectors or added genes. Other iPS cell technology currently being practiced by other researchers utilizes viruses and genes that are likely incompatible with human therapeutic uses. We believe that technologies that facilitate the reprogramming of human cells to iPS cells without using viruses could be advantageous in the development of human stem cell products for use in medicine.

The Kirin sublicense covers patent application for methods for cloning mammals using reprogrammed donor chromatin or donor cells and methods for altering cell fate. These patent applications relate to technology to alter the state of a cell, such as a human skin cell, by exposing the cell's DNA to the cytoplasm of another reprogramming cell with differing properties. We may use this licensed technology for all human therapeutic and diagnostic applications.

A second series of patent applications licensed non-exclusively from ACT includes technologies for:

the use of reprogramming cells that over-express RNAs for the genes OCT4, SOX2, NANOG, and MYC, and other factors known to be useful in iPS technology

methods of resetting cell lifespan by extending the length of telomeres

the use of the cytoplasm of undifferentiated cells to reprogram human cells

the use of a cell bank of hemizygous O- cells

methods of screening for differentiation agents

stem cell-derived endothelial cells modified to disrupt tumor angiogenesis.

We may use this technology in commercializing the patents licensed under the Kirin sublicense.

The ACT license also includes patent applications for other uses. One licensed patent application covers a method of differentiation of morula or inner cell mass cells and a method of making lineage-defective embryonic stem cells. That technology can be used in producing hEPCs without the utilization of hES cell lines. Another licensed patent application covers novel culture systems for ex vivo development that contains technology for utilizing avian cells in the production of stem cell products free of viruses and bacteria.

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ACT iPS Cell License Provisions

Under the ACT license for iPS cell technology, we paid ACT a $200,000 license fee and we will pay a 5% royalty on sales of products, services, and processes that utilize the licensed technology, and a 20% royalty on any fees or other payments, other than equity investments, research and development costs, and loans and royalties, received by us from sublicensing the ACT technology to third parties. Once a total of $600,000 of royalties has been paid, no further royalties will be due..

We may use the licensed technology and cell lines for research purposes and for the development of therapeutic and diagnostic products for human and veterinary use, excluding (a) human and non-human animal cells for commercial research use, including small-molecule and other drug testing and basic research; and (b) human cells for therapeutic and diagnostic use in the treatment of human diabetes, liver diseases, retinal diseases and retinal degenerative diseases, other than applications involving the use of cells in the treatment of tumors where the primary use of the cells is the destruction or reduction of tumors and does not involve regeneration of tissue or organ function. The exclusions from the scope of permitted uses under the ACT license will lapse if ACT's license with a third party terminates or if the third party no longer has an exclusive license from ACT for those uses. Therefore, our cell lines marketed for research use are produced from hES cell lines (not iPS cells). In the therapeutic arena, our use of the licensed iPS cell technology will be for applications such as the blood and vascular products being developed by ReCyte Therapeutics.

Our license to use some of the ACT iPS technology is non-exclusive, and is limited to use in conjunction with the technology sublicensed from ACT under the Kirin sublicense, and may not be sublicensed to third parties other than subsidiaries and other affiliated entities. We do have the right to grant sublicenses to the other licensed ACT technology.

We will have the right to prosecute the patent applications and to enforce all patents, at our own expense, except that ACT is responsible for prosecuting patent applications for the non-exclusively licensed technology at its own expense. We will have the right to patent any new inventions arising from the use of the licensed patents and technology.

We will indemnify ACT for any products liability claims arising from products made by us and our sublicensees.

The term of the licenses from ACT expire on the later of August 14, 2028 or the expiration of the last to expire of the licensed patents. The patent expiration dates cannot be presently determined with certainty because certain patents are pending, but the latest expiration date of the licensed patents that have issued is 2025. ACT may terminate the license agreement if we commit a breach or default in the performance of our obligations under the agreement and fail to cure the breach or default within the permitted cure periods. We have the right to terminate the license agreement at any time by giving ACT three months prior notice and paying all amounts due ACT through the effective date of the termination.

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Kirin Sublicense Provisions

The technology licensed from Kirin relates to methods of reprogramming human and animal cells. Under the Kirin sublicense, we paid ACT a $50,000 license fee and will pay a 3.5% royalty on sales of products, services, and processes that utilize the licensed ACT technology, and 20% of any fees or other payments, other than equity investments, research and development costs, and loans and royalties we may receive from sublicensing the Kirin technology to third parties. We will also pay to ACT or to an affiliate of Kirin, annually, the amount, if any, by which royalties payable by ACT under its license agreement with Kirin are less than the $50,000 annual minimum royalty due. Those payments will be credited against other royalties payable to ACT under the Kirin sublicense.

We may use the sublicensed technology for the development of therapeutic and diagnostic human cell products, including both products made, in whole or in part, of human cells, and products made from human cells. We have the right to grant further sublicenses.

We will indemnify ACT for any products liability claims arising from products made by us and our sublicensees. The licenses will expire upon the expiration of the last to expire of the licensed patents, or May 9, 2016 if no patents are issued. The patent expiration dates cannot be presently determined with certainty because certain patents are pending, but the latest expiration date of the licensed patents that have issued is 2025. ACT may terminate the license agreement if we commit a breach or default in the performance of our obligations under the agreement and fail to cure the breach or default within the permitted cure periods. We have the right to terminate the license agreement at any time by giving ACT three months prior notice and paying all amounts due ACT through the effective date of the termination.

Lifeline Cell Technology, LLC.

We have entered into a Product Production and Distribution Agreement with Lifeline Cell Technology, LLC., for the production and marketing of hEPCs or hEPC lines, and products derived from those hEPCs. The products developed under the agreement with Lifeline will be produced and sold for research purposes such as drug discovery and drug development uses.

The proceeds from the sale of products to certain distributors with which Lifeline has a pre-existing relationship will be shared equally by us and Lifeline, after the deduction of royalties payable to licensors of the technology used, and certain production and marketing costs. The proceeds from products produced for distribution by both us and Lifeline, and products produced by one party at the request of the other party, will be shared in the same manner. Proceeds from the sale of other products, which are produced for distribution by one party, generally will be shared 90% by the party that produced the product for distribution, and 10% by the other party after the deduction of royalties payable to licensors of the technology used. In the case of the sale of these products, the party that produces the product and receives 90% of the sales proceeds will bear all of the production and marketing costs of the product. All of our research products to date were acquired from Advanced Cell Technology, Inc. and were not manufactured in collaboration with Lifeline.

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We paid Lifeline $250,000 to facilitate their product production and marketing efforts. We will be entitled to recover that amount from the share of product sale proceeds that otherwise would have been allocated to Lifeline.

Our agreement with Lifeline will expire on the later of June 18, 2028 or the expiration of the last to expire of the patents licensed from WARF, ACT, or Lifeline covered by the agreement. The patent expiration dates cannot be presently determined with certainty because certain patents are pending, but the latest expiration date of the licensed patents that have issued is 2025. Either party may terminate the agreement if the other party commits a breach or default in the performance of its obligations under the agreement and fails to cure the breach or default within the permitted cure periods. We have the right to terminate the agreement at any time if any claim is brought against us alleging that the use of the patents or technology licensed to Lifeline by ACT or licensed to us by WARF, or certain WARF cell lines infringe on the patent or other intellectual property rights of a third party. Lifeline has the right to terminate the agreement at any time if any claim is brought against it alleging that the use of the patents or technology licensed to Lifeline by ReCyte Therapeutics (formerly Embryome Sciences), or licensed to us by WARF, or certain WARF cell lines, infringe on the patent or other intellectual property rights of a third party. Notwithstanding any such notice of termination, the terminating party shall remain obligated to pay all amounts due the other party through the effective date of the termination.

Stem Cell Agreement with Reproductive Genetics Institute

In 2009, we entered into a Stem Cell Agreement with Reproductive Genetics Institute (“RGI”) pursuant to which we obtained the non-exclusive right to acquire RGI’s proprietary stem cell lines. The Stem Cell Agreement grants us rights to market new hES lines selected by us from 294 hES lines derived by RGI. We will initially select 10 RGI hES cell lines, and may add additional cell lines at our option. We will receive starting cultures of the cell lines we select, and will scale up those cell lines for resale as research products. Because our rights are non-exclusive, RGI will retain the right to market and use its stem cell lines for its own account. RGI is a leading fertility center that screens embryos for genetic disorders, such as cystic fibrosis and muscular dystrophy, prior to implantation. The RGI hES lines include both normal cells and 88 cell lines identified as carrying a host of inherited genetic disease genes, some of which we plan to sell as research products to universities and companies in the bioscience and pharmaceutical industries.

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We will pay RGI a royalty in the amount of 7% of net sales of RGI-derived cells sold for research purposes such as the use of cells to test potential new drugs or diagnostic products. The Stem Cell Agreement requires us to sell the RGI cells for a minimum price of $7,500 per ampoule of cells. We also agreed to sell to RGI any cells that we derive from RGI stem cells at a price equal to 50% of the lowest price at which we sell those cells to third parties.

We will be marketing the acquired cells for research purposes only. However, the Stem Cell Agreement allows us and RGI to develop therapeutic or diagnostic uses of the cells, subject to approval by a joint steering committee composed of our officers and RGI officers. In the absence of an agreement by the steering committee for a different revenue-sharing arrangement, and provided that we are successful in developing and commercializing one or more of those products for therapeutic or diagnostic uses, we would pay RGI a royalty based on net sales of each product. The royalty rate would be 50% of net sales of the product, minus one-half of any other royalties required to be paid to third parties. None of the RGI cells have been approved by the United States FDA or any equivalent foreign regulatory agency for use in the treatment of disease, and we do not have any specific plans for the development of RGI stem cells for use in the treatment or diagnosis of disease in humans.

Our agreement with RGI is scheduled to terminate on December 31, 2039 but will be automatically extended for an additional ten years, unless we or RGI elect not to extend the term of the agreement. If the initial term of the agreement is extended for ten years, the extended term will be automatically extended for an additional period of ten years, unless we or RGI elect not to extend the term of the agreement for the additional period. RGI may terminate the agreement if we commit a breach or default in the performance of our obligations under the agreement and fail to cure the breach or default within the permitted cure periods. We have the right to terminate the agreement at any time by giving RGI 30-day prior notice and paying all royalties due with respect to the sale of cell products that occurred prior to the date of termination.

Sanford-Burnham Medical Research Institute

Through our acquisition of the assets of CTI, we acquired a royalty-bearing, exclusive, worldwide license from the Sanford-Burnham Medical Research Institute (“SBMRI”) to use certain patents pertaining to homing peptides for preclinical research investigations of cell therapy treatments, and to enhance cell therapy products for the treatment and prevention of disease and injury in conjunction with our own proprietary technology or that of a third party. We have the right to grant sublicenses with notice to SBMRI.

We will pay SBMRI a royalty of 4% on the sale of pharmaceutical products, and 10% on the sale of any research-use products that we develop using or incorporating the licensed technology; and 20% of any payments we receive for sublicensing the patents to third parties. The royalties payable to SBMRI may be reduced by 50% if royalties or other fees must be paid to third parties in connection with the sale of any products. An annual license maintenance fee is payable each year during the term of the license, and after commercial sales of royalty bearing products commence, the annual fee will be credited towards our royalty payment obligations for the applicable year.

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We will reimburse SBMRI for 25% of its costs incurred in filing, prosecuting, and maintaining patent protection, subject to our approval of the costs. We will indemnify SBMRI against liabilities that may arise from our use of the licensed patents in the development, manufacture, and sale of products, including any product liability and similar claims that may arise from the use of any therapeutic products that we develop using the SBMRI patents.

Our license will terminate on a product-by-product and country-by-country basis, when the last-to-expire patent expires. The patent expiration dates cannot be presently determined with certainty because certain patents are pending, but the latest expiration date of the licensed patents that have issued is 2025. We may terminate the license agreement by giving SBMRI 60-day notice. SBMRI may terminate the license agreement if we fail to make license or royalty payments or to perform our reporting obligations after applicable cure periods.

Hadasit Research and License Agreement

Cell Cure Neurosciences has entered into an Amended and Restated Research and License Agreement under which it received an exclusive license to use certain of Hadasit's patented technologies for the development and commercialization for hES cell-derived cell replacement therapies for retinal degenerative diseases. Cell Cure Neurosciences paid Hadasit 249,058 New Israeli Shekels as a reimbursement for patent expenses incurred by Hadasit, and pays Hadasit quarterly fees for research and product development services under a related Product Development Agreement.

If Teva exercises its option to license OpRegen or OpRegen-Plus, Cell Cure Neurosciences will pay Hadasit 30% of all payments made by Teva to Cell Cure Neurosciences under the Teva License Option Agreement, other than payments for research, reimbursements of patent expenses, loans or equity investments.

If Teva does not exercise its option and Cell Cure Neurosciences instead commercializes OpRegen or OpRegen-Plus itself or sublicenses the Hadasit patents to a third party for the completion of development or commercialization of OpRegen or OpRegen-Plus, Cell Cure Neurosciences will pay Hadasit a 5% royalty on sales of products that utilize the licensed technology. Cell Cure Neurosciences will also pay sublicensing fees ranging from 10% to 30% of any payments Cell Cure Neurosciences receives from sublicensing the Hadasit patents to companies other than Teva. Commencing in January 2017, Hadasit will be entitled to receive an annual minimum royalty payment of $100,000 that will be credited toward the payment of royalties and sublicense fees otherwise payable to Hadasit during the calendar year. If Cell Cure Neurosciences or a sublicensee other than Teva paid royalties during the previous year, Cell Cure may defer making the minimum royalty payment until December and will be obligated to make the minimum annual payment to the extent that royalties and sublicensing fee payments made during that year are less than $100,000.

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If Teva does not exercise its option under the Teva License Option Agreement and instead Cell Cure Neurosciences or a sublicensee other than Teva conducts clinical trials of OpRegen or OpRegen-Plus, Hadasit will be entitled to receive certain payments from Cell Cure Neurosciences upon the first attainment of certain clinical trial milestones in the process of seeking regulatory approval to market a product developed by Cell Cure Neurosciences using the licensed patents. Hadasit will receive $250,000 upon the enrollment of patients in the first Phase I clinical trial, $250,000 upon the submission of Phase II clinical trial data to a regulatory agency as part of the approval process, and $1 million upon the enrollment of the first patient in the first Phase III clinical trial.

The Hadasit license agreement will automatically expire on a country-by-country and product-by-product basis upon the later of the expiration of all of the licensed patents or 15 years following the first sale of a product developed using a licensed patent. The patent expiration dates cannot be presently determined with certainty because the patents are pending. After expiration of the license agreement, Cell Cure Neurosciences will have the right to exploit the Hadasit licensed patents without having to pay Hadasit any royalties or sublicensing fees. Either party may terminate the license agreement if the other party commits a breach or default in the performance of its obligations under the agreement and fails to cure the breach or default within the permitted cure periods.

Plasma Volume Expanders and Related Products

We develop blood plasma volume expanders, blood replacement solutions for hypothermic (low-temperature) surgery, organ preservation solutions, and technology for use in surgery, emergency trauma treatment, and other applications. Our first product, Hextend, is a physiologically balanced blood plasma volume expander used for the treatment of hypovolemia. Hypovolemia is a condition caused by low blood volume, often from blood loss during surgery or from injury. Hextend maintains circulatory system fluid volume and blood pressure and helps sustain vital organs during surgery. Hextend, approved for use in major surgery, is the only blood plasma volume expander that contains lactate, multiple electrolytes, glucose, and a medically approved form of starch called hetastarch. Hextend is sterile, so its use avoids the risk of infection. Health insurance reimbursements and HMO coverage now include the cost of Hextend used in surgical procedures.

Hextend has become the standard plasma volume expander at a number of prominent teaching hospitals and leading medical centers, and is part of the United States Armed Forces Tactical Combat Casualty Care protocol. We believe that as Hextend use proliferates within leading U.S. hospitals, other smaller hospitals will follow their lead, contributing to sales growth.

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We are also developing another blood volume replacement product, PentaLyte. It, like Hextend, has been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. We have completed a Phase II clinical trial of PentaLyte in which PentaLyte was used to treat hypovolemia in cardiac surgery. Our ability to commence and complete additional clinical studies of PentaLyte depends on our cash resources, the costs involved, and licensing arrangements with a pharmaceutical company capable of manufacturing and marketing PentaLyte. We are currently seeking a licensee or co-developer to advance the commercialization of PentaLyte.

Hextend is manufactured and distributed in the United States by Hospira, Inc., and in South Korea by CJ CheilJedang Corp. ("CJ"), under license from us. Summit Pharmaceuticals International Corporation ("Summit") has a license to develop Hextend and PentaLyte in Japan, the People's Republic of China, and Taiwan.

The Market for Plasma Volume Expanders

Approximately 10,000,000 surgeries take place in the United States each year, and blood transfusions are required in approximately 3,000,000 of those cases. Transfusions are also required to treat patients suffering severe blood loss due to traumatic injury. Many more surgical and trauma cases do not require blood transfusions but do involve significant bleeding that can place the patient at risk of suffering from shock caused by the loss of fluid volume (hypovolemia) and physiological balance. Whole blood and packed red cells generally cannot be administered to a patient until the patient's blood has been typed and sufficient units of compatible blood or red cells can be located. Periodic shortages of supply of donated human blood are not uncommon, and rare blood types are often difficult to locate. The use of human blood products also poses the risk of exposing the patient to blood-borne diseases such as AIDS and hepatitis.

Due to the risks and cost of using human blood products, even when a sufficient supply of compatible blood is available, physicians treating patients suffering blood loss are generally not permitted to transfuse red blood cells until the patient's level of red blood cells has fallen to a level known as the "transfusion trigger." During the course of surgery, while blood volume is being lost, the patient is infused with plasma volume expanders to maintain adequate blood circulation. During the surgical procedure, red blood cells are not generally replaced until the patient has lost approximately 45% to 50% of his or her red blood cells, thus reaching the transfusion trigger, at which point the transfusion of red blood cells may be required. After the transfusion of red blood cells, the patient may continue to experience blood volume loss, which will be treated with plasma volume expanders. Even in those patients who do not require a transfusion, physicians routinely administer plasma volume expanders to maintain sufficient fluid volume to permit the available red blood cells to circulate throughout the body and to maintain the patient's physiological balance.

Several units of fluid replacement products are often administered during surgery. The number of units will vary depending upon the amount of blood loss and the kind of plasma volume expander administered. Crystalloid products must be used in larger volumes than colloid products such as Hextend.

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Uses and Benefits of Hextend and PentaLyte

Hextend and PentaLyte have been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. Both products are composed of a hydroxyethyl starch, electrolytes, sugar, and lactate in an aqueous base. Hextend uses a high molecular weight hydroxyethyl starch (hetastarch), whereas PentaLyte uses a lower molecular weight hydroxyethyl starch (pentastarch). The hetastarch is retained in the blood longer than the pentastarch, which may make Hextend the product of choice when a larger volume of plasma expander or blood replacement solution for low-temperature surgery is needed, or when the patient's ability to restore his own blood proteins after surgery is compromised. PentaLyte, with pentastarch, would be eliminated from the blood faster than Hextend and might be used when less plasma expander is needed or where the patient is more capable of quickly restoring lost blood proteins. We believe that by testing and bringing these products to the market, we can increase our market share by providing the medical community with solutions to match patients' needs.

Certain clinical test results indicate that Hextend is effective at maintaining blood calcium levels when used to replace lost blood volume. Calcium can be a significant factor in regulating blood clotting and cardiac function. Clinical studies have also shown that Hextend is better at maintaining the acid-base balance than are saline-based surgical fluids. We expect that PentaLyte will also be able to maintain blood calcium levels and acid-base balance, based upon the fact that the electrolyte formulation of PentaLyte is identical to that of Hextend.

Albumin produced from human plasma is also used as a plasma volume expander, but it is expensive and subject to supply shortages. Additionally, an FDA warning has cautioned physicians about the risk of administering albumin to seriously ill patients.

We have not attempted to synthesize potentially toxic and costly oxygen-carrying molecules such as hemoglobin because the loss of fluid volume and physiological balance may contribute as much to shock as the loss of the oxygen-carrying component of the blood. Surgical and trauma patients are routinely given supplemental oxygen and retain a substantial portion of their own red blood cells. Whole blood or packed red blood cells are generally not transfused during surgery or in trauma care until several units of plasma volume expander have been administered and the patient's blood cell count has fallen to the transfusion trigger threshold. Therefore, the lack of oxygen-carrying molecules in BioTime solutions should not pose a significant contraindication to use.

However, our scientists have conducted laboratory animal experiments in which they have shown that Hextend can be successfully used in conjunction with a hemoglobin-based oxygen carrier solution approved for veterinary purposes to completely replace the animal's circulating blood volume without any subsequent transfusion and without the use of supplemental oxygen. By diluting these oxygen carrier solutions, Hextend may reduce the potential toxicity and costs associated with the use of those products. Once such solutions have received regulatory approval and become commercially available, this sort of protocol may prove valuable in certain markets in the developing world where the blood supply is extremely unsafe. These applications may also be useful in combat situations where logistics make blood use impracticable.

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Research and Development Strategy

A significant part of our activities are devoted to research and development, focused primarily on the development of stem cell products and technology. During 2010, 2009, and 2008, we spent $7,892,024, $2,968,987, and $1,725,187, respectively, on research and development. While we utilize our own proprietary technology in both our plasma volume expander and stem cell research and development programs, we presently rely to a significant extent upon technology licensed from others in our stem cell research and development efforts. See “Licensed Stem Cell Technology and Stem Cell Product Development Agreements.”

A portion of our current efforts in the regenerative medicine field are focused on the development and sale of advanced human stem cell products and technology that can be used by researchers at universities and other institutions, at companies in the bioscience and biopharmaceutical industries, and at other companies that provide research products to companies in those industries. By focusing a portion of our resources on products and technology that will be used by researchers and drug developers at larger institutions and corporations, we believe that we will be able to commercialize products in less time and using less capital than will be required to develop therapeutic products.

In our CIRM-funded research project, we will work with hEPCs generated using our ACTCellerate™ embryonic stem cell technology. The hEPCs are relatively easy to manufacture on a large scale and in a purified state, which may make it more advantageous to work with these cells than with hES or iPS cells directly. We will work on identifying antibodies and other cell purification reagents that may aid the production of hEPCs that can be used to develop pure therapeutic cells such as nerve, blood vessel, heart muscle, cartilage, and skin.

Through our subsidiaries, OncoCyte, OrthoCyte, ReCyte Therapeutics, Cell Cure Neurosciences, and BioTime Asia, we will attempt to develop human stem cell products for therapeutic uses. We and ESI will license certain technology to the subsidiaries for their research and development programs. OncoCyte will seek to utilize human embryonic stem cell technology to create genetically modified stem cells capable of homing to specific malignant tumors while carrying genes that can cause the destruction of the cancer cells. OrthoCyte will seek to develop cellular therapeutics for the treatment of orthopedic degenerative diseases and disorders and injuries. ReCyte will seek to develop therapeutic products for cardiovascular and blood diseases and disorders. Cell Cure Neurosciences will seek to develop therapeutic products for retinal and neurological degenerative diseases and disorders. BioTime Asia will initially seek to develop therapeutic products for the treatment of ophthalmologic, skin, musculoskeletal system, and hematologic diseases, including the targeting of genetically modified stem cells to tumors to treat cancer.

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We have obtained the rights to use and market stem cell lines developed by other companies. We believe that obtaining rights to these cell lines has jump-started our assemblage of an array of products for stem cell research by our subsidiaries and for sale to researchers at other companies, universities, and other institutions.

During November 2010, we signed an agreement with CIRM to make five research-grade and GMP-compliant hES cell lines available to CIRM-funded and California-based researchers. During December 2010, the University of California system signed an agreement under which the universities in the system may acquire hES cell lines under the same terms of our agreement with CIRM. We believe that making available the GMP-grade cell lines may streamline the translation of basic science to human therapies. If the users of our cell lines eventually sign definitive license agreements with our permission to use those cell lines in commercial products, we will receive a royalty on net sales of their products, without the need on our part to fund any of their research, development, and clinical trial costs, or the costs of producing and marketing the new products.

We may also derive new stem cell lines, and we are working on the development of new products derived from human stem cells such as ESpy cell lines, which will be derivatives of hES cells and will emit beacons of light. The light-emitting property of the ESpy cells will allow researchers to track the location and distribution of the cells in both in vitro and in vivo studies.

We are also working to develop new growth and differentiation factors that will permit researchers to manufacture specific cell types from embryonic stem cells, and purification tools helpful to researchers involved in the quality control of products used in the field of regenerative medicine.

Licensing and Sale of Plasma Volume Expander Products

Hospira

Hospira has the exclusive right to manufacture and sell Hextend in the United States and Canada under a license agreement with us. Hospira is presently marketing Hextend in the United States. Hospira’s license applies to all therapeutic uses other than those involving hypothermic surgery, during which the patient’s body temperature reaches temperatures lower than 12°C (“Hypothermic Use”), or those involving the replacement of substantially all of a patient’s circulating blood volume (“Total Body Washout”).

Hospira pays us a royalty on total annual net sales of Hextend. The royalty rate is 5% plus an additional .22% for each $1,000,000 of annual net sales, up to a maximum royalty rate of 36%. The royalty rate for each year is applied on a total net sales basis. Hospira’s obligation to pay royalties on sales of Hextend will expire on a country-by-country basis when all patents protecting Hextend in the applicable country expire and any third party obtains certain regulatory approvals to market a generic equivalent product in that country. The relevant composition patents begin to expire in 2014 and the relevant methods of use patents expire in 2019.

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We have the right to convert Hospira's exclusive license to a non-exclusive license or to terminate the license outright if certain minimum sales and royalty payments are not met. In order to terminate the license outright, we would pay a termination fee in an amount ranging from the milestone payments we received to an amount equal to three times the prior year's net sales, depending upon when termination occurs. Hospira has agreed to manufacture Hextend for sale by us in the event that the exclusive license is terminated.

Hospira has certain rights to acquire additional licenses to manufacture and sell our other plasma expander products in their market territory. If Hospira exercises these rights to acquire a license to sell such products for uses other than Hypothermic Use or Total Body Washout, in addition to paying royalties, Hospira will be obligated to pay a license fee based upon our direct and indirect research, development, and other costs allocable to the new product. If Hospira desires to acquire a license to sell any of our products for use in Hypothermic Surgery or Total Body Washout, the license fees and other terms of the license will be subject to negotiation between the parties. For the purpose of determining the applicable royalty rates, net sales of any such new products licensed by Hospira will be aggregated with sales of Hextend. If Hospira does not exercise its right to acquire a new product license, we may manufacture and sell the product ourselves or we may license others to do so.

The foregoing description of the Hospira license is a summary only and is qualified in all respects by reference to the full text of the Hospira license agreement.

CJ

CJ markets Hextend in South Korea under an exclusive license from us. CJ paid us a license fee to acquire their right to market Hextend. CJ also pays us a royalty on sales of Hextend. The royalty will range from $1.30 to $2.60 per 500 ml unit of product sold, depending upon the price approved by Korea's National Health Insurance. CJ is also responsible for obtaining the regulatory approvals required to manufacture and market PentaLyte, including conducting any clinical trials that may be required, and will bear all related costs and expenses.

The foregoing description of the CJ license is a summary only and is qualified in all respects by reference to the full text of the CJ license agreement.

Summit

We have entered into agreements with Summit to develop Hextend and PentaLyte in Japan, the People's Republic of China, and Taiwan. Summit had sublicensed to Maruishi Pharmaceutical Co., Ltd. ("Maruishi") the right to manufacture and market Hextend in Japan, and the right to manufacture and market Hextend and PentaLyte in China and Taiwan. However, Maruishi has withdrawn from the sublicense arrangement with Summit, and Summit has informed us that they intend to seek a replacement sublicensee.

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A Phase III clinical trial using Hextend in surgery, funded by Maruishi, was conducted in Japan, but work on the trial has not been completed. Due to the withdrawal of Maruishi from its sublicense agreement, Summit will need to find a replacement sublicensee or other source of funding in order to complete the Phase III clinical study. Successful completion of the clinical study is required in order to seek regulatory approval to market Hextend in Japan.

The revenues from licensing fees, royalties, and net sales, and any other payments made for co-development, manufacturing, or marketing rights to Hextend and PentaLyte in Japan will be shared between BioTime and Summit as follows: 40% to us and 60% to Summit. “Net sales” means the gross revenues from the sale of a product, less rebates, discounts, returns, transportation costs, sales taxes, and import/export duties. Summit paid us fees for the right to co-develop Hextend and PentaLyte in Japan, and Summit has also paid us a share of a sublicense fee payment from Maruishi.

We will pay to Summit 8% of all net royalties that we receive from the sale of PentaLyte in the United States, plus 8% of any license fees that we receive in consideration of granting a license to develop, manufacture, and market PentaLyte in the United States. “Net royalties” means royalty payments received during a calendar year, minus the following costs and expenses incurred during such calendar year: (a) all taxes assessed (other than taxes determined with reference to our net income) and credits given or owed by us in connection with the receipt of royalties on the sale of PentaLyte in the United States, and (b) all fees and expenses payable by us to the United States FDA (directly or as a reimbursement of any licensee) with respect to PentaLyte.

Summit paid us a fee to acquire the China and Taiwan license. We also will be entitled to receive 50% of the royalties and milestone payments payable to Summit by any third-party sublicensee.

The foregoing description of the Summit agreement is a summary only and is qualified in all respects by reference to the full text of the Summit agreements.

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Major Customers

During 2010, 2009, and 2008 all of our royalty revenues were generated through sales of Hextend by Hospira in the United States and by CJ in the Republic of Korea. We also earned license fees from CJ and Summit. The following table shows the relative portions of our Hextend and PentaLyte royalty and license fee revenues paid by Hospira, CJ, and Summit that were recognized during the past three fiscal years.

	% of Total Revenues for the Year Ending December 31,		
Licensee	2010	2009	2008
Hospira	68%	73%	81%
CJ	20%	17%	9%
Summit	12%	10%	10%

Royalty Revenues and License Fees by Geographic Area

The principal source of revenues have been from royalties from the sale of our product. During the past three years, we received $945,461, $1,079,950 and $1,289,290 in royalty payments from Hospira and CJ from the sale of Hextend. The following table shows the source of our 2010, 2009, and 2008 royalty and license fee revenues by geographic areas, based on the country of domicile of the licensee:

	Revenues for Year Ending December 31,		
Geographic Area	2010	2009	2008
Domestic	$ 839,740	$ 996,681	$ 1,203,453
Asia	398,625	376,102	277,999
Total Revenues	$ 1,238,365	$ 1,372,783	$ 1,481,452

Manufacturing

Hospira manufactures Hextend for use in the North American market, and CJ manufactures Hextend for use in South Korea. Hospira and CJ have the facilities to manufacture Hextend and other BioTime products in commercial quantities. If Hospira and CJ choose not to manufacture and market other BioTime products, other manufacturers will have to be identified that would be willing to manufacture products for us or any licensee of our products.

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Facilities Required—Plasma Volume Expanders

Any products that are used in clinical trials for regulatory approval in the United States or abroad, or that are approved by the FDA or foreign regulatory authorities for marketing have to be manufactured according to GMP at a facility that has passed regulatory inspection. In addition, products that are approved for sale will have to be manufactured in commercial quantities, and with sufficient stability to withstand the distribution process, and in compliance with such domestic and foreign regulatory requirements as may be applicable. The active ingredients and component parts of the products must be of medical grade or themselves be manufactured according to FDA-acceptable "good manufacturing practices."

We do not have facilities to manufacture our plasma volume expander products in commercial quantities, or under GMP. Acquiring a manufacturing facility would involve significant expenditure of time and money for design and construction of the facility, purchasing equipment, hiring and training a production staff, purchasing raw material, and attaining an efficient level of production. Although we have not determined the cost of constructing production facilities that meet FDA requirements, we expect that the cost would be substantial, and that we would need to raise additional capital in the future for that purpose. To avoid the incurrence of those expenses and delays, we are relying on Hospira and CJ for the production of Hextend, but there can be no assurance that satisfactory arrangements will be made for any new products that we may develop.

Facilities Required—Stem Cell Products

We lease a 17,000 square-foot tissue culture facility in Alameda, California. The facility is GMP-capable and has previously been certified as Class 1000 and Class 10,000 laboratory space, and includes cell culture and manufacturing equipment previously validated for use in GMP manufacture of cell-based products. Our subsidiaries ESI, OncoCyte, OrthoCyte, and ReCyte Therapeutics will also conduct their research and development activities at this facility.

ESI leases approximately 1,290 square feet of laboratory space and 590 square feet of office space in the Biopolis, a research and development park in Singapore devoted to the biomedical sciences. We will use this facility as a manufacturing and shipping point for sales in parts of Asia.

Cell Cure Neurosciences leases approximately 290 square feet of office and laboratory space located at Hadasa Ein Carem, in Jerusalem, Israel. Most of Cell Cure Neurosciences' research and development work is conducted by Hadasit at Hadassah University Hospital under contractual arrangements.

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Raw Materials

Although most ingredients in the products we are developing are readily obtainable from multiple sources, we know of only a few manufacturers of the hydroxyethyl starches that serve as the primary drug substance in Hextend and PentaLyte. Hospira and CJ presently have a source of supply of the hydroxyethyl starch used in Hextend and PentaLyte and have agreed to maintain a supply sufficient to meet market demand for Hextend in the countries in which they market the product. We believe that we will be able to obtain a sufficient supply of starch for our needs in the foreseeable future, although we do not have supply agreements in place. If for any reason a sufficient supply of hydroxyethyl starch could not be obtained, we or a licensee would have to acquire a manufacturing facility and the technology to produce the hydroxyethyl starch according to good manufacturing practices. We would have to raise additional capital to participate in the development and acquisition of the necessary production technology and facilities, which may not be feasible. The use of a different hydroxyethyl starch could require us or a licensee to conduct additional clinical trials for FDA or foreign regulatory approval to market Hextend with the new starch.

If arrangements cannot be made for a source of supply of hydroxyethyl starch, we would have to reformulate our solutions to use one or more other starches that are more readily available. In order to reformulate our products, we would have to perform new laboratory and clinical testing to determine whether the alternative starches could be used in a safe and effective synthetic plasma volume expander, low-temperature blood substitute, or organ preservation solution. We or our licensees would also have to obtain new regulatory approvals from the FDA and foreign regulatory agencies to market the reformulated product. If needed, such testing and regulatory approvals would require the incurrence of substantial cost and delay, and there is no certainty that any such testing would demonstrate that an alternative ingredient, even if chemically similar to the one currently used, would be safe or effective.

Marketing

Stem Cell Research Products

Our products for use in stem cell research are being offered to researchers at universities and other institutions, at companies in the bioscience and biopharmaceutical industries, and at other companies that provide research products to companies in those industries. By initially focusing our resources on products and technologies that will be used by researchers and drug developers at larger institutions and corporations, we believe that we will be able to commercialize products more quickly, and with less capital, than would be possible were we to develop therapeutic products ourselves.

On July 7, 2009, ReCyte Therapeutics entered into an agreement under which Millipore Corporation became a worldwide distributor of our ACTCellerate™ human progenitor cell lines. The Millipore agreement will be assigned to us by ReCyte Therapeutics during 2011 in connection with Embryome Sciences' change of its name to ReCyte Therapeutics and the change of its business focus to the development of therapeutic products and iPS cell banking. Millipore's initial offering of our research products began during January 2010, with six novel progenitor cell lines and related growth media, which are being marketed and distributed on a worldwide basis. We anticipate that we will jointly launch with Millipore, within the coming 12 months, an additional 29 cell lines and associated ESpan™ growth media for the in vitro propagation of each progenitor cell line.

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Millipore is our exclusive third-party distributor of the products covered by the agreement, although we retain the right to sell the products to our own customers, and we are presently marketing products online at Embryome.com. Our research products are also being offered in the People's Republic of China and other countries in Asia through BioTime Asia. We will provide the products to Millipore on consignment and will be paid on a quarterly basis for products sold. We will receive additional annual payments from Millipore based on a percentage of annual sales, if annual sales exceed certain milestone amounts.

The Millipore agreement will have a term of five years, subject to annual renewal if the parties so elect, and subject to Millipore's right to terminate the agreement at any time upon 60-day notice. Either party may also terminate the agreement in the case of an uncured breach or default by the other party.

The market for our stem cell products may be impacted by the amount of government funding available for research in the development of stem cell therapies.

Plasma Volume Expanders

Hextend is being distributed in the United States by Hospira and in South Korea by CJ under exclusive licenses from us. Hospira also has the right to obtain licenses to manufacture and sell other BioTime products. We have granted CJ the right to market PentaLyte in South Korea, and we have licensed to Summit the right to market Hextend and PentaLyte in Japan, China, and Taiwan, but our licensees will have to first obtain the foreign regulatory approvals required to sell our product in those countries.

Because Hextend is a surgical product, sales efforts must be directed to physicians and hospitals. The Hextend marketing strategy is designed to reach its target customer base through sales calls, through an advertising campaign focused on the use of a plasma-like substance to replace lost blood volume, and on the ability of Hextend to support vital physiological processes.

Hextend competes with other products used to treat or prevent hypovolemia, including albumin, generic 6% hetastarch solutions, and crystalloid solutions. The competing products have been commonly used in surgery and trauma care for many years, and in order to sell Hextend, physicians must be convinced to change their product loyalties. Although albumin is expensive, crystalloid solutions and generic 6% hetastarch solutions sell at low prices. In order to compete with other products, particularly those that sell at lower prices, Hextend will have to be recognized as providing medically significant advantages.

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The FDA has required the manufacturers of 6% hetastarch in saline solutions to change their product labeling by adding a warning stating that those products are not recommended for use as a cardiac bypass prime solution, or while the patient is on cardiopulmonary bypass, or in the immediate period after the pump has been disconnected. We have not been required to add that warning to the labeling of Hextend. An article discussing this issue entitled “6% Hetastarch in Saline Linked to Excessive Bleeding in Bypass Surgery” appeared in the December 2002 edition of Anesthesiology News. We understand that a number of hospitals have switched from 6% hetastarch in saline to Hextend due to these concerns.

As part of the marketing program, a number of studies have been conducted that show the advantages of receiving Hextend and other BioTime products during surgery. As these studies are completed, the results are presented at medical conferences and articles are written for publication in medical journals. We are also aware of independent studies using Hextend that are being conducted by physicians and hospitals who may publish their findings in medical journals or report their findings at medical conferences. For example, a recent independent study in hemodynamically unstable trauma patients conducted at the University of Miami Ryder Trauma Center reported that initial resuscitation with Hextend was associated with no obvious coagulopathy and reduced mortality compared to fluid resuscitation without Hextend. The outcome of future medical studies and timing of the publication or presentation of the results could have an effect on Hextend sales.

Patents and Trade Secrets

Patents Used in Our Plasma Volume Expander Business

We currently hold 26 issued United States patents with composition and methods-of-use claims covering our proprietary solutions, including Hextend and PentaLyte. The most recent U.S. patents were issued during March 2009. Some of our allowed claims in the United States, which include the composition and methods-of-use of Hextend and PentaLyte, are expected to remain in force until 2014 in the case of the composition patents, and 2019 in the case of the methods-of-use patents. Patents covering certain proprietary solutions have also been issued in several countries of the European Union, Australia, Israel, Russia, South Africa, South Korea, Japan, China, Hong Kong, Taiwan, and Singapore, and we have filed patent applications in other foreign countries for certain products, including Hextend, HetaCool, and PentaLyte. Certain device patents describing our hyperbaric (high-pressure oxygen) chamber and our proprietary microcannula (a surgical tool) have also been issued in the United States and overseas. Both devices have possible indications in clinical medicine, although thus far they have only been used in research. There is no assurance that any additional patents will be issued. Furthermore, the enforcement of patent rights often requires litigation against third party infringers, and such litigation can be costly to pursue.

Patents Used in Our Regenerative Medicine and Stem Cell Business

In addition to patenting our own technology and that of our subsidiaries, we and our subsidiaries have licensed patents and patent applications for certain stem cell technology, hEPC lines, and hES cell lines from other companies. See “Licensed Stem Cell Technologies and Stem Cell Product Development Agreements.”

In Europe, the European Patent Convention prohibits the granting of European patents for inventions that concern "uses of human embryos for industrial or commercial purposes." The European Patent Office is presently interpreting this prohibition broadly, and is applying it to reject patent claims that pertain to hES cells. However, this broad interpretation is being challenged through the European Patent Office appeals system. As a result, we do not yet know whether or to what extent we will be able to obtain patent protection for our hES cell technologies in Europe.

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General Risks Related to Obtaining and Enforcing Patent Protection

There is a risk that any patent applications that we file and any patents that we hold or later obtain could be challenged by third parties and be declared invalid or infringing on third party claims. A patent interference proceeding may be instituted with the U.S. Patent and Trademark Office ("PTO") when more than one person files a patent application covering the same technology, or if someone wishes to challenge the validity of an issued patent. At the completion of the interference proceeding, the PTO will determine which competing applicant is entitled to the patent, or whether an issued patent is valid. Patent interference proceedings are complex, highly contested legal proceedings, and the PTO's decision is subject to appeal. This means that if an interference proceeding arises with respect to any of our patent applications, we may experience significant expenses and delay in obtaining a patent, and if the outcome of the proceeding is unfavorable to us, the patent could be issued to a competitor rather than to us. In addition to interference proceedings, the PTO can re-examine issued patents at the request of a third party seeking to have the patent invalidated. This means that patents owned or licensed by us may be subject to re-examination and may be lost if the outcome of the re-examination is unfavorable to us.

Oppositions to the issuance of patents may be filed under European patent law and the patent laws of certain other countries. As with the U.S. PTO interference proceedings, these foreign proceedings can be very expensive to contest and can result in significant delays in obtaining a patent or can result in a denial of a patent application.

The enforcement of patent rights often requires litigation against third-party infringers, and such litigation can be costly to pursue. Even if we succeed in having new patents issued or in defending any challenge to issued patents, there is no assurance that our patents will be comprehensive enough to provide us with meaningful patent protection against our competitors.

In addition to relying on patents, we rely on trade secrets, know-how, and continuing technological advancement to maintain our competitive position. We have entered into intellectual property, invention, and non-disclosure agreements with our employees, and it is our practice to enter into confidentiality agreements with our consultants. There can be no assurance, however, that these measures will prevent the unauthorized disclosure or use of our trade secrets and know-how, or that others may not independently develop similar trade secrets and know-how or obtain access to our trade secrets, know-how, or proprietary technology.

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Competition

We and our subsidiaries face substantial competition in both our blood plasma expander business and our regenerative medicine and stem cell business. That competition is likely to intensify as new products and technologies reach the market. Superior new products are likely to sell for higher prices and generate higher profit margins once acceptance by the medical community is achieved. Those companies that are successful at being the first to introduce new products and technologies to the market may gain significant economic advantages over their competitors in the establishment of a customer base and track record for the performance of their products and technologies. Such companies will also benefit from revenues from sales that could be used to strengthen their research and development, production, and marketing resources. All companies engaged in the medical products industry face the risk of obsolescence of their products and technologies as more advanced or cost-effective products and technologies are developed by their competitors. As the industry matures, companies will compete based upon the performance and cost-effectiveness of their products.

Plasma Volume Expanders

Our plasma volume expander solutions will compete with products currently used to treat or prevent hypovolemia, including albumin, other colloid solutions, and crystalloid solutions presently manufactured by established pharmaceutical companies, and with human blood products. Some of these products–crystalloid solutions in particular–are commonly used in surgery and trauma care, and they sell at low prices. In order to compete with other products, particularly those that sell at lower prices, our products will have to be recognized as providing medically significant advantages. Like Hextend, the competing products are being manufactured and marketed by established pharmaceutical companies with large research facilities, technical staffs, and financial and marketing resources. B.Braun presently markets Hespan, an artificial plasma volume expander containing 6% hetastarch in saline solution. Hospira and Baxter International manufacture and sell a generic equivalent of Hespan. As a result of the introduction of generic plasma expanders and new proprietary products, competition in the plasma expander market has intensified, and wholesale prices have declined. Hospira, which markets Hextend in the United States, is also the leading seller of generic 6% hetastarch in saline solution, and recently obtained the right to sell Voluven®, a plasma volume expander containing a 6% low molecular weight hydroxyethyl starch in saline solution. Sanofi-Aventis, Baxter International, and Alpha Therapeutics sell albumin, and Hospira, Baxter International, and B.Braun sell crystalloid solutions.

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To compete with new and existing plasma expanders, we have developed products that contain constituents that may prevent or reduce the physiological imbalances, bleeding, fluid overload, edema, poor oxygenation, and organ failure that can occur when competing products are used. To compete with existing organ preservation solutions, we have developed solutions that can be used to preserve all organs simultaneously and for long periods of time.

A number of other companies are known to be developing hemoglobin and synthetic red blood cell substitutes and technologies. Our products have been developed for use either before red blood cells are needed or in conjunction with the use of red blood cells. In contrast, hemoglobin and other red blood cell-substitute products are designed to remedy hypoxia and similar conditions that may result from the loss of oxygen-carrying red blood cells. Those products would not necessarily compete with our products, unless oxygenating molecules were included in solutions that could replace fluid volume and prevent or reduce the physiological imbalances as effectively as can be achieved with our products. Generally, red blood cell substitutes are more expensive to produce and potentially more toxic than Hextend and PentaLyte.

Products for Stem Cell Research

The stem cell industry is 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 the smaller companies' potential research and development as well as 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.

We believe that some of our competitors are trying to develop hES cell-, iPS cell-, and hEPC-based technologies and products that may compete with our potential stem cell products based on efficacy, safety, cost, and intellectual property positions. We are aware that ACT has obtained approval from the FDA to commence clinical trials of a hES cell product designed to treat age-related macular degeneration. If the ACT product is proven to be safe and effective, it may reach the market ahead of Cell Cure Neuroscience's OpRegen, which is not yet in clinical trials. We are also aware that Geron Corp. is working on stem cell-derived treatments for cancer and cartilage repair and its intended products may be in more advanced stages of development than ours.

We may also face competition from companies that have filed patent applications relating to the cloning or differentiation of stem cells. Such companies include ACT, which has had claims allowed on a patent for RPE. We may be required to seek licenses from these competitors in order to commercialize certain products proposed by us, and such licenses may not be granted.

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Government Regulation

FDA and Foreign Regulation

The FDA and foreign regulatory authorities will regulate our proposed products as drugs, biologicals, or medical devices, depending upon such factors as the use to which the product will be put, the chemical composition, and the interaction of the product with the human body. In the United States, products, such as plasma volume expanders that are intended to be introduced into the body will be regulated as drugs, while tissues and cells intended for transplant into the human body will be regulated as biologicals, and both plasma volume expanders and tissue and cell therapeutic products will be reviewed by the FDA staff responsible for evaluating biologicals.

Our domestic human drug and biological products will be subject to rigorous FDA review and approval procedures. After testing in animals, an Investigational New Drug Application ("IND") must be filed with the FDA to obtain authorization for human testing. Extensive clinical testing, which is generally done in three phases, must then be undertaken at a hospital or medical center to demonstrate optimal use, safety, and efficacy of each product in humans. Each clinical study is conducted under the auspices of an independent Institutional Review Board ("IRB"). The IRB will consider, among other things, ethical factors, the safety of human subjects, and the possible liability of the institution. The time and expense required to perform this clinical testing can far exceed the time and expense of the research and development initially required to create the product. No action can be taken to market any therapeutic product in the United States until an appropriate New Drug Application ("NDA") has been approved by the FDA. FDA regulations also restrict the export of therapeutic products for clinical use prior to NDA approval.

Even after initial FDA approval has been obtained, further studies may be required to provide additional data on safety or to gain approval for the use of a product as a treatment for clinical indications other than those initially targeted. In addition, use of these products during testing and after marketing could reveal side effects that could delay, impede, or prevent FDA marketing approval, resulting in FDA-ordered product recall, or in FDA-imposed limitations on permissible uses.

Obtaining regulatory approval of HyStem-Rx or a similar implantable matrix for tissue transplant or stem cell therapy will require the preparation of a Device Master File containing details on the basic chemistry of the product manufacturing and production methods, analytical controls to assure that the product meets its release specification, and data from analytical assay and process validations, ISO 10993 biocompatibility testing, and if stem cell line cultures involved, safety and toxicology investigations of those cultures. Preparation of a Device Master File and completion of ISO biocompatibility testing represents a majority of the expenses associated with the regulatory application process in Europe. Clinical trials may also be required on pre-approval or post-approval basis in Europe. The procedures for obtaining FDA approval for sale in the United States are likely to be stringent, and the cost greater, than would be the case in an application for approval in Europe.

The FDA and comparable foreign regulatory agencies regulate the manufacturing process of pharmaceutical products, medical devices, and human tissue and cell products, requiring that they be produced in compliance with GMP (see "Manufacturing"). The regulatory agencies also regulate the content of advertisements used to market pharmaceutical products and medical devices. Generally, claims made in advertisements concerning the safety and efficacy of a product, or any advantages of a product over another product, must be supported by clinical data filed as part of an NDA or an amendment to an NDA, and statements regarding the use of a product must be consistent with the approved labeling and dosage information for that product.

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Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Even if FDA approval has been obtained, approval of a product by comparable regulatory authorities of foreign countries must be obtained prior to the commencement of marketing the product in those countries. The time required to obtain such approval may be longer or shorter than that required for FDA approval.

The United States government and its agencies have until recently refused to fund research which involves the use of human embryonic tissue. President Bush issued Executive Orders on August 9, 2001 and June 20, 2007 that permitted federal funding of research on hES cells using only the limited number of hES cell lines that had already been created as of August 9, 2001. On March 9, 2009, President Obama issued an Executive Order rescinding President Bush's August 9, 2001 and June 20, 2007 Executive Orders. President Obama's Executive Order also instructed the National Institutes of Health to review existing guidance on human stem cell research and to issue new guidance on the use of hES cells in federally funded research, consistent with President's new Executive Order and existing law. The U.S. National Institutes of Health ("NIH") has adopted new guidelines that went into effect July 7, 2009. The central focus of the new guidelines is to assure that hES cells used in federally funded research were derived from human embryos that were created for reproductive purposes, were no longer needed for this purpose, and were voluntarily donated for research purposes with the informed written consent of the donors. Those hES cells that were derived from embryos created for research purposes rather than reproductive purposes, and other hES cells that were not derived in compliance with the guidelines, are not eligible for use in federally funded research. A lawsuit, Sherley v. Sebelius, is now pending challenging the legality of the new NIH guidelines. In that litigation, a United States District Court issued a temporary injunction against the implementation of the new NIH guidelines, but the District Court's ruling has been stayed during the pendency of an appeal. The ultimate resolution of that lawsuit could determine whether the federal government may fund research using hES cells, unless new legislation is passed expressly permitting or prohibiting such funding.

In addition to President Obama's Executive Order, a bipartisan bill has been introduced in the United States Senate that would allow Federal funding of hES research. The Senate bill is identical to one that was previously approved by both Houses of Congress but vetoed by President Bush. The Senate Bill provides that hES cells will be eligible for use in research conducted or supported by federal funding if the cells meet each of the following guidelines: (1) the stem cells were derived from human embryos that have been donated from in vitro fertilization clinics, were created for the purposes of fertility treatment, and were in excess of the clinical need of the individuals seeking such treatment; (2) prior to the consideration of embryo donation and through consultation with the individuals seeking fertility treatment, it was determined that the embryos would never be implanted in a woman and would otherwise be discarded, and (3) the individuals seeking fertility treatment donated the embryos with written informed consent and without receiving any financial or other inducements to make the donation. The Senate Bill authorizes the NIH to adopt further guidelines consistent with the legislation.

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California State Regulations

The state of California has adopted legislation and regulations that require institutions that conduct stem cell research to notify, and in certain cases obtain approval from, a Stem Cell Research Oversight Committee ("SCRO Committee") before conducting the research. Advance notice, but not approval by the SCRO Committee, is required in the case of in vitro research that does not derive new stem cell lines. Research that derives new stem cell lines, or that involves fertilized human oocytes or blastocysts, or that involves clinical trials or the introduction of stem cells into humans, or that involves introducing stem cells into animals, requires advanced approval by the SCRO Committee. Clinical trials may also entail approvals from an institutional review board ("IRB") at the medical center at which the study is conducted, and animal studies may require approval by an Institutional Animal Care and Use Committee.

All human pluripotent stem cell lines that will be used in our research must be acceptably derived. To be acceptably derived, the pluripotent stem cell line must have either:

Been listed on the National Institutes of Health Human Embryonic Stem Cell Registry, or

Been deposited in the United Kingdom Stem Cell Bank, or

Been derived by, or approved for use by, a licensee of the United Kingdom Human Fertilisation and Embryology Authority, or

Been derived in accordance with the Canadian Institutes of Health Research Guidelines for Human Stem Cell Research under an application approved by the National Stem Cell Oversight Committee, or

Been derived under the following conditions:

(a) Donors of gametes, embryos, somatic cells, or human tissue gave voluntary and informed consent.

(b) Donors of gametes, embryos, somatic cells, or human tissue did not receive valuable consideration. This provision does not prohibit reimbursement for permissible expenses as determined by an IRB.

(c) A person may not knowingly, for valuable consideration, purchase or sell gametes, embryos, somatic cells, or human tissue for research purposes. This provision does not prohibit reimbursement for permissible expenditures as determined by an IRB or SCRO Committee. "Permissible expenditures" means necessary and reasonable costs directly incurred as a result of persons, not including human subjects or donors, providing gametes, embryos, somatic cells, or human tissue for research purposes. Permissible expenditures may include but are not limited to costs associated with processing, quality control, storage, or transportation of materials.

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(d) Donation of gametes, embryos, somatic cells, or human tissue was overseen by an IRB (or, in the case of foreign sources, an IRB equivalent).

(e) Individuals who consented to donate stored gametes, embryos, somatic cells, or human tissue were not reimbursed for the cost of storage prior to the decision to donate.

California regulations also require that certain records be maintained with respect to stem cell research and the materials used, including:

A registry of all human stem cell research conducted, and the source(s) of funding for this research.

A registry of human pluripotent stem cell lines derived or imported, to include, but not necessarily limited to:

(a) The methods utilized to characterize and screen the materials for safety;

(b) The conditions under which the materials have been maintained and stored;

(c) A record of every gamete donation, somatic cell donation, embryo donation, or product of somatic cell nuclear transfer that has been donated, created, or used;

(d) A record of each review and approval conducted by the SCRO Committee.

California Proposition 71

During November 2004, California State Proposition 71 (“Prop. 71”), the California Stem Cell Research and Cures Initiative, was adopted by state-wide referendum. Prop. 71 provides for a state-sponsored program designed to encourage stem cell research in the State of California, and to finance such research with State funds totaling approximately $295 million annually for 10 years beginning in 2005. This initiative created CIRM, which will provide grants, primarily but not exclusively, to academic institutions to advance both hES cell research and adult stem cell research. During April 2009, we were awarded a $4,721,706 research grant from CIRM. We believe that Prop. 71 funding for research in the use of hES cells for various diseases and conditions will contribute to the demand for stem cell research products.

Employees

As of December 31, 2010, we employed thirty-one persons on a full-time basis and five persons on a part-time basis. Twelve full-time employees, including one employed by ESI and two by Cell Cure Neurosciences, hold Ph.D. Degrees in one or more fields of science.

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Item 1A. Risk Factors

Our business is subject to various risks, including those described below. You should consider the following risk factors, together with all of the other information included in this report, which could materially adversely affect our proposed operations, our business prospects, and financial condition, and the value of an investment in our business. There may be other factors that are not mentioned here or of which we are not presently aware that could also affect our business operations and prospects.

Risks Related to Our Business Operations

We have incurred operating losses since inception and we do not know if we will attain profitability

Our net losses for the fiscal years ended December 31, 2010, 2009 and 2008 were $10,103,872, $5,144,499, and $3,780,895, respectively, and we had an accumulated deficit of $64,011,947, $52,769,891, and $47,625,392 as of December 31, 2010, 2009, and 2008, respectively. Since inception, we have primarily financed our operations through the sale of equity securities, licensing fees, royalties on product sales by our licensees, and borrowings. Also, we have recently been awarded a research grant from the California Institute of Regenerative Medicine for a particular project. Ultimately, our ability to generate sufficient operating revenue to earn a profit depends upon our success in developing and marketing or licensing our products and technology.

We will spend a substantial amount of our capital on research and development but we might not succeed in developing products and technologies that are useful in medicine

We are attempting to develop new medical products and technologies.

Many of our experimental products and technologies have not been applied in human medicine and have only been used in laboratory studies in vitro or in animals. These new products and technologies might not prove to be safe and efficacious in the human medical applications for which they were developed.

The experimentation we are doing is costly, time consuming, and uncertain as to its results. We incurred research and development expenses amounting to $7,892,024, $2,968,987, and $1,725,187 during the fiscal years ended December 31, 2010, 2009 and 2008, respectively.

If we are successful in developing a new technology or product, refinement of the new technology or product and definition of the practical applications and limitations of the technology or product may take years and require the expenditure of large sums of money.

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Future clinical trials of new therapeutic products will be very expensive and will take years to complete. We may not have the financial resources to fund clinical trials on our own and we may have to enter into licensing or collaborative arrangements with larger, well-capitalized pharmaceutical companies in order to bear the cost. Any such arrangements may be dilutive to our ownership or economic interest in the products we develop, and we might have to accept a royalty payment on the sale of the product rather than receiving the gross revenues from product sales.

Our success depends in part on the uncertain growth of the stem cell industry, which is still in its infancy

The success of our business of selling products for use in stem cell research depends on the growth of stem cell research, without which there may be no market or only a very small market for our products and technology. The likelihood that stem cell research will grow depends upon the successful development of stem cell products that can be used to treat disease or injuries in people or that can be used to facilitate the development of other pharmaceutical products. The growth in stem cell research also depends upon the availability of funding through private investment and government research grants.

There can be no assurance that any safe and efficacious human medical applications will be developed using stem cells or related technology.

Government-imposed restrictions and religious, moral, and ethical concerns with respect to use of embryos or human embryonic stem cells in research and development could have a material adverse effect on the growth of the stem cell industry, even if research proves that useful medical products can be developed using human embryonic stem cells.

Sales of our products to date have not been sufficient to generate an amount of revenue sufficient to cover our operating expenses

Hextend is presently the only plasma expander product that we have on the market, and it is being sold only in the United States and South Korea. The royalty revenues that we have received from sales of Hextend have not been sufficient to pay our operating expenses. This means that we need to successfully develop and market or license additional products and earn additional revenues in sufficient amounts to meet our operating expenses.

We will receive additional license fees and royalties if our licensees are successful in marketing Hextend and PentaLyte in Japan, Taiwan, and China, but they have not yet obtained the regulatory approvals required to begin selling those products.

We are also beginning to bring our first stem cell research products to the market, but there is no assurance that we will succeed in generating significant revenues from the sale of those products.

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Sales of our plasma volume expander products may be adversely impacted by the availability of competing products

Hextend and our other plasma expander products will compete with other products that are commonly used in surgery and trauma care and sell at lower prices.

In order to compete with other products, particularly those that sell at lower prices, our products will have to provide medically significant advantages.

Physicians and hospitals may be reluctant to try a new product due to the high degree of risk associated with the application of new technologies and products in the field of human medicine.

Competing products are being manufactured and marketed by established pharmaceutical companies. For example, B. Braun/McGaw presently markets Hespan, an artificial plasma volume expander, and Hospira and Baxter International, Inc. manufacture and sell a generic equivalent of Hespan.

There also is a risk that our competitors may succeed at developing safer or more effective products that could render our products and technologies obsolete or noncompetitive.

We might need to issue additional equity or debt securities in order to raise additional capital needed to pay our operating expenses

We plan to continue to incur substantial research and product development expenses, largely through our subsidiaries, and we and our subsidiaries will need to raise additional capital to pay operating expenses until we are able to generate sufficient revenues from product sales, royalties, and license fees.

It is likely that additional sales of equity or debt securities will be required to meet our short-term capital needs, unless we receive substantial revenues from the sale of our new products or we are successful at licensing or sublicensing the technology that we develop or acquire from others and we receive substantial licensing fees and royalties.

Sales of additional equity securities by us or our subsidiaries could result in the dilution of the interests of present shareholders.

The amount and pace of research and development work that we and our subsidiaries can do or sponsor, and our ability to commence and complete clinical trials required to obtain FDA and foreign regulatory approval of our pharmaceutical products, depends upon the amount of money we have

At December 31, 2010, we had $33,324,924 of cash and cash equivalents on hand. There can be no assurance that we or our subsidiaries will be able to raise additional funds on favorable terms or at all, or that any funds raised will be sufficient to permit us or our subsidiaries to develop and market our products and technology. Unless we and our subsidiaries are able to generate sufficient revenue or raise additional funds when needed, it is likely that we will be unable to continue our planned activities, even if we make progress in our research and development projects.

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We have already curtailed the pace and scope of our plasma volume expander development efforts due to the limited amount of funds available, and we may have to postpone other laboratory research and development work unless our cash resources increase through a growth in revenues or additional equity investment or borrowing.

Our business could be adversely affected if we lose the services of the key personnel upon whom we depend

Our stem cell research program is directed primarily by our Chief Executive Officer, Dr. Michael West. The loss of Dr. West's services could have a material adverse effect on us.

Risks Related to Our Industry

We will face certain risks arising from regulatory, legal, and economic factors that affect our business and the business of other pharmaceutical development companies. Because we are a small company with limited revenues and limited capital resources, we may be less able to bear the financial impact of these risks than is the case with larger companies possessing substantial income and available capital.

If we do not receive FDA and other regulatory approvals we will not be permitted to sell our pharmaceutical products

The pharmaceutical products that we and our subsidiaries develop cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. The need to obtain regulatory approval to market a new product means that:

We will have to conduct expensive and time-consuming clinical trials of new products. The full cost of conducting and completing clinical trials necessary to obtain FDA approval of a new product cannot be presently determined, but could exceed our current financial resources.

We will incur the expense and delay inherent in seeking FDA and foreign regulatory approval of new products, even if the results of clinical trials are favorable. For example, 12 months elapsed between the date we filed our application to market Hextend in the United States and the date on which our application was approved. Approximately 36 months elapsed between the date we filed our application for approval to market Hextend in Canada, and the date on which our application was approved, even though we did not have to conduct any additional clinical trials.

Data obtained from preclinical and clinical studies is susceptible to varying interpretations that could delay, limit, or prevent regulatory agency approvals. Delays in the regulatory approval process or rejections of NDAs may be encountered as a result of changes in regulatory agency policy.

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Because the therapeutic products we are developing with hES and iPS technology involve the application of new technologies and approaches to medicine, the FDA or foreign regulatory agencies may subject those products to additional or more stringent review than drugs or biologicals derived from other technologies.

A product that is approved may be subject to restrictions on use.

The FDA can recall or withdraw approval of a product if problems arise.

We will face similar regulatory issues in foreign countries.

Government-imposed restrictions and religious, moral, and ethical concerns about the use of hES cells could prevent us from developing and successfully marketing stem cell products

Government-imposed restrictions with respect to the use of embryos or human embryonic stem cells in research and development could limit our ability to conduct research and develop new products.

Government-imposed restrictions on the use of embryos or hES cells in the United States and abroad could generally constrain stem cell research, thereby limiting the market and demand for our products. During March 2009, President Obama lifted certain restrictions on federal funding of research involving the use of hES cells, and in accordance with President Obama's Executive Order, the NIH has adopted new guidelines for determining the eligibility of hES cell lines for use in federally funded research. The central focus of the proposed guidelines is to assure that hES cells used in federally funded research were derived from human embryos that were created for reproductive purposes, were no longer needed for this purpose, and were voluntarily donated for research purposes with the informed written consent of the donors. The hES cells that were derived from embryos created for research purposes rather than reproductive purposes, and other hES cells that were not derived in compliance with the guidelines, are not eligible for use in federally funded research. A lawsuit, Sherley v. Sebelius, is now pending, challenging the legality of the new NIH guidelines. In that litigation, a United States District Court issued a temporary injunction against the implementation of the new NIH guidelines, but the District Court's ruling has been stayed during the pendency of an appeal. The ultimate resolution of that lawsuit could determine whether the federal government may fund research using hES cells, unless new legislation is passed expressly permitting or prohibiting such funding.

California law requires that stem cell research be conducted under the oversight of a SCRO committee. Many kinds of stem cell research, including the derivation of new hES cell lines, may only be conducted in California with the prior written approval of the SCRO. A SCRO could prohibit or impose restrictions on the research that we plan to do.

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The use of hES cells gives rise to religious, moral, and ethical issues regarding the appropriate means of obtaining the cells and the appropriate use and disposal of the cells. These considerations could lead to more restrictive government regulations or could generally constrain stem cell research, thereby limiting the market and demand for our products.

If we are unable to obtain and enforce patents and to protect our trade secrets, others could use our technology to compete with us, which could limit opportunities for us to generate revenues by licensing our technology and selling products

Our success will depend in part on our ability to obtain and enforce patents and maintain trade secrets in the United States and in other countries. If we are unsuccessful at obtaining and enforcing patents, our competitors could use our technology and create products that compete with our products, without paying license fees or royalties to us.

The preparation, filing, and prosecution of patent applications can be costly and time consuming. Our limited financial resources may not permit us to pursue patent protection of all of our technology and products throughout the world.

Even if we are able to obtain issued patents covering our technology or products, we may have to incur substantial legal fees and other expenses to enforce our patent rights in order to protect our technology and products from infringing uses. We may not have the financial resources to finance the litigation required to preserve our patent and trade secret rights.

There is no certainty that our pending or future patent applications will result in the issuance of patents

We have filed patent applications for technology that we have developed, and we have obtained licenses for a number of patent applications covering technology developed by others, that we believe will be useful in producing new products, and which we believe may be of commercial interest to other companies that may be willing to sublicense the technology for fees or royalty payments. In the future, we may also file additional new patent applications seeking patent protection for new technology or products that we develop ourselves or jointly with others. However, there is no assurance that any of our licensed patent applications, or any patent applications that we have filed or that we may file in the future covering our own technology, either in the United States or abroad, will result in the issuance of patents.

In Europe, the European Patent Convention prohibits the granting of European patents for inventions that concern “uses of human embryos for industrial or commercial purposes.” The European Patent Office is presently interpreting this prohibition broadly, and is applying it to reject patent claims that pertain to human embryonic stem cells. However, this broad interpretation is being challenged through the European Patent Office appeals system. As a result, we do not yet know whether or to what extent we will be able to obtain patent protection for our human embryonic stem cell technologies in Europe.

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The process of applying for and obtaining patents can be expensive and slow

The preparation and filing of patent applications, and the maintenance of patents that are issued, may require substantial time and money.

A patent interference proceeding may be instituted with the U.S. PTO when more than one person files a patent application covering the same technology, or if someone wishes to challenge the validity of an issued patent. At the completion of the interference proceeding, the PTO will determine which competing applicant is entitled to the patent, or whether an issued patent is valid. Patent interference proceedings are complex, highly contested legal proceedings, and the PTO's decision is subject to appeal. This means that if an interference proceeding arises with respect to any of our patent applications, we may experience significant expenses and delay in obtaining a patent, and if the outcome of the proceeding is unfavorable to us, the patent could be issued to a competitor rather than to us.

Oppositions to the issuance of patents may be filed under European patent law and the patent laws of certain other countries. As with the U.S. PTO interference proceedings, these foreign proceedings can be very expensive to contest and can result in significant delays in obtaining a patent or can result in a denial of a patent application.

Our patents may not protect our products from competition

We or our subsidiaries have patents in the United States, Canada, the European Union countries, Australia, Israel, Russia, South Africa, South Korea, Japan, Hong Kong, and Singapore, and have filed patent applications in other foreign countries for our plasma volume expander products.

We might not be able to obtain any additional patents, and any patents that we do obtain might not be comprehensive enough to provide us with meaningful patent protection.

There will always be a risk that our competitors might be able to successfully challenge the validity or enforceability of any patent issued to us.

In addition to interference proceedings, the U.S. PTO can re-examine issued patents at the request of a third party seeking to have the patent invalidated. This means that patents owned or licensed by us may be subject to re-examination and may be lost if the outcome of the re-examination is unfavorable to us.

We may be subject to patent infringement claims that could be costly to defend, which may limit our ability to use disputed technologies, and which could prevent us from pursuing research and development or commercialization of some of our products

The success of our business depends significantly on our ability to operate without infringing patents and other proprietary rights of others. If the technology that we use infringes a patent held by others, we could be sued for monetary damages by the patent holder or its licensee, or we could be prevented from continuing research, development, and commercialization of products that rely on that technology, unless we are able to obtain a license to use the patent. The cost and availability of a license to a patent cannot be predicted, and the likelihood of obtaining a license at an acceptable cost would be lower if the patent holder or any of its licensees is using the patent to develop or market a product with which our product would compete. If we could not obtain a necessary license, we would need to develop or obtain rights to alternative technologies, which could prove costly and could cause delays in product development, or we could be forced to discontinue the development or marketing of any products that were developed using the technology covered by the patent.

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

Our business depends on several critical technologies that are based in part on technology licensed from third parties. Those third-party license agreements impose obligations on us, including payment obligations and obligations to pursue development of commercial products under the licensed patents or technology. If a licensor believes that we have failed to meet our obligations under a license agreement, the licensor could seek to limit or terminate our license rights, which could lead to costly and time-consuming litigation and, potentially, a loss of the licensed rights. During the period of any such litigation, our ability to carry out the development and commercialization of potential products, and our ability to raise any capital that we might then need, could be significantly and negatively affected. If our license rights were restricted or ultimately lost, we would not be able to continue to use the licensed technology in our business.

The price and sale of our products may be limited by health insurance coverage and government regulation

Success in selling our pharmaceutical products may depend in part on the extent to which health insurance companies, HMOs, and government health administration authorities such as Medicare and Medicaid will pay for the cost of the products and related treatment. Presently, most health insurance plans and HMOs will pay for Hextend when it is used in a surgical procedure that is covered by the plan. However, until we actually introduce a new product into the medical marketplace, we will not know with certainty whether adequate health insurance, HMO, and government coverage will be available to permit the product to be sold at a price high enough for us to generate a profit. In some foreign countries, pricing or profitability of health care products is subject to government control, which may result in low prices for our products. In the United States, there have been a number of federal and state proposals to implement similar government controls, and new proposals are likely to be made in the future.

Risks Pertaining to Our Common Shares

Ownership of our common shares will entail certain risks associated with the volatility of prices for our shares and the fact that we do not pay dividends.

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Because we are engaged in the development of pharmaceutical and stem cell research products, the price of our stock may rise and fall rapidly

The market price of our shares, like that of the shares of many biotechnology companies, has been highly volatile.

The price of our shares may rise rapidly in response to certain events, such as the commencement of clinical trials of an experimental new drug, even though the outcome of those trials and the likelihood of ultimate FDA approval remain uncertain.

Similarly, prices of our shares may fall rapidly in response to certain events such as unfavorable results of clinical trials or a delay or failure to obtain FDA approval.

The failure of our earnings to meet analysts' expectations could result in a significant rapid decline in the market price of our common shares.

Current economic and stock market conditions may adversely affect the price of our common shares

The stock market has been experiencing extreme price and volume fluctuations which have affected the market price of the equity securities without regard to the operating performance of the issuing companies. Broad market fluctuations, as well as general economic and political conditions, may adversely affect the market price of the common shares.

Because we do not pay dividends, our stock may not be a suitable investment for anyone who needs to earn dividend income

We do not pay cash dividends on our common shares. For the foreseeable future, we anticipate that any earnings generated in our business will be used to finance the growth of our business and will not be paid out as dividends to our shareholders. This means that our stock may not be a suitable investment for anyone who needs to earn income from their investments.

Securities analysts may not initiate coverage or continue to cover our common shares, and this may have a negative impact on the market price of our shares

The trading market for our common shares will depend, in part, on the research and reports that securities analysts publish about our business and our common shares. We do not have any control over these analysts. There is no guarantee that securities analysts will cover our common shares. If securities analysts do not cover our common shares, the lack of research coverage may adversely affect the market price of those shares. If securities analysts do cover our shares, they could issue reports or recommendations that are unfavorable to the price of our shares, and they could downgrade a previously favorable report or recommendation, and in either case our share price could decline as a result of the report. If one or more of these analysts does not initiate coverage, ceases to cover our shares or fails to publish regular reports on our business, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

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You may experience dilution of your ownership interests because of the future issuance of additional shares of common and preferred shares by us and our subsidiaries

In the future, we may issue our authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of our present shareholders. We are currently authorized to issue an aggregate of 76,000,000 shares of capital stock consisting of 75,000,000 common shares and 1,000,000 “blank check” preferred shares. As of March 1, 2011, there were 47,357,360 common shares outstanding; 3,320,590 common shares reserved for issuance upon the exercise of outstanding options under our employee stock option plans; and 649,000 shares reserved for issuance upon the exercise of common share purchase warrants. No preferred shares are presently outstanding.

The operation of some of our subsidiaries has been financed in part through the sale of capital stock in those subsidiaries to private investors. Sales of additional subsidiary shares could reduce our ownership interest in the subsidiaries, and correspondingly dilute our shareholder’s ownership interests in our consolidated enterprise. Our subsidiaries also have their own stock option plans and the exercise of subsidiary stock options or the sale of restricted stock under those plans would also reduce our ownership interest in the subsidiaries, with a resulting dilutive effect on the ownership interest of our shareholders in our consolidated enterprise.

We and our subsidiaries may issue additional common shares or other securities that are convertible into or exercisable for common shares in order to raise additional capital, or in connection with hiring or retaining employees or consultants, or in connection with future acquisitions of licenses to technology or rights to acquire products in connection with future business acquisitions, or for other business purposes. The future issuance of any such additional common shares or other securities may create downward pressure on the trading price of our common shares.

We may also issue preferred shares having rights, preferences, and privileges senior to the rights of our common shares with respect to dividends, rights to share in distributions of our assets if we liquidate our company, or voting rights. Any preferred shares may also be convertible into common shares on terms that would be dilutive to holders of common shares. Our subsidiaries may also issue their own preferred shares with a similar dilutive impact on our ownership of the subsidiaries.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

Our offices and laboratory facilities are located at 1301 Harbor Bay Parkway, in Alameda, California, where we occupy approximately 17,000 square feet of office and research laboratory space. The facility is GMP-capable and has previously been certified as Class 1000 and Class 10,000 laboratory space, and includes cell culture and manufacturing equipment previously validated for use in GMP manufacture of cell-based products. We will use the facility for the production of hEPCs and hEPC lines, and products derived from those hEPC lines.

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Base monthly rent for this facility was $23,340 during 2010, and will be $27,086 during 2011. In addition to base rent, we pay a pro rata share of real property taxes and certain costs related to the operation and maintenance of the building in which the leased premises are located.

We also currently pay $5,050 per month for the use of approximately 900 square feet of office space in New York City, which is made available to us by one of our directors at his cost for use in conducting meetings and other business affairs.

ESI leases approximately 1,290 square feet of laboratory space and 590 square feet of office space in the Biopolis, a research and development park in Singapore devoted to the biomedical sciences. ESI paid approximately $6,200 as base monthly rent for the laboratory space and $1,450 as base monthly rent for the office space. In addition to base rent, ESI pays a pro rata share of real property taxes and certain costs related to the operation and maintenance of the building in which the leased premises are located. Cell Cure Neurosciences leases approximately 290 square feet of office and laboratory space located at Hadasa Ein Carem, in Jerusalem, Israel. Base monthly rent for this facility is approximately $9,600. In addition to base rent, Cell Cure Neurosciences pays a pro rata share of real property taxes and certain costs related to the operation and maintenance of the building in which the leased premises are located.

Item 3. Legal Proceedings

We are not presently involved in any material litigation or proceedings, and to our knowledge no such litigation or proceedings are contemplated.

Item 4. [Reserved]

PART II

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

BioTime common shares were traded on the American Stock Exchange from August 31, 1999 until July 14, 2005; were quoted on the OTC Bulletin Board (“OTCBB”) under the symbol BTIM from July 15, 2005 until October 29, 2009; and were relisted on the NYSE Amex on October 30, 2009. On October 12, 2010, BioTime changed its ticker symbol to BTX.

The following table sets forth the range of high and low closing prices for our common shares for the fiscal years ended December 31, 2009 and 2010 based on transaction data as reported by the OTCBB and NYSE Amex:

Quarter Ended	High	Low
March 31, 2009	2.55	1.25
June 30, 2009	3.00	1.57
September 30, 2009	6.40	2.30
December 31, 2009	6.35	3.59
March 31, 2010	8.42	4.27
June 30, 2010	8.20	5.25
September 30, 2010	6.50	4.02
December 31, 2010	9.94	4.73

Over-the-counter market quotations may reflect inter-dealer prices, without retail mark-up, mark-down, or commission, and may not necessarily represent actual transactions.

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As of January 12, 2011, there were 13,729 holders of the common shares based on the share position listing.

The following table shows certain information concerning the options and warrants outstanding and available for issuance under all of our compensation plans and agreements as of December 31, 2010:

Plan Category	Number of Shares to be Issued upon Exercise of Outstanding Options, Warrants, and Rights	Weighted Average Exercise Price of the Outstanding Options, Warrants, and Rights	Number of Shares Remaining Available for Future Issuance under Equity Compensation Plans
BioTime Equity Compensation Plans Approved by Shareholders	3,320,590	$ 1.51	1,842,168
BioTime Equity Compensation Plans Not Approved by Shareholders*	249,000	$ 7.46	-

*We have granted 249,000 warrants to certain consultants for providing services to us. These warrants were issued without registration under the Securities Act of 1933, as amended, in reliance upon the exemption provided by Section 4(2) thereunder.

The following table shows certain information concerning the options outstanding and available for issuance under all of the compensation plans and agreements for our subsidiary companies as of December 31, 2010:

Plan Category	Number of Shares to be Issued upon Exercise of Outstanding Options, Warrants, and Rights	Weighted Average Exercise Price of the Outstanding Options, Warrants, and Rights	Number of Shares Remaining Available for Future Issuance under Equity Compensation Plans
OrthoCyte Equity Compensation Plans Approved by Shareholders**	2,300,000	$ 0.08	1,700,000
OncoCyte Equity Compensation Plans Approved by Shareholders**	1,000,000	$ 0.67	3,000,000
ReCyte Therapeutics Equity Compensation Plans Approved by Shareholders**	1,000,000	$ 2.05	3,000,000
BioTime Asia Equity Compensation Plans Approved by Shareholders**	400	$ .01	1,200
Cell Cure Neurosciences Compensation Plans Approved by Shareholders**	23,978	$ 8.58	1,860

**BioTime is the majority shareholder.

Additional information concerning our stock option plan and the stock options of our subsidiaries may be found in Note 11 to the Consolidated Financial Statements.

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Dividend Policy

We have never paid cash dividends on our capital stock and do not anticipate paying cash dividends in the foreseeable future, but intend to retain our capital resources for reinvestment in our business. Any future determination to pay cash dividends will be at the discretion of our Board of Directors and will be dependent upon our financial condition, results of operations, capital requirements and other factors as the Board of Directors deems relevant.

Performance Measurement Comparison (1)

The following graph compares total stockholder returns of BioTime, Inc. for the last five fiscal years beginning December 31, 2005 to two indices: the NYSE Amex Market Value – U.S. Companies (Amex Market Value) and the NYSE Amex Biotechnology Index (Amex Biotechnology Index). The total return for our stock and for each index assumes the reinvestment of dividends, although we have never declared dividends on BioTime stock, and is based on the returns of the component companies weighted according to their capitalizations as of the end of each quarterly period. The NYSE Amex Market Value tracks the aggregate price performance of equity securities of U.S. companies listed therein. The NYSE Amex Biotechnology Index represents biotechnology companies, trading on NYSE Amex under the Standard Industrial Classification (SIC) Code Nos. 283 (Drugs) and 382 (Laboratory Apparatus and Analytical, Optical) main categories (2834:Pharmaceutical Preparations; 2835: Diagnostic Substances; 2836: Biological Products; 3826: Laboratory Analytical Instruments; and 3829: Measuring & Controlling Devices). BioTime common stock trades on the NYSE Amex and is a component of the NYSE Amex Market Value – US Companies.

Comparison of Five-Year Cumulative Total Return on Investment

		2005	2006	2007	2008	2009	2010
BioTime, Inc.	Return %		-14.51	54.74	331.63	138.98	96.93
	Cum $	100.00	85.49	132.29	571.01	1,364.60	2,687.29
AMEX Market Value (US Companies)	Return %		16.12	3.62	-36.25	22.31	26.85
	Cum $	100.00	116.12	120.33	76.71	93.82	119.01
Amex Biotechnology Index	Return %		10.76	4.26	-17.71	45.56	45.23
	Cum $	100.00	110.76	115.48	95.03	138.32	200.89

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BioTime, Inc., the Amex Market Value and Amex Biotechnology Index (2)

(1) This Section is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference in any filing of BioTime under the Securities Act of 1933, or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

(2) Shows the cumulative total return on investment assuming an investment of $100 in each of BioTime, Inc., the Amex Market Value and Amex Biotechnology Index on December 31, 2005. The cumulative total return on BioTime stock has been computed based on a price of $0.31 per share, the price at which BioTime’s shares closed on December 30, 2005.

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Item 6. Selected Financial Data

	Year Ended December 31,				
	2010	2009	2008	2007	2006
Consolidated Statements of Operations Data:					
REVENUES:					
License fees	$292,904	$292,832	$277,999	$255,549	$172,371
Royalty from product sales	945,461	1,079,951	1,203,453	776,679	933,478
Grant income	2,336,325	546,795	-	13,893	56,166
Sales of research products	105,610	5,590	22,340	-	-
Total revenues	3,680,300	1,925,168	1,503,792	1,046,121	1,162,015
EXPENSES:					
Research and development	(7,892,024)	(2,968,987)	(1,725,187)	(967,864)	(1,422,257)
General and administrative	(5,640,409)	(2,476,447)	(2,601,237)	(1,300,630)	(1,491,622)
Total expenses	(13,532,433)	(5,445,434)	(4,326,424)	(2,268,494)	(2,913,879)
Loss from operations	(9,852,133)	(3,520,266)	(2,822,632)	(1,222,373)	(1,751,864)
OTHER INCOME (EXPENSES):					
Interest expense	(124,300)	(1,653,755)	(965,781)	(232,779)	(156,535)
Modification cost of warrants	(2,142,201)	-	-	-	-
Other (expense)/income, net	(68,573)	30,112	7,518	16,926	43,778
Total other expenses, net	(2,335,074)	(1,623,643)	(958,263)	(215,853)	(112,757)
NET LOSS	(12,187,207)	(5,143,909)	(3,780,895)	$(1,438,226)	$(1,864,621)
Net loss/(income) attributable to the noncontrolling interest	1,002,589	(590)	-	-	-
Net loss attributable to BioTime, Inc.	(11,184,618)	(5,144,499)	(3,780,895)	(1,438,226)	(1,864,621)
Foreign currency translation gain	897,338	-	-	-	-
COMPREHENSIVE NET LOSS	$(10,287,280)	$(5,144,499)	$(3,780,895)	$(1,438,226)	$(1,864,621)
BASIC AND DILUTED LOSS PER COMMON SHARE	$(0.28)	$(0.18)	$(0.16)	$(0.06)	$(0.08)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:BASIC AND DILUTED	40,266,311	29,295,608	23,749,933	22,853,278	22,538,003

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	December 31,				
	2010	2009	2008	2007	2006
Consolidated Balance Sheet Data:					
Cash and cash equivalents	$33,324,924	$12,189,081	$12,279	$9,501	$561,017
Total assets	53,272,659	13,433,071	1,035,457	110,082	650,507
Long-term liabilities	1,367,045	1,223,823	2,003,754	1,763,489	1,900,080
Accumulated deficit	(64,319,541)	(52,769,891)	(47,625,392)	(43,844,497)	(42,406,271)
Total equity/(deficit)	$49,425,657	$11,046,989	$(4,346,814)	$(3,046,389)	$(1,865,221)

We entered the regenerative medicine and stem cell research fields during the fourth quarter of 2007. Prior to that time, our research and product development efforts focused exclusively on our blood plasma volume expander products, particularly Hextend and PentaLyte.

Our consolidated statement of operations data and balance sheet data for the year ended December 31, 2010 reflect our acquisition of ESI and a majority interest in Cell Cure Neurosciences during the year. See Notes 12, 13, and 19 to Consolidated Financial Statements.

Grant income and research and development expenses during 2009 and 2010 reflect our receipt of research grant payments from CIRM during 2009 and 2010, and from the United States Qualifying Therapeutic Discovery Project during 2010.

We did not amortize deferred license fees during the years ended December 31, 2008 and 2009 on the basis that sales of products under the licenses had not yet begun. Because BioTime has modified its procedure for amortizing deferred license fees for the year ended December 31, 2010, we have recorded in research and development expenses for 2010 an additional $121,200, representing the amortization amounts not previously recorded in 2008 and 2009. See Notes 2 and 8 to Consolidated Financial Statements.

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

Plasma Volume Expander Products

Our operating revenues have been derived almost exclusively from royalties and licensing fees related to our plasma volume expander products, primarily Hextend. Hextend has become the standard plasma volume expander at a number of prominent teaching hospitals and leading medical centers and is part of the Tactical Combat Casualty Care protocol. We believe that as the decision to use Hextend proliferates within leading U.S. hospitals, other smaller hospitals will follow this trend, contributing to sales growth.

Under our license agreements, Hospira and CJ will report sales of Hextend and pay us the royalties and license fees due on account of such sales after the end of each calendar quarter. We recognize such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place.

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Royalties on sales of Hextend that occurred during the fourth quarter of 2009 through the third quarter of 2010 are reflected in our financial statements for the year ended December 31, 2010. We received $839,740 in royalties from Hextend sales by Hospira during 2010. Royalties for 2010 decreased 16% from $996,681 in royalties from Hospira on Hextend sales in 2009, largely due to a decrease in sales to the military. In addition, we received royalties from CJ in the amount of $105,781 for the period ended December 31, 2010, representing a 27% increase from $83,197 in royalties received for the period ended December 31, 2009.

Based on sales of Hextend that occurred during the fourth quarter of 2010, we received royalties of $187,621 from Hospira and $28,365 from CJ during the first quarter of 2011. Total royalties of $215,986 for the quarter decreased 26% from royalties of $293,373 received during the same period last year. These royalties will be reflected in our financial statements for the first quarter of 2011.

The decrease in royalties received from Hospira based on sales during the third and fourth quarters of 2010 is generally due to a decrease in sales to the United States Armed Forces, which was partially offset by an increase in sales to hospitals. Purchases by the Armed Forces generally take the form of intermittent, large-volume orders, and cannot be predicted with certainty. Hospira has reported that the Armed Forces have shifted the primary point of use of Hextend from the field to the hospital level, which may account for some decrease in overall sales. This change was made due to the fact that too much of the product was being distributed to ground troops for inclusion in field packs and was going unused beyond the expiration date, so a different pattern of distribution was deemed advisable.

During the year ended December 31, 2006, we received $500,000 from Summit for the right to co-develop Hextend and PentaLyte in Japan, China, and Taiwan. A portion of the cash payment is a partial reimbursement of BioTime's development costs of Hextend and a portion is a partial reimbursement of BioTime's development costs of PentaLyte. This payment is reflected on our balance sheet as deferred revenue.

Stem Cells and Products for Regenerative Medicine Research

We are marketing our stem cell products for research through our website Embryome.com. By an agreement with us, Millipore Corporation became a worldwide distributor of certain ACTCellerate™ hEPC lines and related ESpan™ growth media. We made our initial delivery of six hEPC lines to Millipore during January 2010, and these lines are being marketed and distributed on a worldwide basis. The companies anticipate jointly launching an additional 29 cell lines and associated optimized ESpan™ growth media for the in vitro propagation of each progenitor cell line within the coming 12 months. The ACTCellerate™ hEPC lines and ESpan™ growth media products distributed by Millipore may also be purchased directly from us on our website Embryome.com. In addition to the products that we are co-marketing with Millipore, we now offer 92 other ACTCellerate™ hEPC lines for sale on Embryome.com, and we anticipate adding additional cell lines and related ESpan™ growth media and differentiation kits over time. We are also offering ACTCellerate™ hEPCs and ESpan™ growth media in Asia through BioTime Asia's distribution agreement with Genext.

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We have acquired from RGI an array of hES cell lines carrying inherited genetic diseases such as cystic fibrosis and muscular dystrophy. Study of these cell lines will enable researchers to better understand the mechanisms involved in causing their corresponding disease states, which may in turn expedite the search for potential treatments. We intend to offer these hES cell lines for sale online at Embryome.com.

We are in the process of launching our first products for stem cell research and cannot yet predict the amount of revenue that may be generated by these new products. We did not receive significant revenues from stem cell product sales during 2010.

We have also targeted for development ESpy cell lines, which will be derivatives of hES cells that will emit beacons of light. These light-emitting cells will allow researchers to track the location and distribution of the cells in both in vitro and in vivo studies. As new products are developed, they will become available for purchase on Embryome.com.

Research and Development Programs in Regenerative Medicine and Stem Cell Research

We entered the fields of stem cell research and regenerative medicine during October 2007. From that time through 2009, our activities in those fields included acquiring rights to market stem cell lines, pursuing patents, planning future products and research programs, applying for research grants, identifying the characteristics of various acquired progenitor and stem cell lines, negotiating a product distribution agreement, organizing new subsidiaries to address particular fields of product development, and planning and launching our first product development programs.

The following table summarizes the most significant achievements in our primary research and development programs in stem cell research and regenerative medicine, and the amount we spent on those programs during the last fiscal year.

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Company	Program	Status	2010 R & D Expenses
Embryome Sciences (1) and ESI	ACTCellerate™ cell lines/ growth media/reagent kits for stem cell research GMP hES cell lines	Nearly 300 products for stem cell research are now being offered, including ACTCellerate™ hEPCs, ESpan™ cell line optimal growth media, and reagent cell differentiation kits. We plan to add additional cell lines, growth media, and differentiation kits with characterization of new hEPCs ESI has developed and offers for sale GMP hES cell lines for research purposes.	$ 1,560,000
Embryome Sciences(1)	CIRM-funded research project addressing the need for industrial-scale production of purified therapeutic cells	Conducted long-term stability studies of hEPCs using commercial-type culture processes to demonstrate phenotypic stability and genotypic stability during culture expansion. Attempting to define a molecular signature of cell surface markers that would be unique to a given hEPC cell line to permit development of reagents to those markers that can be used to purify the target hEPCs intended for therapy. Mapping cell surface protein expression directly on hEPCs using large collections of commercially available antibodies and have begun testing those antibodies as affinity reagents for purifying target hEPCs. Identifying peptide reagents that show specificity for cell surface targets on hEPCs and could thus be used directly as affinity reagents.	$ 2,162,400
OncoCyte(2)	Vascular endothelial cells that can be engineered to deliver a toxic payload to the developing blood vessels of a tumor	Developed a derivation protocol that can reproducibly produce populations of endothelial-type cells with levels of purity and efficiency far above those reported in the published literature. Established broad range of support assays to monitor and measure vascular endothelial cell differentiation process. Initiated in vivo experiments monitoring incorporation of endothelial cells into developing mouse vasculature and into the developing vasculature of human tumor xenografts. Completed initial development of a toxic payload transgene system which includes a pro-drug	$ 1,305,600

	converting enzyme (TK) and paired pro-drug (gangcyclovir)

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Company	Program	Status	2010 R & D Expenses
OrthoCyte(3)	Cartilage repair using embryonic progenitor cells	Identified several cell lines that displayed molecular markers consistent with the production of human cartilage. Confirmed chondrogenic potential by directly measuring cartilage production from those lines. Demonstrated that those cell lines can be combined with commonly used support matrices to formulate a combination product for treating cartilage deficits.	$ 709,500
ReCyte Therapeutics	Therapeutic products for cardiovascular and blood diseases utilizing its proprietary ReCyte™ iPS technology.	Evaluating effects of telomere length on growth potential of iPS cells and iPS-derived progenitor lines.	$ 558,000
BioTime	Hextend – Blood plasma volume expanders	Hextend is currently marketed to hospitals and physicians in the USA and Korea. Activities include complying with all regulatory requirements and promotional activities.	$ 541,200
BioTime Asia	Distributing ACTCellerate hEPC lines growth media and reagents	Initial sales of cell lines, growth media, and differentiation kits, to customers in Asia.	$ 190,500
Cell Cure Neurosciences(4)	OpRegen™ and OpRegen-Plus™ for treatment of age related macular degeneration	Conducted animal model studies to establish proof of concept. Developed directed differentiation as efficient method for short culture period to produce a supply of RPE cells. Granted Teva Pharmaceutical Industries, Ltd. an option to complete clinical development of, and to manufacture, distribute, and sell, OpRegen™ and OpRegen-Plus™	$ 864,800

(1) Embryome Sciences was organized during December 2007 and acquired its ACTCellerate™ technology during July 2008. During late December 2010, Embryome Sciences changed its name to ReCyte Therapeutics, Inc. in conjunction with a change of its business focus to the research and development of therapeutic products to treat blood and vascular diseases and disorders. Embryome Sciences' research products business and ACTCellerate™ hEPC research and development projects, including related patent and technology rights, are being assigned to BioTime or other BioTime subsidiaries.

(2) OncoCyte was organized during October 2009 and received $4,000,000 of initial capital from private investors.

(3) OrthoCyte was organized during June 2010.

(4) We acquired our interest in Cell Cure Neurosciences during 2010. Cell Cure Neurosciences received $7,100,000 of additional equity financing during October 2010 from us and two of its other principal shareholders.

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The inherent uncertainties of developing new products for stem cell research and for medical use make it impossible to predict the amount of time and expense that will be required to complete the development and commence commercialization of new products. There is no assurance that we or any of our subsidiaries will be successful in developing new technologies or stem cell products, or that any technology or products that may be developed will be proven safe and effective for treating diseases in humans, or will be successfully commercialized. Most of our potential therapeutic products are at a very early stage of preclinical development. Before any clinical trials can be conducted by us or any of our subsidiaries, the company seeking to conduct the trials would have to compile sufficient laboratory test data substantiating the characteristics and purity of the stem cells, conduct animal studies, and then obtain all necessary regulatory and clinical trial site approvals, after which a team of physicians and statisticians would need to be assembled to perform the trials. Clinical trials will be costly to undertake and will take years to complete. See our discussion of the risks inherent in our business and the impact of government regulation on our business in the “Risk Factors” section and “Business” section of this report.

We believe each of our subsidiaries has sufficient capital to carry out its current research and development plan during 2011. We may provide additional financing for our subsidiaries, or obtain financing from third parties, based on the following: our evaluation of progress made in their respective research and development programs, any changes to or the expansion of the scope and focus of their research, and our projection of future costs. See “Liquidity and Capital Resources” for a discussion of our available capital resources, our potential need for future financing, and possible sources of capital.

Research and Development Expenses

The following table shows the approximate percentages of our total research and development expenses of $7,892,024 allocated to our primary research and development projects during the year ended December 31, 2010:

Company	Program	Percent
Embryome Sciences and ESI	ACTCellerate hPECs, GMP hES cell lines, and related research products	20%
Embryome Sciences	CIRM sponsored ACTCellerate technology	27%
OncoCyte	Cancer therapy	17%
OrthoCyte	Orthopedic therapy	9%
ReCyte Therapeutics	IPS and vascular therapy	7%
BioTime	Hextend	7%
BioTime Asia	Stem cell products for research	2%
Cell Cure Neurosciences	OpRegen,™ OpRegen-Plus,™ and neurological disease therapies	11%

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Critical Accounting Policies

Revenue recognition – We comply with SEC Staff Accounting Bulletin guidance on revenue recognition. Royalty and license fee revenues consist of product royalty payments and fees under license agreements and are recognized when earned and reasonably estimable. We recognize revenue in the quarter in which the royalty report is received rather than the quarter in which the sales took place. When we are entitled to receive up-front nonrefundable licensing or similar fees pursuant to agreements under which we have no continuing performance obligations, the fees are recognized as revenues when collection is reasonably assured. When we receive up-front nonrefundable licensing or similar fees pursuant to agreements under which we do have continuing performance obligations, the fees are deferred and amortized ratably over the performance period. If the performance period cannot be reasonably estimated, we amortize nonrefundable fees over the life of the contract until such time that the performance period can be more reasonably estimated. Milestone payments, if any, related to scientific or technical achievements are recognized in income when the milestone is accomplished if (a) substantive effort was required to achieve the milestone, (b) the amount of the milestone payment appears reasonably commensurate with the effort expended, and (c) collection of the payment is reasonably assured. Grant income is recognized as revenue when earned.

Patent costs – Costs associated with obtaining patents on products or technology developed are expensed as general and administrative expenses when incurred. This accounting is in compliance with guidance promulgated by the Financial Accounting Standards Board (“FASB”) regarding goodwill and other intangible assets.

Research and development – We comply with FASB requirements governing accounting for research and development costs. Research and development costs are expensed when incurred, and consist principally of salaries, payroll taxes, research and laboratory fees, and license fees paid to acquire patents or licenses to use patents and other technology from third parties.

Stock-based compensation – We have adopted accounting standards governing share-based payments, which require the measurement and recognition of compensation expense for all share-based payment awards made to directors and employees, including employee stock options, based on estimated fair values. We utilize the Black-Scholes Merton option pricing model. Our determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, expected stock price volatility over the term of the awards, and the actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The risk-free rate is based on the United States Treasury rates in effect during the corresponding period of grant. Although the fair value of employee stock options is determined in accordance with recent FASB guidance, changes in the subjective assumptions can materially affect the estimated value. In management's opinion, the existing valuation models may not provide an accurate measure of the fair value of employee stock options because the option-pricing model value may not be indicative of the fair value that would be established in a willing buyer/willing seller market transaction.

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Impairment of long-lived assets – Our long-lived assets, including intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. If an impairment indicator is present, we evaluate recoverability by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are impaired, the impairment recognized is measured by the amount by which the carrying amount exceeds the estimated fair value of the assets.

Deferred license and consulting fees – Deferred license and consulting fees consist of $1,979,036 attributable to the value of warrants issued to third parties for services and to the minority shareholder in BioTime Asia for its participation in the organization of that company, and $1,095,000 in deferred license fees paid to acquire rights to use the proprietary technologies of third parties. The value of the warrants is being amortized over the lives of the warrants, and deferred license fees over the estimated useful lives of the licensed technologies or licensed research products. The estimation of the useful life any technology or product involves a significant degree of inherent uncertainty, since the outcome of research and development or the commercial life of a new product cannot be known with certainty at the time that the right to use the technology or product is acquired. We will review its amortization schedules for impairments that might occur earlier than the original expected useful lives. See also Note 8 to the Consolidated Financial Statements.

Principles of consolidation – Our consolidated financial statements include the accounts of our wholly-owned subsidiaries, OrthoCyte and ESI, the accounts of ReCyte Therapeutics, a subsidiary of which we owned approximately 95% of the outstanding shares of common stock as of December 31, 2010; the accounts of OncoCyte, a subsidiary of which we owned approximately 74% of the outstanding shares of common stock as of December 31, 2010; the accounts of BioTime Asia, a subsidiary of which we owned approximately 81% of the outstanding shares as of December 31, 2010, and the accounts of Cell Cure Neurosciences, a subsidiary in which we owned approximately 54% of the outstanding shares as of December 31, 2010. All material intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States and with the accounting and reporting requirements of Regulation S-X of the SEC.

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Results of Operations

Under our license agreements with Hospira and CJ, our licensees report sales of Hextend and pay us the royalties and license fees due on account of such sales within 90 days after the end of each calendar quarter. We recognize such revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place, as we do not have sufficient sales history to accurately predict quarterly sales. For example, royalties on sales made during the fourth quarter of 2010 were not recognized until the first quarter of fiscal year 2011.

Year Ended December 31, 2010 and Year Ended December 31, 2009

Our royalty revenues for the year ended December 31, 2010 consist of royalties on sales of Hextend made by Hospira and CJ during the period beginning October 1, 2009 and ending September 30, 2010. Royalty revenues recognized for that period were $945,521 compared with $1,079,951 recognized for the year ended December 31, 2009. This 12% decrease in royalties is attributable to a decrease in Hextend sales in the United States, which was slightly offset by an increase in sales in the Republic of Korea. The decrease in sales in the U.S. market is primarily due to a decrease in sales to the U.S. Armed Forces. Purchases by the Armed Forces generally take the form of intermittent, large-volume orders, and cannot be predicted with certainty. Hospira has reported that the Armed Forces have shifted primary point of use of Hextend from the field to the hospital level, which may account for some decrease in overall sales. This change was made due to the fact that too much of the product was being distributed to ground troops for inclusion in field packs and was going unused beyond the expiration date, so a different pattern of distribution was deemed advisable.

We recognized as revenue $292,904 and $292,832 of license fees from CJ and Summit during 2010 and 2009, respectively. The license fees were received from CJ during April 2003 and July 2004, and from Summit during December 2004 and April and October of 2005, but full recognition of the license fees has been deferred, and is being recognized over the life of the contract, which has been estimated to last until approximately 2019 based on the current expected life of the governing patent covering our products in Korea and Japan. See Note 2 to the Consolidated Financial Statements.

We received four quarterly payments totaling $1,575,523 from our research grant from CIRM during the year ended December 31, 2010. Because grant income is recognized as revenue when earned, and these amounts received covered the period of March 1, 2010 through February 28, 2011, only $1,313,746 earned during the 2010 fiscal year was recognized in our consolidated financial statements. Total grant income recognized during the year amounted to $1,577,143, which includes $263,397 of a payment received in 2009 but that was recognized as revenues in 2010.

We received $476,724 of the $733,438 grant awarded to us under the U.S. Government's Qualifying Therapeutic Discovery Project ("QTDP"). The remainder of the award was received in February 2011. The QTDP was part of the Patient Protection and Affordable Care Act signed into law on March 23, 2010. The grants awarded BioTime were for the maximum amount allowed for three of our programs: orthopedic product development, our ACTCellerate™ platform, and our ReCyte™ iPS program.

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Research and development expenses increased to $7,892,024 for the year ended December 31, 2010, from $2,968,987 for the year ended December 31, 2009. For 2010, research and development expenses also included $1,938,130 of research and development expense incurred by ESI and Cell Cure Neurosciences, of which $776,682 is derived from the amortization of patent technology related to our acquisition of those subsidiaries during the year. Also, during the year ended December 31, 2010, BioTime modified its procedure for amortizing deferred license fees. As a result, research and development expenses for 2010 include an additional $121,200, representing amortization of deferred license fees not previously recorded in 2008 and 2009. Aside from those expenses, the increase in research and development expense during 2010 is primarily attributable to an increase of $804,308 in employee compensation and related costs allocated to research and development expense, an increase of $221,578 in scientific consulting fees, an increase of $291,260 in stock-based compensation allocated to research and development expense, an increase of $97,392 of travel and related costs allocated to research and development expenses, an increase of $788,371 in outside research and laboratory costs, and an increase of $580,524 in expenditures made to cover laboratory expenses and supplies. The increase in the amount we spent on research and development during 2010 reflects in part the greater amount of grant payments we received during 2010 compared to 2009. Research and development expenses include laboratory study expenses, patent and technology license fees, salaries, rent, insurance, and science-related consultants' fees.

General and administrative expenses increased to $5,640,409 for the year ended December 31, 2010 from $2,476,447 for the year ended December 31, 2009. For 2010, general and administrative expenses also included $435,909 of general and administrative expense incurred by ESI and Cell Cure Neurosciences, which we acquired during the year. The increase is further attributable to increase of $895,106 in employee compensation, bonuses and related costs allocated to general and administrative expense, $483,688 in stock appreciation rights compensation liability, an increase of $358,343 in cash and stock-based compensation paid to our independent directors, an increase of $344,484 in legal fees and general and administrative patent expenses, an increase of $133,369 in accounting fees and an increase of $113,986 in investor and public relations expenses. General and administrative expenses include salaries allocated to general and administrative accounts, consulting fees other than those paid for science-related consulting, expenditures for patent costs, trademark expenses, insurance costs allocated to general and administrative expenses, stock exchange-related costs, depreciation expense, shipping expenses, marketing costs, and other miscellaneous expenses.

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Year Ended December 31, 2009 and Year Ended December 31, 2008

Our royalty revenues for the year ended December 31, 2009 consist of royalties on sales of Hextend made by Hospira and CJ during the period beginning October 1, 2008 and ending September 30, 2009. Royalty revenues recognized for that period were $1,079,951, compared with $1,203,453 recognized for the year ended December 31, 2008. This 10% decrease in royalties is attributable to a decrease in Hextend sales in the United States, which was slightly offset by an increase in sales in the Republic of Korea. The decrease in sales in the U.S. market is primarily due to a decrease in sales to the U.S. Armed Forces. Purchases by the Armed Forces generally take the form of intermittent, large-volume orders, and cannot be predicted with certainty. Royalties from sales of Hextend by CJ were included in license fees during 2008.

We received the first two quarterly payments, totaling $790,192, from our research grant from CIRM in the second half of 2009. Because grant income is recognized as revenue when earned, and the amounts received covered the period of September 1, 2009 through February 28, 2010, only $546,795 earned through December 31, 2009 was recognized in our consolidated financial statements.

We recognized as revenue $292,832 and $277,999 of license fees from CJ and Summit during 2009 and 2008, respectively. The license fees were received from CJ during April 2003 and July 2004, and from Summit during December 2004 and April and October of 2005, but full recognition of the license fees has been deferred, and is being recognized over the life of the contract, which has been estimated to last until approximately 2019 based on the current expected life of the governing patent covering our products in Korea and Japan. Royalties of $70,993 from Hextend sales by CJ were included in license fees during 2008. See Note 2 to the Consolidated Financial Statements.

Research and development expenses increased to $2,968,987 for the year ended December 31, 2009, from $1,725,187 for the year ended December 31, 2008. The increase is primarily attributable to our entry into the stem cell field, and includes increases of approximately $337,000 in salaries and other payroll-related expenses charged to research and development, $62,000 in employee bonus amounts allocated to research and development, $120,000 in rent charged to research and development, $264,000 in laboratory expense and laboratory supplies, $189,000 in outside research expenses, $123,000 in expense associated with stock-based compensation allocated to research and development, $63,000 in scientific consulting fees, and $81,000 in fringe-benefit costs allocated to research and development expense. The increase in the amount we spent on research and development during 2009 reflects in part our receipt of research grant payments from CIRM. Research and development expenses during 2009 and 2008 included laboratory study expenses, salaries, rent, insurance, and science-related consultants' fees.

General and administrative expenses decreased to $2,476,447 for the year ended December 31, 2009 from $2,601,237 for the year ended December 31, 2008. This change reflects decreases of approximately $158,000 in general and administrative consulting expenses, $96,000 in stock-based compensation expenses charged to general and administrative expense, and $954,000 in stock appreciation rights compensation expenses. These decreases were offset to some extent by increases of approximately $228,000 in stock-based compensation paid to our independent directors, $129,000 in cash compensation paid to our independent directors, $82,000 in stock-related expenses, $50,000 in annual report and meeting expenses, $81,000 in investor/public relations expenses, $30,000 in rent allocated to general and administration expenses, $64,000 in travel and entertainment expenses, $91,000 in legal expenses, $77,000 in outside services expenses, $41,000 in salaries and other payroll-related expenses, $48,000 in employee bonus amounts allocated to general and administrative expense, $36,000 in accounting expenses, $35,000 in taxes allocated to general and administrative expense, and $48,000 in patent expenses. General and administrative expenses include salaries allocated to general and administrative accounts, consulting fees other than those paid for science-related consulting, expenditures for patent costs, trademark expenses, insurance costs allocated to general and administrative expenses, stock exchange-related costs, depreciation expense, shipping expenses, marketing costs, and other miscellaneous expenses. Stock-based compensation increased during 2009 in large part due to our common

shares trading at prices higher than the prices that prevailed during 2008.

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Interest and Other Income (Expense)

Our interest expense decreased by approximately $1.6 million during 2010, primarily due to full repayment of our borrowings under the various lines of credit in 2009. See Note 7 to the Consolidated Financial Statements.

During 2010 we recognized $2,142,201 in costs for the modification of stock purchase warrants that expired on November 1, 2010. We offered a discounted exercise price of $1.818 per share to the holders of the warrants with an original strike price of $2.00 per share. The warrant discount offer commenced on June 18, 2010, and expired at 5:00 p.m., New York time, on August 18, 2010.

Taxes

At December 31, 2010 we had a cumulative net operating loss carryforward of approximately $56,000,000 for federal income tax purposes and $28,000,000 for state income tax purposes. Our effective tax rate differs from the statutory rate because we have recorded a 100% valuation allowance against our deferred tax assets, as we do not consider realization to be more likely than not.

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Liquidity and Capital Resources

At December 31, 2010, we had $33,324,924 of cash and cash equivalents on hand. We may need to obtain additional debt or equity capital in order to finance our operations. Since inception, we have primarily financed our operations through the sale of equity securities, licensing fees, royalties on product sales by our licensees, and borrowings. The amount of revenue that may be earned through the licensing and sale of our products and technology, the timing of the receipt of license fee and royalty payments, and the future availability and terms of equity financing, are uncertain. Although we have recently been awarded research grants from CIRM and QTDP for particular projects, and our subsidiary Cell Cure Neurosciences has received research grants from the Office of the Chief Scientist of the Ministry of Industry, Trade and Labor in Israel, we must finance our other research and operations with funding from other sources.

We presently have issued and outstanding 649,00 common share purchase warrants, of which 350,000 are exercisable at a price of $10.00 per share, 199,000 at $3.00 per share, and the remaining 100,000 at $0.68 per share. These warrants expire on various dates ranging from September 2012 to May 2014. None of the warrants are publicly traded.

The unavailability or inadequacy of financing or revenues to meet future capital needs could force us to modify, curtail, delay, or suspend some or all aspects of our planned operations. Sales of additional equity securities could result in the dilution of the interests of present shareholders.

Cash generated by operations

During 2010, we received $3,230,000 of cash in our operations. Our sources of that cash were $839,740 of royalty revenues from Hospira, $105,721 of royalty revenues from CJ, a $25,746 research grant payment from the NIH, a $476,724 payment from a QTDP research grant, and a $1,575,522 research grant payment from CIRM.

Cash used in operations

During 2010, our total research and development expenditures were $7,892,000 and our general and administrative expenditures were $5,640,400. Net loss for the year ended December 31, 2010 amounted to $11,184,600. Net cash used in operating activities during this period amounted to $7,732,900. The difference between the net loss and net cash used in operating activities during 2010 was primarily attributable to $638,700 in stock-based compensation paid to employees and consultants, amortization of $790,100 in intangible assets, $455,000 in options issued as independent director compensation, $520,200 amortization of deferred consulting fees, $227,200 amortization of deferred license fees, $138,600 in depreciation expense, $2,142,200 in costs for the modification of warrants, and a $258,500 share in the net loss of Cell Cure Neurosciences. This overall difference was offset to some extent by amortization of $293,000 in deferred license revenues, $256,700 in grants receivable, $392,800 in prepaid expenses and other current assets, and net loss of $1,002,600 allocable to the noncontrolling interest in our subsidiaries.

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Cash flows from investing activities

During the year ended December 31, 2010, $4,605,800 was used for investing activities. The primary components of this cash were approximately $4,100,000, invested in Cell Cure Neurosciences shares, $220,800 used in the purchase of equipment, $215,000 used to pay license fees, and $80,000 used in the acquisition of ESI.

Cash generated by financing activities

During the year ended December 31, 2010, $25,767,500 in net cash was provided from our financing activities. During this period, we received $606,000 in connection with the exercise of 526,410 options, $22,861,500 in connection with the exercise of 12,240,357 warrants, and $2,300,000 from issuance of ReCyte common shares.

Contractual obligations

As of December 31, 2010, our contractual obligations for the next five years and thereafter were as follows:

		Principal Payments Due by Period			
Contractual Obligations (1)	Total	Less Than 1 Year	1-3 Years	4-5 Years	After 5 Years
Operating leases (2)	$2,139,567	$507,773	$877,583	$722,811	$31,400

(1) This table does not include payments to key employees that could arise if they were involuntary terminated or if their employment terminated following a change in control.

(2) Includes the lease of our principal office and laboratory facilities in Alameda, California, and leases of the offices and laboratory facilities of our subsidiaries ESI and Cell Cure Neurosciences.

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Future capital needs

We will depend upon revenue from the sale of our research products, royalties from the sale of Hextend by Hospira and CJ, and our research grants from CIRM and QTDP as our principal sources of revenues for the near future. Our product sales and royalty revenues will be supplemented by any license fees that we may receive if we enter into new commercial license agreements for our products or technology. Millipore and Genext began marketing some of our hEPC lines an ESpan™ growth media during 2010, but it is too early to predict future revenues from the sale of our stem cell research products by them.

The amount and pace of research and development work that we can do or sponsor, and our ability to commence and complete the clinical trials that are required in order for us to obtain FDA and foreign regulatory approval of products, depend upon the amount of money we have. We curtailed the pace and scope of our plasma volume expander development efforts due to the limited amount of funds available. Future research and clinical study costs are not presently determinable due to many factors, including the inherent uncertainty of these costs and the uncertainty as to timing, source, and amount of capital that will become available for these projects.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Exchange Risk

We are exposed to some foreign exchange currency risks because we have subsidiaries that are located in foreign countries. We do not engage in foreign currency hedging activities. Because we translate foreign currencies into United States dollars for reporting purposes, currency fluctuations have an impact on our financial results. We believe that our exposure to currency exchange fluctuation risk is mitigated by the fact that our foreign subsidiaries pay their financial obligations almost exclusively in their local currency. As of December 31, 2010, currency exchange rates did not have a material impact on our intercompany transactions with our foreign subsidiaries. However, a weakening of the dollar against the foreign exchange used in the home countries of our foreign subsidiaries could increase our cost of providing additional financing to our foreign subsidiaries in the future. Conversely, a strengthening of the dollar would decrease our cost of making additional investments in those subsidiaries. Much of the foreign currency translation gain recognized as of December 31, 2010 is derived from the translation of the subsidiary accounts for consolidation purposes.

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Credit Risk

We place most of our cash in United States banks and we invest some of our cash in interest bearing instruments issued by United States banks or the United States Treasury. Deposits with banks may temporarily exceed the amount of insurance provided on such deposits. We monitor the cash balances in our accounts and adjust the cash balances as appropriate, but if the amount of a deposit at any time exceeds the federally insured amount at a bank, the uninsured portion of the deposit could be lost, in whole or in part, if the bank were to fail.

Our foreign subsidiaries deposit their cash in local banks, but if the amount of a deposit at any time exceeds the amount at a bank under the national banking insurance laws, the uninsured portion of the deposit could be lost, in whole or in part, if the bank were to fail.

Interest Rate Risk

We invest a portion of our cash in interest-bearing securities issued by the United States Treasury. The primary objective of our investments is to preserve principal and liquidity while earning a return on our invested capital, without incurring significant risks. The market value of fixed-rate instruments will decline if interest rates rise. Due in part to this factor, our future investment income may fall short of expectations due to changes in market conditions and in interest rates, or we may suffer losses in principal if forced to sell securities which may have declined in fair value due to changes in interest rates.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of

BioTime, Inc.

We have audited the accompanying consolidated balance sheets of BioTime, Inc. and Subsidiaries (collectively, the "Company") as of December 31, 2010, and the related consolidated statements of operations, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2010. We have also audited the Company'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 ("COSO"). The Company's management is responsible for these financial statements, 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 Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. Our audit over internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide 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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the consolidated financial statements.

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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, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of BioTime, Inc. and Subsidiaries as of December 31, 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company 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 (“COSO”).

Rothstein Kass & Company, P.C.
Roseland, New Jersey
March 10, 2011

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Item 8. Financial Statements and Supplementary Data

BIOTIME, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2010	December 31, 2009
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$33,324,924	$ 12,189,081
Inventory	45,470	38,384
Prepaid expenses and other current assets	2,202,284	138,547
Total current assets	35,572,678	12,366,012
Equipment, net	710,766	131,133
Deferred license and consulting fees	1,550,410	880,000
Deposits	51,900	55,926
Intangible assets, net	15,386,905	-
TOTAL ASSETS	$53,272,659	$ 13,433,071
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	$1,929,874	$ 530,958
Deferred grant income	261,777	263,397
Deferred license revenue, current portion	288,306	367,904
Total current liabilities	2,479,957	1,162,259
LONG-TERM LIABILITIES		
Deferred license revenue, net of current portion	1,048,757	1,223,823
Other long term liabilities	318,288	-
Total long-term liabilities	1,367,045	1,223,823
Commitments and contingencies		
EQUITY		
Preferred Shares, no par value, authorized 1,000,000 shares; none issued	-	-
Common Shares, no par value, authorized 75,000,000 shares; issued and outstanding shares; 44,777,701 and 33,667,659 in 2010 and 2009, respectively	101,135,428	59,722,318
Contributed capital	93,972	93,972
Accumulated other comprehensive income	897,338	-
Accumulated deficit	(63,954,509)	(52,769,891)
Total shareholders' equity	38,172,229	7,046,399
Noncontrolling interest	11,253,428	4,000,590
Total equity	49,425,657	11,046,989
TOTAL LIABILITIES AND EQUITY	$53,272,659	$ 13,433,071

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2010	2009	2008
REVENUES:			
License fees	$ 292,904	$ 292,832	$ 277,999
Royalties from product sales	945,461	1,079,951	1,203,453
Grant income	2,336,325	546,795	-
Sale of research products	105,610	5,590	22,340
Total revenues	3,680,300	1,925,168	1,503,792
EXPENSES:			
Research and development	(7,892,024)	(2,968,987)	(1,725,187)
General and administrative	(5,640,409)	(2,476,447)	(2,601,237)
Total expenses	(13,532,433)	(5,445,434)	(4,326,424)
Loss from operations	(9,852,133)	(3,520,266)	(2,822,632)
OTHER INCOME (EXPENSES):			
Interest expense	(124,300)	(1,653,755)	(965,781)
Modification cost of warrants	(2,142,201)	-	-
Other (expense)/income, net	(68,573)	30,112	7,518
Total other expenses, net	(2,335,074)	(1,623,643)	(958,263)
NET LOSS	(12,187,207)	(5,143,909)	(3,780,895)
Net loss/(income) attributable to the noncontrolling interest	1,002,589	(590)	-
NET LOSS ATTRIBUTABLE TO BIOTIME, INC.	(11,184,618)	(5,144,499)	(3,780,895)
Foreign currency translation gain	897,338	-	-
COMPREHENSIVE LOSS	$ (10,287,280)	$ (5,144,499)	$ (3,780,895)
BASIC AND DILUTED LOSS PER COMMON SHARE	$ (0.28)	$ (0.18)	$ (0.16)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:BASIC AND DILUTED	40,266,311	29,295,608	23,749,933

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Common Shares						
	Number of Shares	Amount	Contributed Capital	Accumulated Deficit	Noncontrolling Interest	Accumulated other comprehensive income	Total Equity/(Deficit)
BALANCE AT JANUARY 1, 2008	23,034,374	$ 40,704,376	$ 93,972	$ (43,844,497)	$ -	$ -	$ (3,046,389)
Common shares issued for new loans and extension of line of credit	580,410	273,200					273,200
Common shares issued for conversion of line of credit and accrued interest	1,112,014	1,442,409					1,442,409
Shares granted for services	225,000	137,250					137,250
Common shares issued for cash	100,000	100,000					100,000
Exercise of options	25,000	8,000					8,000
Stock options granted for compensation		134,518					134,518
Warrants issued for lines of credit		225,951					225,951
Warrants issued for services		159,142					159,142
NET LOSS				(3,780,895)			(3,780,895)
BALANCE AT DECEMBER 31, 2008	25,076,798	$ 43,184,606	$ 93,972	$ (47,625,392)	$ -	$ -	$ (4,346,814)
Sale of OncoCyte subsidiary shares to noncontrolling interest					4,000,000		4,000,000
Common shares issued for new loans and extension of line	153,206	304,181					304,181

of credit							
Common shares issued for conversion of line of credit and accrued interest	2,493,374	4,134,424					4,134,424
Shares granted for services	135,000	229,500					229,500
Shares granted for licensing fees	65,278	120,000					120,000
Common shares issued for cash	4,400,000	8,000,000					8,000,000
Exercise of options	535,832	848,449					848,449
Warrants exercised	808,171	1,616,342					1,616,342
Warrants issued for line of credit		398,548					398,548
Warrants issued for services		93,304					93,304
Stock options granted for compensation		488,564					488,564
Beneficial conversion feature		304,400					304,400
NET LOSS				(5,144,499)	590		(5,143,909)
BALANCE AT DECEMBER 31, 2009	33,667,659	$ 59,722,318	$ 93,972	$ (52,769,891)	$ 4,000,590	$ -	$ 11,046,989
Sale of ReCyte subsidiary shares to noncontrolling interest					2,300,000		2,300,000
Noncontrolling interest in Cell Cure					5,894,255		5,894,255
Common shares issued as part of acquisition of ESI	1,383,400	11,011,864					11,011,864
Common shares retired as payment for exercise of options	(40,125)	(249,978)					(249,978)
Exercise of options	526,410	855,977					855,977
Warrants exercised	12,240,357	22,861,458					22,861,458
		1,778,727					1,778,727

Warrants issued as part of acquisition of ESI							
Warrants issued for services		1,979,036					1,979,036
Modification cost of warrants		2,142,202					2,142,202
Stock options granted for compensation		1,033,824					1,033,824
Stock options granted for compensation in subsidiary					61,172		61,172
Foreign currency translation gain						897,338	897,338
NET LOSS				(11,184,618)	(1,002,589)		(12,187,207)
BALANCE AT DECEMBER 31, 2010	47,777,701	$ 101,135,428	$ 93,972	$ (63,954,509)	$ 11,253,428	$ 897,338	$ 49,425,657

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2010	2009	2008
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss attributable to BioTime, Inc.	$ (11,184,618)	$ (5,144,499)	$ (3,780,895)
Adjustments to reconcile net loss attributable to BioTime, Inc to net cash used in operating activities:			
Depreciation and amortization of capital leased assets	138,659	34,591	16,745
Loss on sale or write-off of equipment	993	1,159	-
Write off of expired inventory	4,008	-	-
Bad debt expense	-	2,538	-
Reclassification of licensing fees expensed in prior year	-	(10,000)	-
Amortization of intangible assets	790,117	-	-
Amortization of deferred consulting fees	520,212	102,059	19,409
Amortization of deferred license fees	227,167	-	-
Amortization of deferred finance cost on lines of credit	-	782,542	321,514
Amortization of deferred rent	21,029	(3,339)	-
Amortization of deferred license revenues	(292,904)	(292,904)	(277,999)
Amortization of deferred grant revenues	(1,620)	(20,000)	-
Stock-based compensation	638,709	260,840	113,710
Options issued as independent director compensation	455,022	227,724	20,808
Stock appreciation rights compensation liability	-	(483,688)	470,537
Common shares issued for services	-	-	137,250
Warrants issued for outside services	-	93,304	52,393
Warrants issued for exchange offer interest expense	-	190,845	-
Modification cost of warrants	2,142,201	-	-
Beneficial conversion feature on notes and interest		304,400	330,394
Share in net loss of associated company	258,493	-	-
Net (loss)/income allocable to noncontrolling interest	(1,002,589)	590	
Changes in operating assets and liabilities:			
Accounts receivable, net	(77,907)	(349)	754
Grant receivable	(256,714)	-	-
Inventory	(11,094)	(38,384)	-
Prepaid expenses and other current assets	(392,820)	(146,200)	57,115
Accounts payable and accrued liabilities	254,090	(419,456)	699,539
Interest on lines of credit	-	(40,108)	114,938
Deferred revenues	36,682	75,000	105,840
Deferred rent	-	-	(6,297)
Deferred grant revenues	-	263,397	-
Net cash used in operating activities	(7,732,884)	(4,259,938)	(1,604,245)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Payments of license fees	(215,000)	-	(750,000)
Purchase of equipment	(220,771)	(61,276)	(109,872)
Cash acquired, net of cash paid for Cell Cure shares	3,733,110	-	-

Note and related interest accrued converted to Cell Cure shares	(252,608)	-	-
Cash acquired, net of cash paid for acquisition of ESI	142,766	-	-
Cash proceeds from sale of equipment	6,000	-	-
Security deposit received/(paid)	3,922	15,050	(50,000)
Net cash provided by/(used in) investing activities	3,197,419	(46,226)	(909,872)

	Year Ended December 31, 2010	2009	2008
CASH FLOWS FROM FINANCING ACTIVITIES:			
Repayments of lines of credit	-	(263,825)	(16,085)
Borrowings under lines of credit	-	2,310,000	2,424,980
Deferred debt cost	-	(28,000)	-
Proceeds from exercises of stock options	605,998	848,449	-
Proceeds from exercises of warrants	22,861,458	1,616,342	-
Proceeds from issuance of common shares	-	8,000,000	108,000
Proceeds from sale of common shares of subsidiary	2,300,000	4,000,000	-
Net cash provided by financing activities	25,767,456	16,482,966	2,516,895
Effect of exchange rate changes on cash and cash equivalents	(96,148)	-	-
NET CHANGE IN CASH AND CASH EQUIVALENTS	21,135,843	12,176,802	2,778
CASH AND CASH EQUIVALENTS:			
At beginning of year	12,189,081	12,279	9,501
At end of year	$33,324,924	$12,189,081	$12,279
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid during year for interest	$1,315	$415,330	$157,620
SUPPLEMENTAL SCHEDULE OF NONCASH FINANCING AND INVESTING ACTIVITIES :			
Common shares issued as part of acquisition of ESI	$11,011,864	-	-
Common shares issued for conversion of line of credit and accrued interest	$-	$4,134,424	$1,442,409
Common shares issued for new loans and extension of line of credit	$-	$304,181	$273,200
Common shares issued for accounts payable	$-	$229,500	-
Common shares issued for deferred license fees	$-	$120,000	-
Common shares retired for exercise of options	$249,979	-	-
Warrants issued as part of acquisition of ESI	$1,778,727	-	-
Warrants issued for services	$1,979,037	-	-
Warrants issued for line of credit	$-	$398,548	$225,951
Rights to exchange promissory notes for stock feature on notes payable	$-	$304,400	-

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Basis of Presentation

General–- BioTime is a biotechnology company engaged in two areas of biomedical research and product development. BioTime has historically developed blood plasma volume expanders and related technology for use in surgery, emergency trauma treatment and other applications. Beginning in 2007, BioTime entered the field of regenerative medicine, and focused on human embryonic stem (“hES”) cell and induced pluripotent stem (“iPS”) cell technology. Regenerative medicine refers to therapies based on stem cell technology that are designed to rebuild cell and tissue function lost due to degenerative disease or injury. hES and iPS cells provide a means of manufacturing every cell type in the human body and therefore show considerable promise for the development of a number of new therapeutic products. BioTime plans to develop stem cell products for research and therapeutic use through its subsidiaries. OncoCyte Corporation (“OncoCyte”) is developing therapies to treat cancer. ES Cell International Pte. Ltd. (“ESI”), a Singapore private limited company develops and sells hES products for research use. BioTime Asia, Limited (“BioTime Asia”), a Hong Kong company, sells products for research use and may develop therapies to treat cancer, neurological, and orthopedic diseases. OrthoCyte Corporation (“OrthoCyte”) is developing therapies to treat orthopedic disorders, diseases and injuries. ReCyte Therapeutics, Inc., formerly known as Embryome Sciences, Inc. (“ReCyte Therapeutics”), is developing therapies to treat vascular and blood diseases and disorders.

At December 31, 2010, BioTime and its subsidiary, ESI through a step acquisition effected in October, 2010, held, in the aggregate, more than 50% of the shares of Cell Cure Neurosciences Ltd. (“Cell Cure Neurosciences”), an Israel-based biotechnology company focused on developing stem cell-based therapies for retinal and neurological disorders, including the development of retinal pigment epithelial cells for the treatment of macular degeneration, and treatments for multiple sclerosis. See Note 13 for additional information about BioTime’s acquisition of its interest in Cell Cure Neurosciences.

BioTime is focusing a portion of its efforts in the field of regenerative medicine on the development and sale of advanced human stem cell products and technology that can be used by researchers at universities and other institutions, at companies in the bioscience and biopharmaceutical industries, and at other companies that provide research products to companies in those industries. Products for the research market generally can be sold without regulatory (FDA) approval, and are therefore relatively near-term business opportunities when compared to therapeutic products.

BioTime’s operating revenues have been derived almost exclusively from royalties and licensing fees related to the sale of its plasma volume expander products, primarily Hextend®. BioTime began to make its first stem cell research products available during 2008, but has not yet generated significant revenues from the sale of those products. BioTime’s ability to generate substantial operating revenue depends upon its success in developing and marketing or licensing its plasma volume expanders and stem cell products and technology for medical and research use. On April 29, 2009, the California Institute of Regenerative Medicine (“CIRM”) awarded BioTime a $4,721,706 grant for a stem cell research project related to its ACTCellerate technology. The CIRM grant covers the period of September 1, 2009 through August 31, 2012. During 2010, BioTime received four quarterly payments from CIRM totaling $1,575,523. During 2010, BioTime received $476,724 of a $733,438 grant awarded under the U.S. Government's Qualifying Therapeutic Discovery Project ("QTDP").

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The consolidated balance sheets as of December 31, 2010 and 2009, the consolidated statements of operations for the years ended December 31, 2010, 2009 and 2008, the consolidated statements of changes in equity for the years ended December 31, 2010, 2009 and 2008, and the consolidated statements of cash flows for the years ended December 31, 2010, 2009 and 2008 have been prepared by BioTime's management in accordance with instructions from Form 10-K. In the opinion of management, all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the financial position, results of operations, and cash flows at December 31, 2010 have been made.

Principles of consolidation – BioTime's consolidated financial statements include the accounts of its subsidiaries. The following table reflects BioTime's ownership of the outstanding shares of its subsidiaries.

Subsidiary	BioTime Ownership	Country
ReCyte Therapeutics, Inc. (formerly Embryome Sciences, Inc.)	95.15%	USA
OncoCyte Corporation	74%	USA
OrthoCyte Corporation	100%	USA
ES Cell International Pte., Ltd.	100%	Singapore
BioTime Asia, Limited	81%	Hong Kong
Cell Cure Neurosciences, Ltd.	53.6%	Israel

All material intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States and with the accounting and reporting requirements of Regulation S-X of the Securities and Exchange Commission ("SEC"). As of December 31, 2010, we consolidated OncoCyte, ReCyte Therapeutics, ESI, Cell Cure Neurosciences, and BioTime Asia as we have the ability to control their operating and financial decisions and policies through our ownership, and we reflect the non-controlling interest as a separate element of equity on our consolidated balance sheet.

Certain significant risks and uncertainties - BioTime's operations are subject to a number of factors that can affect its operating results and financial condition. Such factors include but are not limited to, the following: the results of clinical trials of BioTime's pharmaceutical products; BioTime's ability to obtain United States FDA and foreign regulatory approval to market its pharmaceutical products; BioTime's ability to develop new stem cell research products and technologies; competition from products manufactured and sold or being developed by other companies; the price and demand for BioTime products; BioTime's ability to obtain additional financing and the terms of any such financing that may be obtained; BioTime's ability to negotiate favorable licensing or other manufacturing and marketing agreements for its products; the availability of ingredients used in BioTime's products; and the availability of reimbursement for the cost of BioTime's pharmaceutical products (and related treatment) from government health administration authorities, private health coverage insurers, and other organizations.

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2. Summary of Significant Accounting Policies

Use of estimates – The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue recognition – BioTime complies with SEC Staff Accounting Bulletin guidance on revenue recognition. Royalty and license fee revenues consist of product royalty payments and fees under license agreements and are recognized when earned and reasonably estimable. BioTime recognizes revenue in the quarter in which the royalty report is received, rather than the quarter in which the sales took place. When BioTime is entitled to receive up-front nonrefundable licensing or similar fees pursuant to agreements under which BioTime has no continuing performance obligations, the fees are recognized as revenues when collection is reasonably assured. When BioTime receives up-front nonrefundable licensing or similar fees pursuant to agreements under which BioTime does have continuing performance obligations, the fees are deferred and amortized ratably over the performance period. If the performance period cannot be reasonably estimated, BioTime amortizes nonrefundable fees over the life of the contract until such time that the performance period can be more reasonably estimated. Milestone payments, if any, related to scientific or technical achievements are recognized in income when the milestone is accomplished if (a) substantive effort was required to achieve the milestone, (b) the amount of the milestone payment appears reasonably commensurate with the effort expended, and (c) collection of the payment is reasonably assured. Grant income is recognized as revenue when earned.

Cash and cash equivalents – BioTime considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Accounts receivable and allowance for doubtful accounts - Trade accounts receivable and grants receivable are presented in the prepaid expenses and other current assets line item of the consolidated balance sheet. Total trade receivables amounted to $125,000 and grants receivable amounted to $543,000 as of December 31, 2010. These amounts are deemed fully collectible; as such BioTime did not recognize any allowance for doubtful accounts as of December 31, 2010. BioTime evaluates the collectability of its receivables based on a variety of factors, including the length of time receivables are past due and significant one-time events and historical experience. An additional reserve for individual accounts is recorded when BioTime becomes aware of a customer's inability to meet its financial obligations, such as in the case of bankruptcy filings or deterioration in the customer's operating results or financial position. If circumstances related to customers change, estimates of the recoverability of receivables would be further adjusted.

Concentrations of credit risk – Financial instruments that potentially subject BioTime to significant concentrations of credit risk consist primarily of cash and cash equivalents. BioTime limits the amount of credit exposure of cash balances by maintaining its accounts in high credit quality financial institutions. Cash equivalent deposits with financial institutions may occasionally exceed the limits of insurance on bank deposits; however, BioTime has not experienced any losses on such accounts.

Equipment – Equipment is stated at cost. Equipment is being depreciated using the straight-line method over a period of 36 to 84 months. See Note 4.

Inventory – Inventories are stated at the lower of cost or market. Cost, which includes amounts related to materials, labor, and overhead, is determined in a manner which approximates the first-in, first-out (“FIFO”) method.

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Deferred costs – Certain costs incurred in obtaining a line of credit were deferred and have been completely amortized as of December 31, 2009.

Patent costs – Costs associated with obtaining patents on products or technology developed are expensed as general and administrative expenses when incurred. This accounting is in compliance with guidance promulgated by the Financial Accounting Standards Board (the "FASB") regarding goodwill and other intangible assets.

Research and development – BioTime complies with FASB requirements governing accounting for research and development costs. Research and development costs are expensed when incurred, and consist principally of salaries, payroll taxes, research and laboratory fees, and license fees paid to acquire patents or licenses to use patents and other technology from third parties.

Comprehensive Loss - In countries in which BioTime operates, and the functional currency is other than the U.S. dollar, assets and liabilities are translated using published exchange rates in effect at the consolidated balance sheet date. Revenues and expenses and cash flows are translated using an approximate weighted average exchange rate for the year. Resulting translation adjustments are recorded as a component of accumulated other comprehensive income. As of December 31, 2010, accumulated other comprehensive income includes income of $897,338, which is entirely from foreign currency translation.

Income taxes – BioTime accounts for income taxes in accordance with FASB requirements, which prescribe the use of the asset and liability method, whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect. Valuation allowances are established when necessary to reduce deferred tax assets when it is more likely than not that a portion or all of the deferred tax assets will not be realized. Effective January 1, 2007, BioTime adopted the provisions of a FASB Interpretation on accounting for uncertainty in income taxes. The FASB guidance also prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not sustainable upon examination by taxing authorities. BioTime recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. No amounts were accrued for the payment of interest and penalties as of December 31, 2010 and 2009. Management is currently unaware of any tax issues under review

Stock-based compensation – BioTime adopted accounting standards governing share-based payments, which require the measurement and recognition of compensation expense for all share-based payment awards made to directors and employees, including employee stock options based on estimated fair values. In March 2005, the SEC issued additional guidelines which provide supplemental implementation guidance for valuation of share-based payments. BioTime has applied the provisions of this guidance in such valuations as well. Consistent with those guidelines, BioTime has continued to utilize the Black-Scholes Merton option pricing model which was previously used for BioTime's pro forma financial statements. BioTime's determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by BioTime's stock price as well as by assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, BioTime's expected stock price volatility over the term of the awards, and the actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The risk-free rate is based on the U.S. Treasury rates in effect during the corresponding period of grant. Although the fair value of employee stock options is determined in accordance with recent FASB guidance, changes in the subjective assumptions can materially affect the estimated value. In management's opinion, the existing valuation models may not provide an accurate measure of the fair value of BioTime's employee stock options because the option-pricing model value may not be indicative of the fair value that would be established in a willing buyer/willing seller market transaction.

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Impairment of long-lived assets – BioTime's long-lived assets, including intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. If an impairment indicator is present, BioTime evaluates recoverability by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are impaired, the impairment recognized is measured by the amount by which the carrying amount exceeds the estimated fair value of the assets.

Deferred license and consulting fees – Deferred license and consulting fees consist of $1,979,036 attributable to the value of warrants issued to third parties for services and to the minority shareholder in BioTime Asia for consulting services, and $1,095,000 in deferred license fees paid to acquire rights to use the proprietary technologies of third parties. The value of the warrants is being amortized over the period the services are being provided, and the license fees are being amortized over the estimated useful lives of the licensed technologies or licensed research products. See Note 8.

Loss per share – Basic net loss per share is computed by dividing net loss available to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted net loss per share reflects the weighted-average number of common shares outstanding plus the potential effect of dilutive securities or contracts which are convertible to common shares, such as options, warrants, convertible debt, and preferred stock (using the treasury stock method) and shares issuable in future periods, except in cases where the effect would be anti-dilutive. Diluted loss per share for the years ended December 31, 2010, 2009, and 2008 excludes any effect from 3,320,590 options and 649,000 warrants, 3,602,000 options and 12,264,345 warrants, and 3,538,332 options and 8,344,534 warrants, respectively, as the inclusion of those options and warrants would be antidilutive.

Fair value of financial instruments – The fair value of BioTime's assets and liabilities, which qualify as financial instruments under FASB guidance regarding disclosures about fair value of financial instruments, approximate the carrying amounts presented in the accompanying consolidated balance sheets.

Reclassification – Certain prior year amounts have been reclassified to conform to the current year presentation.

Effect of recently issued and recently adopted accounting pronouncements – In April 2010, the FASB issued an Accounting Standards Update ("ASU") which provides guidance on defining a milestone and determining when it may be appropriate to apply the milestone method of revenue recognition for research or development transactions. Research or development arrangements frequently include payment provisions whereby a portion or all of the consideration is contingent upon milestone events such as successful completion of phases in a study or achieving a specific result from the research or development efforts. The amendments in this standard provide guidance on the criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. This standard is effective for fiscal years and interim periods within those years beginning on or after June 15, 2010, with early adoption permitted. This standard became effective for BioTime on January 1, 2011. BioTime's management is currently evaluating the impact that the adoption of this standard will have on BioTime's consolidated financial condition, results of operations, and disclosures.

In December 2010, the FASB issued ASU 2010-29, Business Combinations — Disclosure of Supplementary Pro Forma Information for Business Combinations , ("ASU 2010-29"), that amends ASC Subtopic 805-50, Business Combinations — Disclosures , and requires public entities that are required to present comparative financial statements to disclose revenue and earnings of the combined entity as though the business combination that occurred during the current year had occurred as of the beginning of the comparable prior annual reporting period only. The amendment also requires public entities to include a description of the nature and amount of material, nonrecurring pro forma adjustments directly attributable to the business combination included in the reported pro forma revenue and earnings. BioTime adopted the provisions of ASU 2010-29. The adoption of these provisions did not have a material impact on

BioTime's consolidated financial statements.

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3. Inventory

At December 31, 2010, ReCyte Therapeutics, in which BioTime owns approximately a 95% interest, held $29,600 of inventory of finished products on-site at its corporate headquarters in Alameda, California. At that same date, $15,870 of inventory of finished products was held by a third party on consignment. At December 31, 2009, ReCyte Therapeutics held $23,030 of inventory of finished products at its corporate headquarters and $15,353 of inventory of finished products was held by a third party on consignment. The inventory held by ReCyte Therapeutics is being transferred to BioTime or another BioTime subsidiary in connection with the change in focus of the subsidiary's business from the production and sale of products for the research market to the development of therapeutic products to treat vascular and blood disease and disorders.

4. Equipment

Equipment, furniture and fixtures at December 31, 2010 and 2009 are as follows:

	2010	2009
Equipment, furniture and fixtures	$ 876,708	$ 185,424
Accumulated depreciation	$ (165,942)	$ (54,291)
Equipment net of accumulated depreciation	$ 710,766	$ 131,133

Depreciation expense amounted to $138,659 and $34,591 for the years ended December 31, 2010 and 2009, respectively.

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5. Intangible assets

Intangible assets at December 31, 2010 are as follows:

Intangible assets	$16,208,116
Accumulated amortization	(821,211)
Equipment, net	$15,386,905

BioTime amortizes its intangible assets over an estimated period of 10 years on a straight line basis.

Amortization of intangible assets for periods subsequent to December 31, 2010 are as follows:

Year Ended December 31,	Amortization Expense
2011	$ 1,548,828
2012	1,548,828
2013	1,548,828
2014	1,548,828
2015	1,548,828
Thereafter	6,937,496
Total	$ 14,681,636

BioTime recognized $790,117 in amortization expense of intangible assets in 2010. The difference between the amortization expense recognized in the consolidated statement of operations and the accumulated amortization of $821,211 per the consolidated balance sheet is entirely attributed to foreign currency rates. See Note 12 and 13.

6. Accounts Payable and Accrued Liabilities

At December 31, 2010 and 2009, accounts payable and accrued liabilities consists of the following:

	December 31, 2010	2009
Accounts Payable	$ 1,036,145	$ 277,720
Accrued bonuses	367,822	-
Other accrued liabilities	525,907	253,238
	$ 1,929,874	$ 530,958

7. Lines of Credit

BioTime had a Revolving Line of Credit Agreement (“Credit Agreement”) with certain private lenders that was collateralized by a security interest in BioTime’s right to receive royalty and other payments under its license agreement with Hospira, Inc. BioTime was permitted to borrow up to $3,500,000 under the Credit Agreement. Following an amendment to the Credit Agreement in April 2009, the maturity date of this Revolving Line of Credit was extended to December 1, 2009 with respect to $2,669,282 in principal amount of loans. BioTime also received a total of $2,310,000 of new loans under the amended Credit Agreement during the period January 1 through May 19, 2009. Lenders who agreed to extend the maturity date of their outstanding loans to December 1, 2009 and lenders who made new loans received from BioTime a total of 112,310 common shares having an aggregate market value (based

on closing price of the shares on the OTC Bulletin Board) equal to six percent (6%) of the lender's loan commitment, as consideration for the extension of the term of their loans or for making new loans. BioTime also repaid $210,718 of principal and accrued interest on loans that matured on April 15, 2009 and were not extended. In addition, from January 1 through April 15, 2009, certain lenders exercised their right to exchange loans totaling $624,415 of principal, plus accrued interest, for an aggregate of 423,936 BioTime common shares.

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On August 20, 2009, BioTime completed an exchange offer with the holders of its revolving credit notes through which BioTime issued 1,989,515 common shares and warrants to purchase 100,482 common shares in exchange for notes in the aggregate principal amount of $3,349,259. BioTime also paid interest in the aggregate amount of $294,351 on the revolving credit notes tendered in the exchange offer. The warrants issued in the exchange offer were exercisable at a price of $2.00 per share and any of those warrants that were not exercised expired on October 31, 2010.

A revolving credit note in the principal amount of $150,000 and associated accrued interest of $9,850 was converted into equity by the note holder upon maturity at December 1, 2009. Under the terms of the Credit Agreement, BioTime issued 79,925 common shares on that date to pay off both the principal loan amount and accrued interest. As of December 31, 2009, all loans, including both principal and accrued interest, made to BioTime under the Credit Agreement had been paid in full, the Credit Agreement has expired, and no further loans may be made under its terms.

8. Royalty Obligation and Deferred License Fees

BioTime amortizes deferred license fees over the estimated useful lives of the licensed technologies or licensed research products. BioTime is applying a 10 year estimated useful life to the technologies and products that it is currently licensing. The estimation of the useful life any technology or product involves a significant degree of inherent uncertainty, since the outcome of research and development or the commercial life a new product cannot be known with certainty at the time that the right to use the technology or product is acquired. BioTime will review its amortization schedules for impairments that might occur earlier than the original expected useful lives.

BioTime did not amortize deferred license fees during the years ended December 31, 2008 and 2009 on the basis that sales of products under the licenses had not yet begun. Because BioTime has modified its procedure for amortizing deferred license fees for the year ended December 31, 2010, certain differences resulted in BioTime’s research and development expenses, total expenses, and net loss for the year ended December 31, 2010 as compared to the years ended December 31, 2008 and 2009. BioTime treated those differences as a correction of an error totaling $35,800 for 2008, and $85,400 for 2009. BioTime does not believe that those differences were material to its results of operations for those prior years. Because BioTime did not record the effect of that error in its financial statements for the years ended December 31, 2008 and 2009 due to the immaterial impact on those financial statements, it has recorded in research and development expenses for 2010 an additional $121,200, representing the amortization amounts not previously recorded in 2008 and 2009.

On January 3, 2008, BioTime entered into a Commercial License and Option Agreement with Wisconsin Alumni Research Foundation (“WARF”). The WARF license permits BioTime to use certain patented and patent pending technology belonging to WARF, as well as certain stem cell materials, for research and development purposes, and for the production and marketing of products used as research tools, including in drug discovery and development. BioTime or Embryome Sciences will pay WARF royalties on the sale of products and services using the technology or stem cells licensed from WARF. The royalty will range from 2% to 4%, depending on the kind of products sold. The royalty rate is subject to certain reductions if BioTime also becomes obligated to pay royalties to a third party in order to sell a product. In March 2009, BioTime amended its license agreement with WARF. The amendment increased the license fee from the original $225,000 to $295,000, of which $225,000 was paid in cash and $70,000 was paid by delivering BioTime common shares having a market value of $70,000 as of March 2, 2009. The amendment extended until March 2, 2010 the dates for payment of the $215,000 balance of the cash license fee and $20,000 in remaining reimbursement of costs associated with preparing, filing, and maintaining the licensed patents. The commencement date for payment of an annual $25,000 license maintenance fee was also been extended to March 2, 2010. The licensing fees were included in deferred license fees in BioTime’s consolidated balance sheet as of December 31, 2009, and less the amortized portion, in BioTime’s consolidated balance sheet as of December 31, 2010.

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On June 24, 2008, BioTime, along with its subsidiary, ReCyte Therapeutics, entered into a Product Production and Distribution Agreement with Lifeline Cell Technology, LLC for the production and marketing of human embryonic progenitor cells ("hEPC") or hEPC lines, and products derived from those hEPCs. The products developed under the agreement with Lifeline will be produced and sold for research purposes such as drug discovery and drug development uses. ReCyte Therapeutics paid Lifeline $250,000, included in the advanced license fee and other fees, to facilitate their product production and marketing efforts. BioTime will be entitled to recover that amount from the share of product sale proceeds that otherwise would have been allocated to Lifeline.

On July 10, 2008, ReCyte Therapeutics entered into a License Agreement with Advanced Cell Technology, Inc. ("ACT"), under which ReCyte Therapeutics acquired exclusive worldwide rights to use ACT's "ACTCellerate" technology for methods to accelerate the isolation of novel cell strains from pluripotent stem cells. ReCyte Therapeutics paid ACT a $250,000 license fee and will pay an 8% royalty on sales of products, services, and processes that utilize the licensed technology. Once a total of $1,000,000 of royalties has been paid, no further royalties will be due. The license will expire in twenty years or upon the expiration of the last to expire of the licensed patents, whichever is later. The $250,000 license fee is included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2009 and, less the amortized portion, in BioTime's consolidated balance sheet as of December 31, 2010.

On August 15, 2008, ReCyte Therapeutics entered into a License Agreement and a Sublicense Agreement with ACT under which ReCyte Therapeutics acquired world-wide rights to use an array of ACT technology (the "ACT License") and technology licensed by ACT from affiliates of Kirin Pharma Company, Limited (the "Kirin Sublicense"). The ACT License and Kirin Sublicense permit the commercialization of products in human therapeutic and diagnostic product markets.

The technology licensed by ReCyte Therapeutics covers methods to transform cells of the human body, such as skin cells, into an embryonic state in which the cells will be pluripotent. Under the ACT License, ReCyte Therapeutics paid ACT a $200,000 license fee and will pay a 5% royalty on sales of products, services, and processes that utilize the licensed ACT technology, and 20% of any fees or other payments (other than equity investments, research and development costs, loans and royalties) received by ReCyte Therapeutics from sublicensing the ACT technology to third parties. Once a total of $600,000 of royalties has been paid, no further royalties will be due. The license will expire in twenty years or upon the expiration of the last-to-expire of the licensed patents, whichever is later. The $200,000 license fee payment was included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2009 and, less the amortized portion, in BioTime's consolidated balance sheet as of December 31, 2010.

Under the Kirin Sublicense, ReCyte Therapeutics has paid ACT a $50,000 license fee and will pay a 3.5% royalty on sales of products, services, and processes that utilize the licensed ACT technology, and 20% of any fees or other payments (other than equity investments, research and development costs, loans and royalties) received by ReCyte Therapeutics from sublicensing the Kirin Technology to third parties. ReCyte Therapeutics will also pay to ACT or to an affiliate of Kirin Pharma Company, Limited ("Kirin"), annually, the amount, if any, by which royalties payable by ACT under its license agreement with Kirin are less than the $50,000 annual minimum royalty due. Those payments by ReCyte Therapeutics will be credited against other royalties payable to ACT under the Kirin Sublicense. The license will expire upon the expiration of the last to expire of the licensed patents, or May 9, 2016 if no patents are issued. The $50,000 license fee payment has been included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2009 and, less the amortized portion, in BioTime's consolidated balance sheet as of December 31, 2010.

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In February 2009, ReCyte Therapeutics entered into a Stem Cell Agreement with Reproductive Genetics Institute ("RGI"). In partial consideration of the rights and licenses granted to ReCyte Therapeutics by RGI, BioTime issued to RGI 32,259 common shares, having a market value of $50,000 on the effective date of the Stem Cell Agreement. This $50,000 payment was included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2009 and, less the amortized portion, in BioTime's consolidated balance sheet as of December 31, 2010.

As of December 31, 2010, amortization of deferred license fees was as follows:

Year Ended December 31,	Deferred License Fees
2011	$ 109,500
2012	109,500
2013	109,500
2014	109,500
2015	109,500
Thereafter	320,333
Total	867,833

9. Related Party Transactions

During April 1998, BioTime initially entered into a financial advisory services agreement with Greenbelt, Corp., a corporation controlled by Alfred D. Kingsley and Gary K. Duberstein, who are also shareholders of BioTime. Until 2007, the agreement was renewed annually in March and covered the 12 months ending March 31. The renewed agreement for 2008 covered services provided from January 1 through December 31, 2008. Under the 2008 agreement, BioTime agreed to pay $135,000 in cash and to issue 300,000 common shares for the twelve months ending December 31, 2008. Greenbelt permitted BioTime to defer paying the entire $135,000 until January 2009. In return for Greenbelt allowing the deferral, 60,000 common shares became issuable by BioTime to Greenbelt in January 2009, the value of which was accrued for in BioTime's financial statements as of December 31, 2008. Greenbelt and BioTime agreed to terminate their agreement effective June 30, 2009, in connection with Alfred D. Kingsley joining the BioTime Board of Directors, and BioTime agreed to pay Greenbelt $90,000 for services rendered from January 1 through June 30, 2009. BioTime agreed to indemnify Greenbelt and its officers, affiliates, employees, agents, assignees, and controlling person from any liabilities arising out of or in connection with actions taken on BioTime's behalf under the agreement.

Activity related to the Greenbelt agreement is presented in the table below:

	Balance included in Accounts Payable at January 1,	Add: Cash-based expense accrued	Add: Stock-based expense accrued	Less: Cash payments	Less: Value of stock-based payments	Balance included in Accounts Payable at December 31,
2010	$ 90,000	$ -	$ -	$ (90,000)	$ -	$ -
2009	$ 454,500	$ 90,000	$ -	$ (225,000)	$ (229,500)	$ 90,000

BioTime also currently pays $5,050 per month for the use of approximately 900 square feet of office space in New York City, which is made available to BioTime on a month-by-month basis by one of its directors at his cost for use in conducting meetings and other business affairs.

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10. Equity

BioTime, as part of rights offerings and other agreements, has issued warrants to purchase its common shares. Activity related to warrants in 2010, 2009, and 2008 is presented in the table below:

	Number of Warrants	Per share exercise price	Weighted Average Exercise Price
Outstanding, January 1, 2008	7,847,867	$2.00	$2.00
Granted in 2008	496,667	.68 - 2.00	1.73
Outstanding, December 31, 2008	8,344,534	2.00	1.98
Granted in 2009	4,727,982	2.00	2.00
Exercised in 2009	(808,171)	2.00	2.00
Outstanding, December 31, 2009	12,264,345	2.00	1.99
Granted in 2010	650,000	3.00 - 10.00	6.77
Exercised in 2010	(12,240,357)	1.818 - 2.00	1.87
Expired in 2010	(24,988)	2.00	2.00
Outstanding, December 31, 2010	649,000	$.68 - 10.00	$6.42

At December 31, 2010, 649,000 warrants to purchase common shares with a weighted average exercise price of $6.42 and a weighted average remaining contractual life of 2.42 years were outstanding.

At December 31, 2009, 12,264,345 warrants to purchase common shares with a weighted average exercise price of $1.99 and a weighted average remaining contractual life of 0.86 years were outstanding.

In October 2009, the board of directors and shareholders approved an increase in the authorized number of common shares to 75,000,000 shares.

A summary of all option activity under the 2007 and 2010 subsidiary option plans for subsidiaries for the year ended December 31, 2010 is as follows:

	Options Available for Grant	Number of Options Outstanding	Weighted Average Exercise Price
January 1, 2010	9,700	4,400	$0.003
Added upon adoption of option plan	12,001,600	-	-
Granted	(4,308,240)	4,308,240	0.74
Forfeited/Exercised	-	-	-
December 31, 2010	7,703,060	4,312,640	$0.74

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Additional information regarding subsidiary options outstanding as of December 31, 2010 is as follows:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Avg. Remaining Contractual Life (yrs)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
$0.003-$0.10	3,304,800	9.78	$ 0.26	437,700	$ 0.10
2.05	1,000,000	10.00	2.05	-	-
27.00-42.02	7,840	9.80	37.35	2,613	32.02
$0.003-$42.02	4,312,640	9.83	$ 0.74	440,313	$ 0.29

Preferred Shares

BioTime is authorized to issue 1,000,000 shares of preferred stock. The preferred shares may be issued in one or more series as the board of directors may by resolution determine. The board of directors is authorized to fix the number of shares of any series of preferred shares and to determine or alter the rights, references, privileges, and restrictions granted to or imposed on the preferred shares as a class, or upon any wholly unissued series of any preferred shares. The board of directors may, by resolution, increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series of preferred shares subsequent to the issue of shares of that series.

As of December 31, 2010 and 2009, BioTime has no issued and outstanding preferred shares.

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Common shares

BioTime is authorized to issue 75,000,000 common shares with no par value. As of December 31, 2010 and 2009, BioTime has issued and outstanding 47,777,701 and 33,667,659 common shares, respectively.

Significant common share transactions during the year ended December 31, 2009 are as follows:

BioTime issued 2,493,374 common shares upon conversion of its line of credit and associated accrued interest of $4,134,424.

BioTime issued 153,206 common shares to the line of credit holders as inducement to extend loans to BioTime or to extend the maturity of the line of credit. These shares were valued at $304,181 based on the fair value of shares granted on the date of the transactions.

BioTime issued 4,400,000 common shares and 4,400,000 warrants for BioTime's common shares for cash proceeds of $8,000,000. No funding cost was incurred.

BioTime received total cash of $848,449 and $1,616,342 for the exercise of 535,832 options and 808,171 warrants, respectively. Average cash receipts were $1.583 for options and $2.00 for warrants.

OncoCyte Corporation sold approximately 26% of its common shares for $4,000,000 to a principal shareholder of BioTime. This amount is included as noncontrolling interest in the consolidated financial statements.

Significant common share transactions during the year ended December 31, 2010 are as follows:

BioTime received total cash of $855,977 and $22,861,458 for the exercise of 526,410 options and 12,240,357 warrants, respectively. Average cash receipts were $1.63 for options and $1.87 for warrants.

BioTime issued 1,383,400 common shares and 300,000 warrants as part of its consideration for the acquisition of ESI.

BioTime recognized $2,142,200 in costs for modification of warrants.

BioTime retired 40,125 common shares as payment for the exercise of employee options.

Cell Cure Neurosciences sold ordinary shares to BioTime and two other shareholders for $7,100,000. BioTime invested $4,100,000 of that amount and increased its consolidated equity ownership interest in Cell Cure Neurosciences to approximately 54%.

ReCyte Therapeutics sold approximately 5% of its common shares for $2,300,000 to two private investors. This amount is included as noncontrolling interest in the consolidated financial statements.

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11. Stock Option Plans

During 1992, BioTime adopted the 1992 Stock Option Plan ("1992 Plan"). Options granted under the 1992 Plan expire five to ten years from the date of grant and may be fully exercisable immediately, or may be exercisable according to a schedule or conditions specified by the Board of Directors or the Compensation Committee. As of December 31, 2008, options to purchase 59,500 shares were outstanding at an exercise price of $11.75 under the 1992 Plan. At December 31, 2008, no options were available for future grants under the 1992 Plan.

During 2002, BioTime adopted the 2002 Plan, which was amended during December 2004 to reserve 2,000,000 common shares for issuance under options granted to eligible persons. During October 2007 and August 2009, the Board of Directors approved amendments to the 2002 Plan to make an additional 4,000,000 common shares available under the 2002 Plan. The 2007 and 2009 amendments were approved by BioTime’s shareholders in October 2009. No options may be granted under the 2002 Plan more than ten years after the date upon which the 2002 Plan was adopted by the Board of Directors, and no options granted under the 2002 Plan may be exercised after the expiration of ten years from the date of grant. Under the 2002 Plan, options to purchase common shares may be granted to employees, directors and certain consultants at prices not less than the fair market value at date of grant for incentive stock options and not less than 85% of fair market value for other stock options. Options may be fully exercisable immediately, or may be exercisable according to a schedule or conditions specified by the Board of Directors or the Compensation Committee. The 2002 Plan also permits BioTime to sell common shares to employees subject to vesting provisions under restricted stock agreements that entitle BioTime to repurchase unvested shares at the employee’s cost upon the occurrence of specified events, such as termination of employment. BioTime may permit employees or consultants, but not executive officers or directors, who purchase stock under restricted stock purchase agreements, to pay for their shares by delivering a promissory note that is secured by a pledge of their shares. Under the 2002 Plan, as of December 31, 2010, BioTime had granted to certain employees, consultants, and directors, options to purchase a total of 3,320,590 common shares at exercise prices ranging from $0.32 to $8.58 per share.

In October 2007, BioTime granted certain executives options to purchase 2,000,000 common shares (“Executive Options”) under BioTime’s 2002 Employee Stock Option Plan, as amended (“2002 Plan”). The exercise price of the Executive Options is $0.50 per share. The Executive Options will vest at the rate of 1/60th of the number of Executive Options granted at the end of each full month of employment. The vested portion of each executive’s Executive Options shall expire on the earliest of (a) seven (7) years from the date of grant, (b) three months after the executive ceases to be an employee of BioTime for any reason other than his death or disability, or (c) one year after he ceases to be an employee of BioTime due to his death or disability; provided that if he dies during the three-month period described in clause (b), the expiration date of the vested portion of this Option shall be one year after the date of his death.

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The Executive Options were originally paired with stock appreciation rights ("SARs") with respect to 1,302,030 shares. The SARs expired during October 2009, under their terms, when BioTime's shareholders approved an amendment to the 2002 Plan making additional common shares available under the 2002 Plan.

On January 1, 2006, BioTime adopted a new accounting pronouncement, which requires the measurement and recognition for all share-based payment awards made to BioTime's employees and directors, including employee stock options. The following table summarizes stock-based compensation expense related to employee and director stock options awards for the years ended December 31, 2010, 2009 and 2008, which was allocated as follows:

	Year Ended December 31,		
	2010	2009	2008
All stock-based compensation expense:			
Research and Development	$475,159	$150,899	$-
General and Administrative	619,837	337,665	206,321
Stock appreciation rights/(reversal)	-	(483,688)	470,537
All stock-based compensation expense included in expenses	$1,094,996	$4,876	$676,858

BioTime adopted a new accounting pronouncement using the modified prospective transition method of accounting for options granted on or after January 1, 2006. As of December 31, 2010, total unrecognized compensation costs related to unvested stock options was $2,735,325, which is expected to be recognized as expense over a weighted average period of approximately 4.7 years.

For all applicable periods, the value of each employee or director stock option was estimated on the date of grant using the Black-Scholes Merton model for the purpose of the pro forma financial disclosures in accordance with a new accounting pronouncement.

The weighted-average estimated fair value of stock options granted during the years ended December 31, 2010 and 2009 was $6.75 and $3.28 per share, respectively, using the Black-Scholes Merton model with the following weighted-average assumptions:

	Year Ended December 31,	
	2010	2009
Expected life (in years)	5.92	6.24
Risk-free interest rates	2.05%	5.71%
Volatility	112.85%	115.49%
Dividend yield	0%	0%

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General Option Information

A summary of all option activity under the 1992 Plan and 2002 Plan for the years ended December 31, 2010, 2009, and 2008 is as follows:

	Options Available for Grant	Number of Options Outstanding	Weighted Average Exercise Price
January 1, 2008	726,168	3,333,332	$ 1.72
Granted 1	(60,000)	(60,000)	0.55
Exercised	-	(25,000)	0.32
Forfeited/expired	80,000	(80,000)	1.55
December 31, 2008	746,168	3,288,332	0.97
Added by Amendment to 2002 Plan 2	2,000,000	-	-
Granted	(699,000)	699,000	3.28
Exercised 1	-	(410,832)	1.73
Forfeited/expired	40,000	(99,500)	1.13
December 31, 2009	2,087,168	3,477,000	1.13
Granted	(245,000)	245,000	6.75
Exercised 1		(401,410)	1.56
December 31, 2010	1,842,168	3,320,590	$ 1.13

1 This table excludes 250,000 options which were granted in 2008 outside the 1992 Plan and 2002 Plan, of which 125,000 were exercised in 2009 and the remaining 125,000 in 2010.

2 During October 2009, the 2002 Plan was amended to make 2,000,000 additional common shares available for the grant of options.

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Additional information regarding options outstanding as of December 31, 2010 is as follows:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Avg. Remaining Contractual Life (yrs)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
$.32-$.47	360,000	.89	$ 0.33	360,000	$ 0.33
.50	2,000,000	3.78	.50	1,266,667	0.50
.68-1.55	45,000	2.95	0.71	45,000	0.71
2.00-8.58	915,590	5.03	4.22	425,736	3.50
$0.32-$8.58	3,320,590	3.80	$ 1.51	2,097,403	$ 1.08

During 2010, BioTime’s subsidiaries OncoCyte, OrthoCyte, ReCyte Therapeutics, and BioTime Asia adopted stock options plans that have substantially the same operative provisions as the BioTime 2002 Stock Option Plan. The OncoCyte, OrthoCyte and ReCyte Therapeutics stock option plans authorize the sale of up to 4,000,000 shares of the applicable subsidiary’s common stock through the exercise of stock options or under restricted stock purchase agreements. The BioTime Asia stock option plan authorizes the sale of up to 1,600 ordinary shares through the exercise of stock options or under restricted stock purchase agreements. Cell Cure Neurosciences' option plan authorizes the sale of 14,100 ordinary shares through the exercise of stock options.

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Avg. Remaining Contractual Life (yrs)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
$0.003-$0.10	3,300,400	9.78	$ 0.26	437,700	$0.10
2.05	1,000,000	10.00	2.05	-	-
27.00-42.02	7,840	9.80	37.35	2,613	32.02
$0.003-$42.02	4,308,240	9.83	$ 0.74	440,313	$0.29

No other options were granted under the other subsidiary Stock Option Plans as of December 31, 2010.

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12 Acquisition of ES Cell International Pte Ltd

On May 3, 2010, BioTime completed the acquisition of all of the issued preferred shares and ordinary shares of ESI, and the secured promissory notes (the "Notes") issued by ESI to a former ESI shareholder (the "Acquisition"). BioTime issued, in the aggregate, 1,383,400 common shares, and warrants to purchase an additional 300,000 common shares at an exercise price of $10 per share, to acquire all of the ESI shares and the Notes in the Acquisition. BioTime did not incur or assume any indebtedness when it acquired ESI.

ESI has produced six clinical-grade human embryonic stem cell lines that were derived following principles of Good Manufacturing Practice (GMP). ESI currently offers these GMP cell lines use in therapeutic product development.

In accordance with Accounting Standards Codification 805, Business Combinations ("ASC 805"), the total purchase consideration is allocated to the net tangible and identifiable intangible assets acquired, and liabilities assumed, based on their estimated fair values as of May 3, 2010. BioTime amortizes intangibles over the estimated useful life of 10 years on a straight line basis.

The purchase price for the acquisition is being allocated as follows:

Components of the purchase price:	
BioTime common shares	$ 11,011,864
BioTime warrants	1,778,727
Cash	80,000
Total purchase price	$ 12,870,591
Preliminary allocation of purchase price:	
Assets acquired and liabilities assumed:	
Cash	$ 222,802
Prepaid and other current assets	65,015
Property and equipment	96,677
Equity investment in Cell Cure	2,766,400
Intangible assets, patents	9,937,529
Current liabilities	(217,832)
Net assets acquired	$ 12,870,591

The fair value of the shares issued was based on the $7.96 closing price per BioTime common share on the NYSE Amex on May 3, 2010. The fair value of the warrants issued was computed using a Black Scholes Merton option pricing model, which utilized the following assumptions: expected term of four years, which is equal to the contractual life of the warrants; risk-free rate of 2.015%; 0% expected dividend yield; 118.20% expected volatility; a stock price of $7.96; and an exercise price of $10.

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13 Acquisition of Cell Cure Neurosciences, Ltd.

On October 18, 2010, BioTime completed the acquisition of 104,027 ordinary shares of Cell Cure Neurosciences by paying $4,100,000 including $3,847,392 in cash and by converting into Cell Cure Neurosciences shares a $250,000 loan that BioTime previously made to Cell Cure Neurosciences. Two other Cell Cure Neurosciences shareholders, Teva Pharmaceutical Industries Ltd. (“Teva”) and -HBL- Hadasit Bio-Holdings, Ltd (“HBL”) concurrently completed their acquisition of Cell Cure Shares. Teva acquired 49,975 Cell Cure Neurosciences shares for $2,000,000 in cash, and HBL acquired 25,625 Cell Cure Neurosciences shares for $897,962 in cash and by converting into Cell Cure Neurosciences shares a $100,000 loan previously made to Cell Cure Neurosciences. As a result of the share purchase, BioTime now owns, directly and through ESI, approximately 53.6% of the outstanding ordinary shares of Cell Cure Neurosciences, HBL owns approximately 26.3% of the outstanding ordinary shares, and Teva owns approximately 19.9% of the ordinary shares.

Cell Cure Neurosciences is developing stem cell-based therapies for retinal and neurological disorders, including the development of retinal pigment epithelial (“RPE”) cells for the treatment of macular degeneration, and treatments for multiple sclerosis.

With more than 50% interest in Cell Cure Neurosciences, BioTime accounts for Cell Cure Neurosciences using the purchase method of accounting, In accordance with Accounting Standards Codification 805, Business Combinations (“ASC 805”), the total purchase consideration is allocated to the net tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values as of October 18, 2010. BioTime amortizes intangibles over the estimated useful life of 10 years on a straight line basis.

The purchase price for the acquisition is being allocated as follows:

Components of the purchase price:	
Note receivable	$ 250,000
Interest accrued on note receivable	2,608
Cash	3,847,392
Total purchase price	$ 4,100,000
Allocation of purchase price:	
Assets acquired and liabilities assumed:	
Cash	$ 480,502
Prepaid and other current assets	472,636
Property and equipment	391,694
Intangible assets	5,480,634
ESI's equity investment in Cell Cure Neurosciences	(2,705,745)
Total investment	7,100,000
Noncontrolling interest	(5,894,255)
Current liabilities	(1,225,466)
Net assets acquired	$ 4,100,000

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14. Commitments and Contingencies

On October 22, 2010, BioTime entered into a new lease for its principal office and laboratory facilities located at 1301 Harbor Bay Parkway, Alameda, California. The new lease term commenced December 1, 2010 and expires on February 29, 2016. BioTime has an option to extend the lease for one additional term of five years, with the rent to be determined at the time of the extension based on the prevailing market rate for comparable facilities. BioTime increased the amount of laboratory and office space from approximately 11,000 square feet to approximately 17,000 square feet and obtained a right of first refusal on approximately 10,000 square feet of contiguous space. Base rent will be $27,086 per month and will increase by three percent each year. BioTime received two months of free rent at the beginning of the new lease term. In addition to the base rent, BioTime pays a pro rata share of real property taxes and certain costs associated to the operation and maintenance of the building in which the leased premises are located.

Rent expenses totaled $656,883, $682,982, and $527,682 for the years ended December 31, 2010, 2009, and 2008, respectively. Remaining minimum annual lease payments under the various operating leases for the year ending after December 31, 2010 are as follows:

Year Ending December 31,	Minimum lease payments
2011	$ 507,777
2012	465,173
2013	412,411
2014	356,064
2015	366,746
2016	31,401

Indemnification – Under BioTime’s bylaws, BioTime has agreed to indemnify its officers and directors for certain events or occurrences arising as a result of the officer or director serving in such capacity. The term of the indemnification period is for the officer’s or director’s lifetime. The maximum potential amount of future payments that BioTime could be required to make under the indemnification provisions contained in BioTime’s bylaws is unlimited. However, BioTime has a director’s and officer’s liability insurance policy that limits its exposure and enables it to recover a portion of any future amounts paid. As a result of the insurance policy coverage, BioTime believes the estimated fair value of these indemnification agreements is minimal, and no liabilities were recorded for these agreements as of December 31, 2010.

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Under the license agreements with Hospira and CJ, BioTime will indemnify Abbott Laboratories (Hospira's predecessor), Hospira, and/or CJ for any cost or expense resulting from any third-party claim or lawsuit arising from alleged patent infringement, as defined, by Abbott, Hospira, or CJ relating to actions covered by the applicable license agreement. Management believes that the possibility of payments under the indemnification clauses is remote. Therefore, BioTime has not recorded a provision for potential claims as of December 31, 2010. BioTime enters into indemnification provisions under (i) agreements with other companies in the ordinary course of business, typically with business partners, licensees, licensors, contractors, hospitals at which clinical studies are conducted, and landlords; and (ii) agreements with investors, underwriters, investment bankers, and financial advisers. Under these provisions, BioTime generally agrees to indemnify and hold harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of BioTime's activities or, in some cases, as a result of the indemnified party's activities under the agreement. These indemnification provisions often include indemnifications relating to representations made by BioTime with regard to intellectual property rights. These indemnification provisions generally survive termination of the underlying agreement. In some cases, BioTime has obtained liability insurance providing coverage that limits its exposure for indemnified matters. The maximum potential amount of future payments that BioTime could be required to make under these indemnification provisions is unlimited. BioTime has not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, BioTime believes the estimated fair value of these agreements is minimal. Accordingly, BioTime has no liabilities recorded for these agreements as of December 31, 2010.

15. Income Taxes

The primary components of the net deferred tax assets at December 31, 2010 and 2009 were as follows:

	2010	2009
Deferred tax assets:		
Net operating loss carryforwards	$ 27,435,000	$ 19,418,000
Research & development and other credits	1,915,000	1,951,000
Other, net	418,000	363,000
Total	29,768,000	21,732,000
Valuation allowance	(29,768,000)	(21,732,000)
Net deferred tax assets	$ -	$ -

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Income taxes differed from the amounts computed by applying the U.S. federal income tax of 34% to pretax losses from operations as a result of the following:

	Year Ended December 31,		
	2010	2009	2008
Computed tax benefit at federal statutory rate	(34%)	(34%)	(34%)
Permanent differences	8%	0%	8%
Losses for which no benefit has been recognized	32%	41%	34%
State tax benefit, net of effect on federal income taxes	(6%)	(6%)	(6%)
Research and development and other credits	-	(1%)	(2%)
	0%	0%	0%

As of December 31, 2010, BioTime has net operating loss carryforwards of approximately $56,000,000 for federal and $28,000,000 for state tax purposes, which expire through 2029. In addition, BioTime has tax credit carryforwards for federal and state tax purposes of $986,000 and $929,000, respectively, which expire through 2030. As of December 31, 2010, BioTime's subsidiaries have foreign net operating loss carryforwards of approximately $38,500,000 which carry forward indefinitely. Approximately $32,000,000 of this amount is subject to government approval due to the 2010 change in ownership.

No tax benefit has been recorded through December 31, 2010 because of the net operating losses incurred and a full valuation allowance has been provided. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax assets will not be realized. BioTime established a 100% valuation allowance for all periods presented due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets.

Internal Revenue Code Section 382 places a limitation ("Section 382 Limitation") on the amount of taxable income that can be offset by net operating loss ("NOL") carryforwards after a change in control (generally greater than 50% change in ownership within a three-year period) of a loss corporation. California has similar rules. Generally, after a control change, a loss corporation cannot deduct NOL carryforwards in excess of the Section 382 Limitation. Due to these "change in ownership" provisions, utilization of the NOL and tax credit carryforwards may be subject to an annual limitation regarding their utilization against taxable income in future periods.

16. Segment Information

BioTime's executive management team represents its chief decision maker. To date, BioTime's management has viewed BioTime's operations as one segment that includes, the research and development of therapeutic products for oncology, orthopedics, retinal and neurological diseases and disorders, blood and vascular system diseases and disorders, blood plasma volume expansion, and products for human embryonic stem cell research. As a result, the financial information disclosed materially represents all of the financial information related to BioTime's sole operating segment.

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17. Enterprise-wide Disclosures

Geographic Area Information

Revenues, including license fees, royalties, grant income, and other revenues by geographic area are based on the country of domicile of the licensee or grantor.

Geographic Area	Revenues for the Year ending December 31,		
	2010	2009	2008
Domestic	$ 3,283,493	$ 1,549,066	$ 1,225,793
Asia	396,807	376,173	277,999
Total revenues	$ 3,680,300	$ 1,925,239	$ 1,503,792

Major Sources of Revenues

BioTime has three major customers and two major grants comprising significant amounts of total revenues.

All of BioTime’s royalty revenues were generated through sales of Hextend by Hospira in the United States and by CJ in the Republic of Korea. BioTime also earned license fees from CJ and Summit.

BioTime was awarded a $4,721,706 grant for a stem cell research project related to its ACTCellerate ™ technology by CIRM in April 2009. The CIRM grant covers the period of September 1, 2009 through August 31, 2012, and as of December 31, 2010 and 2009, BioTime had received payments from CIRM totalling $1,575,523 and $790,192, respectively. BioTime recognized $1,577,142 and $533,595 as revenues as of December 31, 2010 and 2009, respectively.

During 2010, BioTime also received $476,724 of a $733,438 grant awarded under the U.S. Government's QTDP. The entire amount of the award is recognized as revenues as of December 31, 2010.

The following table shows the relative portions of BioTime’s Hextend and PentaLyte royalty and license fee revenues paid by Hospira, CJ, and Summit that were recognized during the years ended December 31, 2010, 2009, and 2008, and the CIRM and QTDP grant payments recognized during the same periods:

Sources of Revenues	% of Total Revenues for Year ended December 31,		
	2010	2009	2008
Hospira	22.8%	51.8%	81.2%
CJ	7.0%	12.0%	8.9%
Summit	3.9%	7.6%	9.9%
CIRM	42.8%	27.7%	-
QTDP	19.9%	-	-
Others	3.6%	0.9%	-

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18. Selected Quarterly Financial Information (UNAUDITED)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Year Ended December 31, 2010				
Revenues	$ 767,127	$ 680,278	$ 815,284	$ 1,417,611
Operating expenses	2,093,249	2,995,702	3,272,988	5,170,494
Loss from operations	(1,326,122)	(2,315,424)	(2,457,704)	(3,752,883)
Net loss attributable to BioTime, Inc.	(1,286,764)	(2,259,775)	(4,671,162)	(2,966,917)
Basic and diluted net loss per share	(0.04)	(0.06)	(0.11)	(0.06)
Year Ended December 31, 2009				
Revenues	296,743	432,090	446,993	749,342
Operating Expenses	1,207,998	1,539,740	3,381,334	(683,638)
Loss from operations	(911,255)	(1,107,650)	(2,934,341)	1,432,980
Net (loss)/income attributable to BioTime, Inc.	(1,518,214)	(1,471,370)	(3,574,755)	1,419,840
Basic and diluted net loss per share	(0.06)	(0.05)	(0.11)	0.04

BioTime did not amortize deferred license fees until the fourth quarter of 2010. Because BioTime has modified its procedure for amortizing deferred license fees in the fourth quarter, certain differences resulted in BioTime’s operating expenses, total expenses, and loss for the fourth quarter of 2010 as compared to the previous quarters of 2010. BioTime treated those differences as a correction of an error totaling $23,792 for first quarter, $27,375 each for the second and third quarter. BioTime does not believe that those differences were material to its results of operations for those prior quarters. Because BioTime did not record the affect of that error in its financial statements for the quarters ended March 31, 2010, June 30, 2010 and September 31, 2010 due to the immaterial impact on those financial statements, it has recorded in research and development expenses in the fourth quarter for 2010 an additional $78,542, representing the amortization not previously recorded in the first three quarters in 2010. See Note 8 for an explanation of the affect on BioTime's financial statements for the years ended December 31, 2010, 2009, and 2008.

Operating expenses include $218,467, $286,252 and $1,695,607 of stock appreciate rights accrual in the first, second and third quarters in 2009. In the fourth quarter of the same year the entire balance of stock appreciate rights liability of approximately $2,684,000 was reversed upon cancellation of those stock appreciation rights.

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19. Pro Forma Financial Information for Fiscal Years Ended December 31, 2010, 2009, and 2008 (UNAUDITED)

The following unaudited pro forma information gives effect to the acquisitions of ESI and Cell Cure Neurosciences, as if the acquisitions took place on January 1, 2009. The pro forma information does not necessarily reflect the results of operations that would have occurred had the entities been a single company during the periods presented.

	Year Ended December 31,	
	2010	2009
Revenues	$ 3,702,693	$ 2,558,109
(loss) available to common shareholders	$ (13,014,491)	$ (7,890,156)
(loss) per common share – basic	$ (0.32)	$ (0.26)
(loss) per common share – diluted	$ (0.32)	$ (0.26)

20. Subsequent Events

In January and February 2011, BioTime received royalties in the amount of $187,621 and $28,365 from Hospira and CJ, respectively, based on sales of Hextend made by Hospira and CJ in the fourth quarter of 2010. These revenues will be reflected in BioTime's consolidated financial statements for the first quarter of 2011.

In January 2011, BioTime acquired substantially all the assets of Cell Targeting, Inc. ("CTI"), a Cleveland, Ohio-based biotechnology company conducting research in regenerative medicine. BioTime issued 261,959 common shares and paid $250,000 in cash to acquire the CTI assets.

In February 2011 BioTime received the second installment in the amount of $256,714 of the approximately $733,000 QTDP grant awarded to BioTime. QTDP was part of the Patient Protection and Affordable Care Act signed into law on March 23, 2010.

On February 11, 2011, BioTime and OrthoCyte entered into an Agreement and Plan of Merger (the "Merger Agreement") with Glycosan BioSystems, Inc. pursuant to which Glycosan agreed to merge with OrthoCyte. Through the merger, Glycosan stockholders will receive, in the aggregate, approximately 332,906 BioTime common shares, and warrants to purchase approximately an additional 206,612 BioTime common shares at an exercise price of $10 per share. The warrants will expire on May 3, 2014.

Established in 2006, Glycosan has been a leader in developing, manufacturing, and marketing proprietary biocompatible hydrogels that mimic the extracellular matrix. Glycosan manufactures hydrogel products for basic laboratory research use, and sells those products directly and through arrangements with distributors in the United States and abroad. Glycosan has recently completed pre-clinical development of hydrogel product for potential use as an implantable cell delivery matrix.

BioTime expects that the merger will be completed shortly after March 18, 2011. The obligations of BioTime, OrthoCyte, and Glycosan to consummate the merger are subject to the satisfaction of certain conditions, including approval of the merger by the Glycosan stockholders.

Subsequent events – These consolidated financial statements were approved by management and the Board of Directors, and were issued on March 10, 2011. Subsequent events have been evaluated through that date.

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

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

It is management's responsibility to establish and maintain adequate internal control over all financial reporting pursuant to Rule 13a-15 under the Securities Exchange Act of 1934 ("Exchange Act"). Our management, including our principal executive officer, our principal operations officer, and our principal financial officer, have reviewed and evaluated the effectiveness of our disclosure controls and procedures as of a date within ninety (90) days of the filing date of this Form 10-K annual report. Following this review and evaluation , management collectively determined that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms; and (ii) is accumulated and communicated to management, including our chief executive officer, our chief operations officer, and our chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the period covered by this Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting, as defined in Exchange Act Rule 13a-15(f), is a process designed by, or under the supervision of, our principal executive officer, our principal operations officer, and our principal financial officer, and effected by our Board of Directors, management, and other personnel, 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 and includes those policies and procedures that:

Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;

Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. The scope of management's assessment of the effectiveness of internal control over financial reporting includes our consolidated subsidiary.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2010. Based on this assessment, management believes that, as of that date, our internal control over financial reporting was effective.

This annual report includes an attestation report of our registered public accounting firm regarding internal control over financial reporting for the year ended December 31, 2010. The attestation is included in the accounting firm's report on our audited consolidated financial statements.

Item 9B. Other Information

Not applicable

PART III

Item 10. Directors, Executive Officers, and Corporate Governance

The name, age, and background of each of our directors are contained under the caption "Election of Directors" in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and are incorporated herein by reference. Information about our executive officers, committees of the Board of Directors, and compensation of directors is reported under the caption "Corporate Governance" in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

We have a written Code of Ethics that applies to our principal executive officer, our principal financial officer and accounting officer, our other executive officers, and our directors. The purpose of the Code of Ethics is to promote (i) honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (ii) full, fair, accurate, timely, and understandable disclosure in reports and documents that we file with or submit to the Securities and Exchange Commission and in our other public communications; (iii) compliance with applicable governmental rules and regulations; (iv) prompt internal reporting of violations of the Code to an appropriate person or persons identified in the Code; and (v) accountability for adherence to the Code. A copy of our Code of Ethics has been posted on our internet website and can be found at www.biotimeinc.com. If we amend or waive a provision of our Code of Ethics that applies to our chief executive officer or chief financial officer, we will post the amended Code of Ethics or information about the waiver on our internet website.

Information about our compliance with Section 16(a) of the Securities Exchange Act of 1934 is reported under the caption "Compliance with Section 16(a) of the Securities Exchange Act of 1934" in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

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Item 11. Executive Compensation

Information on compensation of our executive officers is reported under the caption “Executive Compensation” in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

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

Information on the number of common shares of BioTime beneficially owned by each shareholder known by us to be the beneficial owner of 5% or more of our common shares, and by each director and named executive officer, and by all directors and named executive officers as a group, is contained under the caption “Principal Shareholders” in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

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

Information about transactions with related persons; review, and approval or ratification of transactions with related persons; and director independence is reported under the caption “Election of Directors” in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

Information about our Audit Committee’s pre-approval policy for audit services, and information on our principal accounting fees and services is reported under the caption “Ratification of the Selection of Our Independent Auditors” in our Proxy Statement for our 2011 Annual Meeting of Shareholders, and is incorporated herein by reference.

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PART IV

Item 15. Exhibits, Financial Statement Schedules

(a-1) Financial Statements.

The following financial statements of BioTime, Inc. are filed in the Form 10-K:

Consolidated balance sheets
Consolidated statements of operations
Consolidated statements of shareholders' deficit
Consolidated statements of cash flows

Notes to Financial Statements

(a-2) Financial Statement Schedules

All schedules are omitted because the required information is inapplicable or the information is presented in the financial statements or the notes thereto.

(a-3) Exhibits.

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Exhibit Numbers	Description
2.1	Equity and Note Purchase Agreement entered into as of April 28, 2010 by and between ES Cell Australia Limited, Pharmbio Growth Fund Pte Ltd., and Biomedical Sciences Investment Fund Pte., Ltd. 19
2.2	Transfer Agreement dated May 3, 2010 between BioTime, Inc. and certain shareholders of ES Cell International Pte. Ltd. 19
2.3	Agreement and Plan of Merger dated February 11, 2010, between Glycosan BioSystems, Inc., OrthoCyte Corporation, and BioTime, Inc. *
3.1	Articles of Incorporation with all amendments. 18
3.2	By-Laws, As Amended. 2
4.1	Specimen of Common Share Certificate. 1
4.2	Warrant Agreement between BioTime, Inc., Broadwood Partners, L.P., and George Karfunkel. 16
4.3	Form of Warrant. 16
4.4	Warrant Agreement between BioTime, Inc. and Biomedical Sciences Investment Fund Pte Ltd. 19

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10.1	Intellectual Property Agreement between BioTime, Inc. and Hal Sternberg. 1
10.2	Intellectual Property Agreement between BioTime, Inc. and Judith Segall. 1
10.3	2002 Stock Option Plan, as amended. 18
10.4	Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 3
10.5	Modification of Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 4
10.6	Exclusive License Agreement between BioTime, Inc. and CJ Corp. 5
10.7	Hextend and PentaLyte Collaboration Agreement between BioTime, Inc. and Summit Pharmaceuticals International Corporation.6
10.8	Addendum to Hextend and PentaLyte Collaboration Agreement Between BioTime Inc. and Summit Pharmaceuticals International Corporation. 7
10.9	Amendment to Exclusive License Agreement Between BioTime, Inc. and Hospira, Inc. 8
10.10	Hextend and PentaLyte China License Agreement Between BioTime, Inc. and Summit Pharmaceuticals International Corporation. 9
10.11	Employment Agreement, dated October 10, 2007, between BioTime, Inc. and Michael D. West. 11
10.12	Commercial License and Option Agreement between BioTime and Wisconsin Alumni Research Foundation. 10
10.13	License, Product Production, and Distribution Agreement, dated June 19, 2008, among Lifeline Cell Technology, LLC, BioTime, Inc., and Embryome Sciences, Inc. 12
10.14	License Agreement, dated July 10, 2008, between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 12
10.15	License Agreement, dated August 15, 2008 between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 13
10.16	Sublicense Agreement, dated August 15, 2008 between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 13

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10.17	Stem Cell Agreement, dated February 23, 2009, between Embryome Sciences, Inc. and Reproductive Genetics Institute. 14
10.18	First Amendment of Commercial License and Option Agreement, dated March 11, 2009, between BioTime and Wisconsin Alumni Research Foundation. 14
10.19	Employment Agreement, dated October 10, 2007, between BioTime, Inc. and Robert Peabody. 14
10.20	Fifth Amendment of Revolving Line of Credit Agreement, dated April 15, 2009. 15
10.21	Form of Amendment of Revolving Credit Note. 15
10.22	Fifth Amendment of Security Agreement, dated April 15, 2009. 15
10.23	Stock and Warrant Purchase Agreement between BioTime, Inc. and George Karfunkel. 16
10.24	Stock and Warrant Purchase Agreement between BioTime, Inc. and Broadwood Partners, L.P. 16
10.25	Registration Rights Agreement between BioTime, Inc., Broadwood Partners, L.P. and George Karfunkel.16
10.26	Co-Exclusive OEM Supply Agreement, date July 7, 2009, between Embryome Sciences, Inc. and Millipore Corporation (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 17
10.27	Stock Purchase Agreement between OncoCyte Corporation and George Karfunkel. 18
10.28	Registration Rights Agreement between OncoCyte Corporation and George Karfunkel. 18
10.29	Employment Agreement, dated August 3, 2009, between BioTime, Inc. and Walter Funk. 19
10.30	Sublease Agreement for 20 Biopolis #05-05/06 Centros, Singapore between Bioprocessing Technology Institute, Biomedical Sciences Institutes and ES Cell International Pte. Ltd. 20
10.31	Share Purchase Agreement, dated October 7, 2010, by and among Cell Cure Neurosciences, Limited, Teva Pharmaceutical Industries, Ltd, HBL-Hadasit Bio-Holdings, Ltd., and BioTime, Inc. 21
10.32	Amended and Restated Shareholders Agreement, dated October 7, 2010, by and among ES Cell International Pte. Ltd, BioTime, Inc., Teva Pharmaceutical Industries, Limited, HBL-Hadasit Bio-Holdings, Ltd., and Cell Cure Neurosciences Ltd. *
10.33	Research and Exclusive License Option Agreement, dated October 7, 2010, between Teva Pharmaceutical Industries, Ltd. and Cell Cure Neurosciences Ltd. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment).*
10.34	Amended and Restated Research and License Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. *
10.35	

	Additional Research Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. *

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10.36	Exclusive License Agreement, dated November 20, 2007, between Cell Targeting, Inc. and Burnham Institute for Medical Research. *
10.37	Stock Purchase Agreement, dated December 29, 2010, between Embryome Sciences, Inc. and Life Extension Foundation. *
10.38	Stock Purchase Agreement, dated December 30, 2010, between Embryome Sciences, Inc. and Geothermal Coring, S.A. *
10.39	Co-Exclusive Supply Agreement, Dated December 8, 2010, between BioTime Asia Limited and Shanghai Genext Medical Technology Co. Ltd *
10.40	OncoCyte Corporation 2010 Stock Option Plan Form of OncoCyte Corporation Stock Option Agreement *
10.41	OrthoCyte Corporation 2010 Stock Option Plan Form of OrthoCyte Corporation Stock Option Agreement *
10.42	BioTime Asia, Limited 2010 Stock Option Plan Form of BioTime Asia Limited Stock Option Agreement *
10.43	ReCyte Therapeutics, Inc. 2010 Stock Option Plan Form of ReCyte Therapeutics, Inc. Stock Option Agreement *
10.44	Lease, dated October 28, 2010, between SKS Harbor Bay Associates, LLC and BioTime, Inc. *
10.45	Memorandum of Tenancy, Renewal of Tenancy and letters of offer and acceptance of renewal of tenancy between ES Cell International Pte. Ltd. and Jurong Town Corporation *
10.46	Genome Office Tenancy Renewal, Renewal of Tenancy and letters of offer and acceptance of renewal of tenancy between ES Cell International Pte Ltd. and Jurong Town Corporation *
21.1	List of Subsidiaries *
31	Rule 13a-14(a)/15d-14(a) Certification. *
32	Section 1350 Certification.*

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1 Incorporated by reference to Registration Statement on Form S-1, File Number 33-44549 filed with the Securities and Exchange Commission on December 18, 1991, and Amendment No. 1 and Amendment No. 2 thereto filed with the Securities and Exchange Commission on February 6, 1992 and March 7, 1992, respectively.

2 Incorporated by reference to Registration Statement on Form S-1, File Number 33-48717 and Post-Effective Amendment No. 1 thereto filed with the Securities and Exchange Commission on June 22, 1992, and August 27, 1992, respectively.

3 Incorporated by reference to BioTime's Form 8-K, filed April 24, 1997.

4 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 1999.

5 Incorporated by reference to BioTime's Form 10-K/A-1 for the year ended December 31, 2002.

6 Incorporated by reference to BioTime's Form 8-K, filed December 30, 2004.

7 Incorporated by reference to BioTime's Form 8-K, filed December 20, 2005.

8 Incorporated by reference to BioTime's Form 8-K, filed January 13, 2006.

9 Incorporated by reference to BioTime's Form 8-K, filed March 30, 2006.

10 Incorporated by reference to BioTime's Form 8-K, filed January 9, 2008.

11 Incorporated by reference to BioTime's Form 10-KSB for the year ended December 31, 2007.

12 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2008.

13 Incorporated by reference to BioTime's Form 10-Q for the quarter ended September 30, 2008.

14 Incorporated by reference to BioTime's Form 10-K for the year ended December 31, 2008.

15 Incorporated by reference to BioTime's Form 8-K filed April 17, 2009.

16 Incorporated by reference to BioTime's Form 10-Q for the quarter ended March 31, 2009.

17 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2009.

18 Incorporated by reference to BioTime's Form 10-Q for the quarter ended September 30, 2009.

19 Incorporated by reference to BioTime's Form 10-Q for the quarter ended March 31, 2010.

20 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2010.

21 Incorporated by reference to BioTime's Form 8-K filed October 19, 2010.

*Filed herewith

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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 on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on the 11 day of March, 2011.

BIOTIME, INC.

By: /s/Michael D. West
Michael D. West, Ph.D.
Chief Executive Officer

Signature	Title	Date
/s/Michael D. West MICHAEL D. WEST, PH.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2011
/s/Robert W. Peabody ROBERT W. PEABODY	Chief Financial Officer (Principal Financial and Accounting Officer)	March 11, 2011
/s/ Neal C. Bradsher NEAL C. BRADSHER	Director	March 11, 2011
/s/ Arnold I. Burns ARNOLD I. BURNS	Director	March 11, 2011
ABRAHAM E. COHEN	Director	March _, 2011
/s/ Alfred D. Kingsley ALFRED D. KINGSLEY	Director	March 11, 2011
PEDRO LICHTINGER	Director	March _, 2011
/s/Judith Segall JUDITH SEGALL	Director	March 11, 2011

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4.1	Specimen of Common Share Certificate. 1
4.2	Warrant Agreement between BioTime, Inc., Broadwood Partners, L.P., and George Karfunkel. 16
4.3	Form of Warrant. 16
4.4	Warrant Agreement between BioTime, Inc. and Biomedical Sciences Investment Fund Pte Ltd. 19
10.1	Intellectual Property Agreement between BioTime, Inc. and Hal Sternberg. 1
10.2	Intellectual Property Agreement between BioTime, Inc. and Judith Segall. 1
10.3	2002 Stock Option Plan, as amended. 18
10.4	Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 3
10.5	Modification of Exclusive License Agreement between Abbott Laboratories and BioTime, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 4
10.6	Exclusive License Agreement between BioTime, Inc. and CJ Corp. 5
10.7	Hextend and PentaLyte Collaboration Agreement between BioTime, Inc. and Summit Pharmaceuticals International Corporation.6
10.8	Addendum to Hextend and PentaLyte Collaboration Agreement Between BioTime Inc. and Summit Pharmaceuticals International Corporation. 7
10.9	Amendment to Exclusive License Agreement Between BioTime, Inc. and Hospira, Inc. 8

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10.10	Hextend and PentaLyte China License Agreement Between BioTime, Inc. and Summit Pharmaceuticals International Corporation. 9
10.11	Employment Agreement, dated October 10, 2007, between BioTime, Inc. and Michael D. West. 11
10.12	Commercial License and Option Agreement between BioTime and Wisconsin Alumni Research Foundation. 10
10.13	License, Product Production, and Distribution Agreement, dated June 19, 2008, among Lifeline Cell Technology, LLC, BioTime, Inc., and Embryome Sciences, Inc. 12
10.14	License Agreement, dated July 10, 2008, between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 12
10.15	License Agreement, dated August 15, 2008 between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 13
10.16	Sublicense Agreement, dated August 15, 2008 between Embryome Sciences, Inc. and Advanced Cell Technology, Inc. 13
10.17	Stem Cell Agreement, dated February 23, 2009, between Embryome Sciences, Inc. and Reproductive Genetics Institute. 14
10.18	First Amendment of Commercial License and Option Agreement, dated March 11, 2009, between BioTime and Wisconsin Alumni Research Foundation. 14
10.19	Employment Agreement, dated October 10, 2007, between BioTime, Inc. and Robert Peabody. 14
10.20	Fifth Amendment of Revolving Line of Credit Agreement, dated April 15, 2009. 15
10.21	Form of Amendment of Revolving Credit Note. 15
10.22	Fifth Amendment of Security Agreement, dated April 15, 2009. 15
10.23	Stock and Warrant Purchase Agreement between BioTime, Inc. and George Karfunkel. 16
10.24	Stock and Warrant Purchase Agreement between BioTime, Inc. and Broadwood Partners, L.P. 16
10.25	Registration Rights Agreement between BioTime, Inc., Broadwood Partners, L.P. and George Karfunkel.16
10.26	Co-Exclusive OEM Supply Agreement, date July 7, 2009, between Embryome Sciences, Inc. and Millipore Corporation (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 17

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10.27	Stock Purchase Agreement between OncoCyte Corporation and George Karfunkel. 18
10.28	Registration Rights Agreement between OncoCyte Corporation and George Karfunkel. 18
10.29	Employment Agreement, dated August 3, 2009, between BioTime, Inc. and Walter Funk. 19
10.30	Sublease Agreement for 20 Biopolis #05-05/06 Centros, Singapore between Bioprocessing Technology Institute, Biomedical Sciences Institutes and ES Cell International Pte. Ltd. 20
10.31	Share Purchase Agreement, dated October 7, 2010, by and among Cell Cure Neurosciences, Limited, Teva Pharmaceutical Industries, Ltd, HBL-Hadasit Bio-Holdings, Ltd., and BioTime, Inc. 21
10.32	Amended and Restated Shareholders Agreement, dated October 7, 2010, by and among ES Cell International Pte. Ltd, BioTime, Inc., Teva Pharmaceutical Industries, Limited, HBL-Hadasit Bio-Holdings, Ltd., and Cell Cure Neurosciences Ltd. *
10.33	Research and Exclusive License Option Agreement, dated October 7, 2010, between Teva Pharmaceutical Industries, Ltd. and Cell Cure Neurosciences Ltd. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment).*
10.34	Amended and Restated Research and License Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. *
10.35	Additional Research Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. *
10.36	Exclusive License Agreement, dated November 20, 2007, between Cell Targeting, Inc. and Burnham Institute for Medical Research. *
10.37	Stock Purchase Agreement, dated December 29, 2010, between Embryome Sciences, Inc. and Life Extension Foundation. *
10.38	Stock Purchase Agreement, dated December 30, 2010, between Embryome Sciences, Inc. and Geothermal Coring, S.A. *
10.39	Co-Exclusive Supply Agreement, dated December 8, 2010, between BioTime Asia Limited and Shanghai Genext Medical Technology Co. Ltd *
10.40	OncoCyte Corporation 2010 Stock Option Plan Form of OncoCyte Corporation Stock Option Agreement *
10.41	OrthoCyte Corporation 2010 Stock Option Plan Form of OrthoCyte Corporation Stock Option Agreement *
10.42	BioTime Asia, Limited 2010 Stock Option Plan Form of BioTime Asia Limited Stock Option Agreement *

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10.43	ReCyte Therapeutics, Inc. 2010 Stock Option Plan Form of ReCyte Therapeutics, Inc. Stock Option Agreement *
10.44	Lease, dated October 28, 2010, between SKS Harbor Bay Associates, LLC and BioTime, Inc. *
10.45	Memorandum of Tenancy, Renewal of Tenancy and letters of offer and acceptance of renewal of tenancy between ES Cell International Pte. Ltd. and Jurong Town Corporation *
10.46	Genome Office Tenancy Renewal, Renewal of Tenancy and letters of offer and acceptance of renewal of tenancy between ES Cell International Pte. Ltd. and Jurong Town Corporation *
21.1	List of Subsidiaries *
31	Rule 13a-14(a)/15d-14(a) Certification. *
32	Section 1350 Certification.*

1 Incorporated by reference to Registration Statement on Form S-1, File Number 33-44549 filed with the Securities and Exchange Commission on December 18, 1991, and Amendment No. 1 and Amendment No. 2 thereto filed with the Securities and Exchange Commission on February 6, 1992 and March 7, 1992, respectively.

2 Incorporated by reference to Registration Statement on Form S-1, File Number 33-48717 and Post-Effective Amendment No. 1 thereto filed with the Securities and Exchange Commission on June 22, 1992, and August 27, 1992, respectively.

3 Incorporated by reference to BioTime's Form 8-K, filed April 24, 1997.

4 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 1999.

5 Incorporated by reference to BioTime's Form 10-K/A-1 for the year ended December 31, 2002.

6 Incorporated by reference to BioTime's Form 8-K, filed December 30, 2004.

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7	Incorporated by reference to BioTime's Form 8-K, filed December 20, 2005.
8	Incorporated by reference to BioTime's Form 8-K, filed January 13, 2006.
9	Incorporated by reference to BioTime's Form 8-K, filed March 30, 2006.
10	Incorporated by reference to BioTime's Form 8-K, filed January 9, 2008.
11	Incorporated by reference to BioTime's Form 10-KSB for the year ended December 31, 2007.
12	Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2008.
13	Incorporated by reference to BioTime's Form 10-Q for the quarter ended September 30, 2008.
14	Incorporated by reference to BioTime's Form 10-K for the year ended December 31, 2008.
15	Incorporated by reference to BioTime's Form 8-K filed April 17, 2009.
16	Incorporated by reference to BioTime's Form 10-Q for the quarter ended March 31, 2009.
17	Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2009.
18	Incorporated by reference to BioTime's Form 10-Q for the quarter ended September 30, 2009.
19	Incorporated by reference to BioTime's Form 10-Q for the quarter ended March 31, 2010.
20	Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2010.
21	Incorporated by reference to BioTime's Form 8-K filed October 19, 2010.

*Filed herewith