BIOTIME INC
Form 10-K
March 14, 2012

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, 2011

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. o

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, 2011 was $126,421,699. 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 5, 2012 was 50,321,962.

Documents Incorporated by Reference
Portions of Proxy Statement for 2012 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.

The description or discussion, in this Form 10-K, of any contract or agreement is a summary only and is qualified in all respects by reference to the full text of the applicable contract or agreement.

Item 1. Business

Overview

We are a biotechnology company focused on the emerging field of regenerative medicine. Our core technologies center on stem cells capable of becoming all of the cell types in the human body,a property called pluripotency. Products made from these “pluripotent” stem cells are being developed by us and our subsidiaries, each of which concentrates on different medical specialties, including: neuroscience, oncology, orthopedics, and blood and vascular diseases. Our commercial strategy is heavily focused on near-term commercial opportunities including our current line of research products such as ACTCellerate™ cell lines and associated ESpan™ culture media, HyStem® hydrogels, human embryonic stem cell lines, and royalties from Hextend®. Potential near term therapeutic product opportunities include the launch of HyStem®-Rx as a cell delivery device expected in 2013, and the launch of PanC-Dx™ as a novel blood-based cancer screen, expected by 2014. Our long-term strategic focus is to provide regenerative therapies for age-related degenerative diseases.

“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. This new technology is made possible by the first isolation of human embryonic stem (“hES”) cells and by the development of “induced pluripotent stem (“iPS”) cells” which are created from regular cells of the human body using technology that allows adult cells to be “reprogrammed” into cells with pluripotency like young hES-like cells. These pluripotent hES and iPS cells have the unique property of being able to branch out into each and every kind of cell in the human body, including 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 regenerating affected cells and tissues, and therefore may have broader applicability. Regenerative medicine represents a revolution in the field of biotechnology with the promise of providing therapies for diseases previously considered incurable.

Our commercial efforts in regenerative medicine include the development and sale of products designed for research applications in the near term as well as products designedfor diagnostic and therapeutic applications in the medium and long term. We offer advanced human stem cell products and technology that can be used by researchers at universities and at companies in the bioscience and biopharmaceutical industries. We have developed research and clinical grade hES cell lines that we market for both basic research and therapeutic product development. Our subsidiary, ES Cell International (“ESI”), has developed six hES cell lines that are among the best-characterized and documented lines available today. Developed using current Good Manufacturing Practices (“cGMP”) that facilitate transitions into the clinic, these hES cell lines are extensively characterized and five of the six cell lines currently have

documented and publicly-available genomic sequences. The ESI hES cell lines are now included in the Stem Cell Registry of the National Institutes of Health ("NIH"), making them eligible for use in federally funded research and all are available for purchase through www.biotimeinc.com. We also market human embryonic progenitor cell ("hEPCs") developed using ACTCellerate™ technology. These hEPCs are purified lineages of cells that are intermediate in the developmental process between embryonic stem cells and fully differentiated cells. We expect that hEPCs will simplify the scalable manufacture of highly purified and identified cell types and will possess the ability to become a wide array of cell types with potential applications in research, drug discovery, and human regenerative stem cell therapies. The ACTCellerate™ cell lines are also available for purchase through www.biotimeinc.com.

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Research products can be marketed without regulatory or other governmental approval, and thus offer relatively near-term business opportunities, especially when compared to therapeutic products. The medical devices that we and our subsidiaries are developing will require regulatory approval for marketing, but the clinical trial and approval process for medical devices is often faster and less expensive than the process for the approval of new drugs and biological therapeutics. Our current and near-term product opportunities, combined with expected long-term revenues from the potentially very large revenue cell-based therapeutic products under development at our subsidiaries, provide us with a balanced commercial strategy. The value of this balance is apparent in the commercial field of regenerative medicine as competitors whose sole focus is on long-term therapeutic products have found it challenging to raise the requisite capital to fund clinical development.

Our HyStem® hydrogel product line is one of the components in our near-term revenue strategy. HyStem® is a patented biomaterial that mimics the human extracellular matrix, which is the network of molecules surrounding cells in organs and tissues that is essential to cellular function. Many tissue engineering and regenerative cell-based therapies will require the delivery of therapeutic cells in a matrix or scaffold to sustain cell survival after transplantation and to maintain proper cellular function. HyStem® is a unique hydrogel that has been shown to support cellular attachment and proliferation in vivo and is currently being used by researchers at a number of leading medical schools in pre-clinical studies of stem cell therapies to facilitate wound healing, for the treatment of ischemic stroke, brain cancer, vocal fold scarring, and for, myocardial infarct repair. Our HyStem® hydrogels may have other applications when combined with the diverse and scalable cell types our scientists have isolated from hES cells.

HyStem®-Rx is a clinical grade formulation of HyStem-C®, a biocompatible, implantable hyaluronan and collagen-based matrix for cell delivery in human clinical applications. As an injectable product, HyStem®-Rx may address an immediate need in cosmetic and reconstructive surgeries and other procedures by improving the process of transplanting adipose derived cells, mesenchymal stem cells, or other adult stem cells. We will need to obtain approval by the U.S. Food and Drug Administration (“FDA”) and comparable regulatory agencies in foreign countries in order to market HyStem®-Rx as a medical device. Our goal is to initiate clinical trials in the European Union by late 2012 for CE marking.

Our subsidiary, OncoCyte Corporation, is developing PanC-Dx™, a novel non-invasive blood-based cancer screening test designed to detect the presence of various human cancers, including cancers of the breast, lung, bladder, uterus, stomach, and colon, during routine check -ups. We intend to initially seek regulatory approval to market PanC-Dx™ in Europe before seeking regulatory approvals required to market the product in the U.S. and other countries.

Our subsidiaries focus on developing regenerative medicine products for diverse medical disciplines. OncoCyte Corporation (“OncoCyte”) is developing products and technologies to diagnose and treat cancer. ESI, a Singapore based private limited company, develops and sells hES products for research use. BioTime Asia, Limited (“BioTime Asia”), a Hong Kong based company, sells products for research use and may develop therapies to treat cancer and neurological and orthopedic diseases in Asia. OrthoCyte Corporation (“OrthoCyte”) is developing therapies to treat orthopedic disorders, diseases and injuries. ReCyte Therapeutics, Inc. (“ReCyte Therapeutics”), formerly known as Embryome Sciences, Inc., is developing therapies for age-related cardiovascular and blood disorders. Cell Cure Neurosciences Ltd. (“Cell Cure Neurosciences”), is an Israel-based biotechnology company focused on developing stem cell-based therapies for retinal and other neurological disorders, including the development of retinal pigment epithelial (RPE) cells for the treatment of age-related macular degeneration. LifeMap Sciences, Inc. (“LifeMap”) is advancing the development and commercialization of our embryonic stem cell database and plans to make the database available for the marketing of research products and for use by stem cell researchers at pharmaceutical and biotechnology companies and other institutions via paid subscriptions or on a fee per use basis.

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We will partly or wholly fund our subsidiaries, recruit their management teams, assist them in acquiring technology, and provide general guidance for product development and business development. We may license our 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 they develop.

Initially, we developed blood plasma volume expanders and related technology for use in surgery, emergency trauma treatment, and other applications. 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. Hextend® is manufactured and distributed in the U.S. by Hospira, Inc., and in South Korea by CJ CheilJedang ("CJ"), under license from us.

Key Accomplishments in 2011

During January 2011, we acquired the assets of Cell Targeting, Inc. ("CTI"), a biotechnology company focused on methods of "painting" molecules on the surface of cells, which in turn causes the cells to adhere to particular tissues, such as those afflicted with disease. CTI and its collaborators have produced several tissue-specific and disease-specific cell modification agents with the potential to elevate cell therapy products to a new level of performance. OncoCyte may utilize this technology in the development of genetically modified hES-derived vascular progenitors designed to target and destroy malignant tumors.

During 2011, we acquired Glycosan BioSystems, Inc. ("Glycosan") through a merger of Glycosan with OrthoCyte. Through the merger, OrthoCyte acquired all of Glycosan's assets, including Glycosan's Hystem® hydrogel product line. The HyStem® product line includes HyStem®-Rx, which we are developing as a medical device for the implantation of adipose derived cells and other adult stem cells in cosmetic and reconstructive surgery. Our subsidiary, OrthoCyte, is using HyStem® hydrogels 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 January 2012, all Glycosan related activities were transferred to BioTime.

During March 2011, we entered into an agreement with XenneX, Inc., a privately-held company, pursuant to which we organized LifeMap Sciences, Inc., a new subsidiary formed to advance the development and commercialization of our hES cell data base. The new expanded data will address all known cellular branches in the mammalian developmental tree, including several thousand stem and progenitor cells, and related information such as that pertaining to anatomy, differentially-expressed gene signatures, and research reagents. Our plan is to make the data base available for use by stem cell researchers at pharmaceutical and biotechnology companies and other institutions via paid subscriptions or on a fee per use basis. The data base will permit users to follow the development of hES cell lines to the purified hEPC lines that we created using our proprietary ACTCellerateTM technology and is therefore expected to be useful in marketing the ACTCellerateTM cell lines.

During July 2011, we were awarded a $335,900 Small Business Innovation Research ("SBIR") grant from the National Institutes of Health to develop HyStem® microcarriers for the propagation of human stem cells and as a means of cell delivery for human clinical applications. The grant period is from September 30, 2011 to September 29, 2012.

During August 2011, we entered into a License Agreement with Cornell University for the worldwide development and commercialization of technology developed at Weill Cornell Medical College for the differentiation of hES cells into vascular endothelial cells. The technology may provide an improved means of generating vascular endothelial cells on an industrial scale, and will be utilized by us in diverse products, including those under development at our subsidiaries ReCyte Therapeutics and OncoCyte, to treat age-related vascular disease and to target the delivery of

toxic payloads to cancerous tumors, respectively.

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During August 2011, our subsidiary, OncoCyte sold 3,000,000 shares of common stock to a private investor who is also a BioTime shareholder for $3,000,000 in cash, and OncoCyte sold to us 7,000,000 shares of OncoCyte common stock for $1,000,000 in cash and 1,286,174 BioTime common shares having a market value of $6,000,000. These BioTime common shares are accounted for as treasury stock as of December 31, 2011. OncoCyte is using the funds raised from the sale of the shares for the expansion of its development of proprietary products and technologies for diagnosis and treatment of cancer in humans. OncoCyte's research has demonstrated that many of the same genes associated with the normal growth of embryonic stem cells are abnormally reactivated by cancer cells. Based on this finding, and utilizing its proprietary algorithms, OncoCyte has discovered and filed patent applications on over 100 novel cancer-associated genes. OncoCyte expects to use its new financing in part to expand its current patent portfolio of over twenty patent filings on these new genes and to advance the development and commercialization of resulting novel diagnostic and therapeutic products, including PanC-Dx™. In addition to advancing its new diagnostic product line, OncoCyte is continuing to develop cellular therapeutics for cancer therapy that will take advantage of the unique biology of vascular endothelial precursor cells.

During August 2011, four hES cell lines (ESI-035, ESI-049, ESI-051 and ESI-053) developed by our subsidiary ESI were approved by the NIH for inclusion in the NIH Human Embryonic Stem Cell Registry. This approval opens the door to the use of these cell lines in federally funded research. Two other ESI hES cell lines, ESI-014 and ESI-017, were previously included in the NIH Human Embryonic Stem Cell Registry. The ESI hES cell lines were derived using procedures and documentation that are in compliance with current Good Tissue Practices ("cGTP") and cGMP, are free of animal feeder cells and have been assessed for pluripotency and karyotypic stability. In collaboration with the California Institute of Regenerative Medicine ("CIRM"), we have supplied research grade versions of these lines to dozens of researchers throughout California, including those in the University of California system. We have also derived the complete genome sequence of five of the ESI hES cell lines to facilitate the development of products derived from these cell lines.

During December 2011, we announced the successful completion of ISO 10993 biocompatibility studies for our product HyStem®-Rx. These tests, as prescribed by the International Organization for Standardization for permanent implantable medical devices, are required by the United States Food and Drug Administration and European Union regulatory authorities prior to beginning clinical studies in humans. The results of these preclinical studies successfully demonstrated the safety and biocompatibility of HyStem®-Rx.

During December, 2011, we entered into two agreements with USCN Life Science, Inc. (USCN), a Chinese company. One agreement is a License Option Agreement that grants us the right, but not the obligation, to license from USCN certain technology and any related patents that may issue, and certain hybridoma cell lines for the purpose of deriving new products and technologies for use in diagnostic procedures and in therapeutics for the treatment of disease, as well as for products intended for research use only. A hybridoma cell line is an expandable culture of cells engineered to secrete a distinct antibody known as a monoclonal antibody that is directed to a specific protein. Certain antibodies distributed by USCN were tested by us and OncoCyte and were found to be effective as components of PanC-DxTM. The option to source USCN's existing hybridoma cell lines for the large-scale manufacture of OncoCyte's proprietary products may benefit OncoCyte by reducing the time required for the launch of PanC-DxTM in Europe, currently planned for 2013. The other agreement we entered into with USCN is an assay kit Supply Agreement under which we will purchase a wide array of assay kits designed for enzyme-linked immunosorbent assay (ELISA) and chemiluminescent immuno assay (CLIA) directed to the stem cell research community and for research use only.

Additional Information

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., PanC-Dx™ is a trademark of OncoCyte. HyStem® is a registered trademark of OrthoCyte Corporation.

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.

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Business Strategy

One of our goals is to develop cell-based regenerative therapies for age-related degenerative disease. The degenerative diseases of aging meet several criteria that make them an attractive business opportunity. First, the elderly comprise a large and growing segment of our population. Second, chronic degenerative diseases account for nearly 75% of health care costs. Third, 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, our cell replacement technologies may eliminate the high costs associated with years of palliative care addressing these large markets.

Our effort in regenerative medicine also includes research on more than 200 purified, scalable, and novel human embryonic progenitor cell types produced from hES and iPS 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 us 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 our 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 they develop. 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. We believe that 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 at the subsidiary level.

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
ES Cell International Pte. Ltd.	Stem cell products for research, including clinical grade cell lines produced produced under cGMP	100%	Singapore
OncoCyte Corporation	Diagnosis and treatment of cancer	75.3%	USA
OrthoCyte Corporation	Orthopedic diseases, including osteoarthritis	100%	USA
Cell Cure Neurosciences, Ltd.	Age-related macular degeneration Multiple sclerosis Parkinson’s disease	53.6%	Israel
ReCyte Therapeutics, Inc. (formerly Embryome Sciences, Inc.)	Blood and vascular diseases including coronary artery disease Endothelial progenitor cells and iPS cell banking	95.15%	USA

BioTime Asia, Ltd.	Ophthalmologic, skin, musculo-skeletal system, and hematologic diseases for Asian markets. Stem cell products for research	81%	Hong Kong
LifeMap Sciences, Inc.	Stem cell data base	100%	USA
LifeMap Sciences, Ltd.	Stem cell data base	100% (1)	Israel

(1) LifeMap Sciences, Ltd. is a wholly-owned subsidiary of LifeMap Sciences, Inc

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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, and realize greater revenues than would be possible with the development of therapeutic products alone.

We have made the filing and prosecution of patent applications an integral part of our business strategy in order to protect our investment in our products and that we and our subsidiaries have developed or licensed from others. See the “Licensed Stem Cell Technology and Stem Cell Product Development Agreements” and “Patents and Trade Secrets” sections of this report. .

Stem Cells and Related Products for Regenerative Medicine Research

Human Embryonic Stem Cell Lines for Research Use

Because hES and iPS cells have the ability to transform into any cell type in the human body, 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 otherwise lost due to degenerative disease or injury.

In 2007, ESI announced the world's first hES cell lines derived according to cGMP principles, i.e. the detailed procedures for all aspects of production that could potentially exert an impact on the safety and quality of a product. The FDA enforces cGMP regulations with respect to the manufacturing of human therapeutics for use in the U.S., and virtually every country across the globe maintains some analogous standards for quality control in the manufacture of therapeutic products for humans.

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.

ESI’s six cGMP hES cell lines have been approved by the NIH for inclusion in the Human Embryonic Stem Cell Registry, which renders those cell lines eligible for use in federally funded research.

The ESI hES cell lines are available for purchase through www.biotimeinc.com. We also market hEPCs developed using ACTCellerate™ technology. These 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. Our hEPCs are also available for sale through www.biotimeinc.com.

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During November and December 2010, we signed agreements with the CIRM and the University of California system to distribute five research-grade and GMP compliant ESI 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. We provided research-grade cell lines free of charge to CIRM-funded and California-based researchers until April 30, 2011 after which the cells were made available to researchers at a price of $2,600 per ampoule.

We recently derived the complete genome sequence of five of the ESI hES cell lines to facilitate the development of products derived from these cell lines. We have made these GMP-grade cell lines, along with certain documentation and complete genomic DNA sequence information, available for sale. 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 we acquired a license from Advanced Cell Technology, Inc. (“ACT”) to use ACTCellerate™ technology, and the rights to market more than 200 novel human cell types made using that process. ACTCellerate™ allows the rapid isolation of novel, highly purified hEPCs, which are cells that are intermediate in the developmental process between embryonic stem cells and fully differentiated cells. Not only are hEPCs 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, they are relatively easy to manufacture on a large scale and in a purified state, which may make it more advantageous to work with them than directly with hES or iPS cells.

Commercial Distribution of ACTCellerate™ hEPC lines.

Through an agreement with ReCyte Therapeutics, Millipore Corporation became a worldwide distributor of ACTCellerate™ hEPC lines. Millipore’s initial offering of our ACTCellerate™ products consists of six novel hEPC lines and optimized ESpan™ growth media for the in vitro propagation of each hEPC line. Together with the optimized media, each of these novel hEPC lines is 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 www.biotimeinc.com. In addition to the products that we are co-marketing with Millipore, we now offer 92 other ACTCellerate™ hEPC lines for purchase at www.biotimeinc.com, and we anticipate adding additional cell lines and related ESpan™ growth media and differentiation kits over time.

Through our subsidiary LifeMap, we have undertaken new efforts to provide online biomedical database services to increase awareness of molecular markers and diverse cell types comprising our ACTCellerate™ hEPC lines.

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.

BioTime Asia has 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."

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Our CIRM-funded research addresses the need for industrial scale production of purified therapeutic cells. 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, and therefore purity and precise identification of desired therapeutic cells are essential for developing cell-based therapies. 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 is 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 the research markets and potential therapeutic product candidates.

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 karyotype 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, 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. The CIRM funding for this research project will continue until August 31, 2012. We received the quarterly payments from CIRM, totaling $790,192, during the second half of 2009, quarterly payments, totaling $1,575,523, during the year ended December 31, 2010, and payments, totaling $1,570,663, during the year ended December 31, 2011

hES Cells Carrying Genetic Diseases

We plan to add to our product line novel muscle progenitor cells produced from five hES cell lines carrying genes for Duchenne muscular dystrophy, Emery-Dreifuss muscular dystrophy, spinal muscular atrophy Type I, facioscapulohumeral muscular dystrophy 1A, and Becker muscular dystrophy. We obtained the diseased hES cell lines from Reproductive Genetics Institute ("RGI"). Our goal is to produce highly purified and characterized progenitor cell types useful to the research community for applications such as drug screening for the development of therapies for these devastating diseases.

ESpan™ Cell Growth Media

Cell lines derived from hES and iPS cells that display novel cell signaling pathways (which are cell signals that regulate cell proliferation) 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 technology from patients with particular degenerative diseases, stem cells are increasingly likely to be utilized in a wide array of future research programs aimed 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.

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.

HyStem® Hydrogel for Research and HyStem®-Rx for Cell Delivery Medical Devices

Our HyStem® hydrogel product line is one the components in our near-term revenue strategy. HyStem® is a patented biomaterial that mimics the ECM, the network of molecules surrounding cells in organs and tissues that is essential to cellular function. Many tissue engineering and regenerative cell-based therapies will require the delivery of therapeutic cells in a matrix or scaffold for proper function. HyStem® is a unique hydrogel that has been shown to support cellular attachment and proliferation in vivo and is currently being used by researchers at a number of medical schools in pre-clinical studies of stem cell therapies to facilitate wound healing; the treatment of ischemic stroke, brain cancer, and vocal fold scarring; and myocardial infarct repair. HyStem® hydrogels may have other applications when combined with the diverse and scalable cell types our scientists have isolated from hES cells. Our HyStem® technology forms the foundation for unique stem cell delivery products in both the adult and embryonic stem cell marketplace, including products manufactured using our ACTCellerate™ technology. Current research at leading

medical institutions has shown that HyStem® is compatible with a wide variety of tissue types including brain, bone, skin, neural, cartilage, and heart tissues.

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As an injectable product, HyStem®-Rx may address an immediate need in cosmetic and reconstructive surgeries and other procedures by improving the process of transplanting adipose derived cells or other adult stem cells. Adult stem cell types such as adipose stem cells obtained from a patient through liposuction can be transplanted back into the same patient at another location in the body, without the risk of rejection associated with the transplant of donor tissues. However, the transplantation of cells without the molecular matrix in which cells normally reside often leads to widespread cell death or the failure of the transplanted cells to remain at the transplant site. The transfer of cells in HyStem®-Rx may resolve these issues by localizing the transplanted cells at the intended site and by providing a three-dimensional scaffold upon which cells can rebuild normal tissue. HyStem®-Rx may support other emerging cell and tissue transplant therapies such as those derived from hES and iPS cells, in addition to its potential application in the treatment of a number of conditions such as osteoarthritis, brain tumors, stroke, bone fracture, and wounds.

We have successfully completed ISO 10993 biocompatibility studies for HyStem®-Rx. These tests, as prescribed by the International Organization for Standardization for permanent implantable medical devices, are required by the FDA and European Union regulatory authorities prior to beginning clinical studies in humans. The results of these preclinical studies successfully demonstrated the safety and biocompatibility of HyStem®-Rx.

Our next milestone will be the completion of manufacture of clinical lots under cGMP, and an ISO 13485 certification audit by mid-2012, which will enable the initiation of clinical trials in the European Union by late 2012. In its first clinical application, HyStem®-Rx will be used with autologous adipose cells to restore subcutaneous tissue lost as a result of injury, oncologic resection, or congenital defects. Restoration of the normal skin contour is an important quality-of-life issue, not only in elective cosmetic procedures, but also in reconstructive surgeries needed to repair deformities and traumatic injuries to the face and upper extremities. Our plan is to bring HyStem®-Rx to the medical market first in the EU, where the anticipated cost of the clinical trials would be relatively low. Once the use of HyStem®-Rx in surgery is established in the EU, we plan to seek FDA approval to market HyStem®-Rx in the larger American market where there are approximately 4 million surgical reconstructive procedures performed per year.

Subsidiaries Focused on Stem Cell-Based Therapies for Specific Diseases

OncoCyte: Cell-Based Therapies Targeting Cancer.

Formed in 2009, OncoCyte is developing novel products for the diagnosis and treatment of cancer based on genetic and embryonic stem cell-derived technology in order to improve both the quality and length of life of cancer patients. OncoCyte is developing products that should provide for earlier detection and more effective treatment of numerous cancers as well as developing cellular therapeutics for cancer treatment that will take advantage of the unique biology of vascular endothelial precursor cells.

Our research has demonstrated that many of the same genes associated with the normal growth of embryonic stem cells are abnormally reactivated by cancer cells. Under this premise, we have established a proprietary dataset using RNA microarray technology; this dataset contains expression levels of over 47,000 genes in over 500 unique samples, representing both normal and cancerous tissues and cell lines, including multiple human embryonic stem cell lines. This broad, bioinformatics-based approach has allowed us to identify numerous genes abnormally activated in cancer or tumor cells; many of these genes have not been previously associated with cancer. Moreover, expression of a large subset of these genes is common across numerous cancer types (e.g. cancers of the breast, colon, ovaries, etc.), suggesting these genes may control fundamental processes during cancer growth and progression. This gene expression data set presents numerous diagnostic product opportunities, such as tests designed to do the following: screen patient samples for the presence of cancer, determine which treatment courses have the best chances for producing a favorable response in individual patients, or monitor for the recurrence of a patient’s cancer.

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OncoCyte's lead diagnostic product is PanC-Dx™, a kit designed to detect the presence of various human cancers, including cancers of the breast, lung, bladder, uterus, stomach, and colon in blood during routine check-ups. PanC-Dx™ would require only a simple antibody-based blood test similar to that commonly used to screen for prostate cancer. Initial studies performed by OncoCyte have indicated that PanC-Dx™ may be useful for detecting a much wider range of cancer types than that detected by blood tests currently available to clinicians. By facilitating early non-invasive detection, PanC-Dx™ could lead to more successful therapeutic outcomes while reducing the costs of cancer monitoring and increasing the availability of affordable cancer screening worldwide.

A blood screening test for cancer markers meets the definition of an in vitro diagnostic product as defined in the European Directive on in vitro diagnostic medical devices (IVD). Under this directive, IVD products placed into the European market must bear the CE mark, which indicates the product is in conformity with all applicable requirements of safety, performance, instructions, markings, and quality sufficient for the safe and effective use of the product. OncoCyte's goal is to launch PanC-DxTM in Europe in 2014, and later to seek FDA approval to market PanC-DxTM in the U.S.

The goal of OncoCyte's therapeutic research and development efforts is to derive vascular endothelial cells that can be engineered to deliver a toxic payload to the developing blood vessels of a tumor, with the aim of removing 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.

OncoCyte is currently working on the development of reproducible protocols to manufacture vascular-related cells from hES and iPS cells. OncoCyte has developed a derivation protocol that can produce populations of vascular-related 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 us and 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 CTI, including technology that uses peptides selected for their ability to adhere to diseased tissues. By coating or "painting" these peptides onto the surface 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. OncoCyte is using this technology in the development of genetically modified hES-derived vascular progenitors designed to target and destroy malignant tumors.

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On August 23, 2011, OncoCyte received $10.0 million in equity financing from us and a private investor. We believe that OncoCyte has sufficient capital to carry out its research and development plan during 2012. 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 75.3% 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, 2011, options to purchase 2,730,000 shares of OncoCyte common stock had been granted.

OrthoCyte: Cartilage Repair Using Embryonic Progenitor Cells

OrthoCyte is our wholly owned subsidiary developing cellular therapeutics for orthopedic disorders. OrthoCyte's lead project is the development of hEPC lines to repair cartilage damaged by injury or disease, 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 the safety and efficacy of the cells using in vivo models of articular disease. OrthoCyte has compiled proprietary animal preclinical data on two therapeutic product candidates designated as OTX-CP03 and OTX-CP07, which are formulated in our HyStem® hydrogel, and which showed initial evidence of safety and efficacy in animal models of joint disease. If our studies in animal models prove successful, we would plan to initiate an Investigational New Drug ("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 the 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 also 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.

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We presently own a 100% equity interest in OrthoCyte. We plan to provide additional equity capital to OrthoCyte or seek outside investors. 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, 2011, options to purchase 2,355,000 shares of OrthoCyte common stock had been granted.

Cell Cure Neurosciences

Cell Cure Neurosciences is developing cell therapies for retinal and neural degenerative diseases. Cell Cure Neurosciences is the neurological arm for BioTime's program for the development of human embryonic stem cell-based therapies.

Cell Cure Neurosciences' pipeline includes two major development programs at present:

Retinal cell therapies OpRegen™ and OpRegen-Plus™ are Cell Cure Neurosciences' proprietary formulations of embryonic stem cell-derived retinal pigmented epithelial ("RPE") cells developed to address the high, unmet medical needs of people suffering from age-related macular degeneration ("dry AMD"). OpRegen-Plus™ is a formulation of RPE cells bound to a membrane.

Cell therapy products for neurodegenerative diseases. Cell Cure Neurosciences is developing neural progenitor cells designed to replace the dopamine producing cells destroyed in Parkinson's disease, and NeurArrest™, neural cells that target and modulate the immune system's self-destruction of the myelin coating of nerve cells in multiple sclerosis.

The U.S. Centers for Disease Control and Prevention estimate that about 1.8 million people in the U.S. 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.

Cell Cure Neurosciences' research and development is conducted at Hadassah University Hospital, through research and consulting agreements with HBL-Hadasit Bio-Holding's ("HBL") 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.

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 the cells are transplanted in the subretinal space.

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In October 2010, we, along with Teva Pharmaceutical Industries, Ltd. (“Teva”) and HBL, invested $7.1 million in Cell Cure Neurosciences. These funds will be used primarily to develop OpRegen™. At the same time, , Cell Cure Neurosciences and Teva entered into a Research and Exclusive License Option Agreement (the “Teva License Option Agreement”) under which Teva obtained an option to acquire 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 U.S., 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 U.S. 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™, and 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 our 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.

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.

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The Teva License Option Agreement will terminate if (a) Teva does not exercise its option within 60 days after an IND 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 U.S. 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 U.S.. 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.

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.

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ReCyte Therapeutics—Treatment of Blood and Vascular Diseases and Disorders

ReCyte Therapeutics focuses on developing treatments for vascular disorders, including both age-related diseases and injuries. The company was founded in January 2011 as a subsidiary of ours with significant investment by private shareholders and by us.

Two of the main therapeutic indications of ReCyte Therapeutics include cardiovascular-related and cerebrovascular (i.e., stroke) diseases. Cell-based therapies for these diseases are being developed by other companies using adult derived stem cells, and some of these therapies have now entered clinical development. However, despite the statistical improvements observed in some studies, patients seldom regain full normal function because of the limited ability of those cells to produce strong regenerative responses. These diseases are among the leading causes of death and disability in the U.S., and they consume a major and ever-increasing proportion of health care costs. The National Academy of Sciences has estimated that a potential 58 million Americans are afflicted with cardiovascular disease. Another 30 million people with autoimmune disorders could potentially benefit from stem cell-based therapies. Combined, these populations in the U.S. represent one of the largest and fastest growing markets due to the aging of the baby-boomer population. ReCyte Therapeutics is working to produce better, more potent therapeutics for these major unmet needs. 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.

ReCyte Therapeutics' products are derived from hES cells and iPS cell sources and are designed to be either cellular or totally acellular for specific uses. Acellular products are an entirely new class of stem cell-derived therapeutics. Our approaches exploit the widely-held view that these most primitive sources have unparalleled potential to produce tissue regenerative responses, as compared to the varying amounts of fibrosis and scarring that may occur with responses achieved with other, especially adult, cells. The "eternally youthful" cells also provide unequalled advantages for engineering and tailoring for specific applications during manufacturing stages without incurring a loss of growth potential.

ReCyte Therapeutics has established the following three platform technologies with broad applications in developing to therapies for vascular disorders: (1) cell reprogramming to reverse developmental aging; (2) highly efficient derivation of endothelial progenitor cells; and (3) secreted trophic factors of embryonic progenitor cells (a cell-free or acellular product) that can guide tissue and organ regeneration.

These platform technologies are further described below:

Cell Reprogramming

We acquired licenses to intellectual property on reprogramming of cells to pluripotency using key transcription factors in the form of very early patent filings by our Chief Executive Officer, Dr. Michael West and co-inventors at Advanced Cell Technology, Inc. ("ACT"). ReCyte Therapeutics has filed patent applications on work at BioTime related to this technology. The advantages of cells that can be reprogrammed to a pluripotent state and then re-differentiated to a specific cell type needed by a patient, isthat the process can be done using only the patient's own body cells, which should make the newly generated cells transplantable back into the patient without the need to administer immunosuppressive drugs to prevent the patient's body from rejecting the transplant. ReCyte Therapeutics plans to develop a manufacturing process for the large scale reprogramming of human skin and blood cells by resetting telomere length and simultaneously resetting the cell's stage of development to the embryonic state. One application of the research and development effort under consideration is the establishment of a cost-effective manufacturing platform that would be the basis of a cell banking service. Another useful application would be the establishment of a so-called "reduced complexity library" of pluripotent stem cell lines representing the most common

HLA types, so that cells and tissues derived from these may be suitable for transplantation to other recipients using reduced immunosuppressive regimens.

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Endothelial Progenitor Cells

Scientists at ReCyte Therapeutics and BioTime have established a medium industrial-scale, highly consistent and GMP-compatible process for the directed differentiation of hEPCs that may be used as precursors to produce cells that form the lining of blood vessels. These cells have been successfully cryopreserved as cell banks and have been efficiently recovered in culture. These goals have all been achieved under chemically-defined, serum-free, xeno-free (no exposure to any non-human component) conditions from multiple embryonic stem cell lines, including from our GMP-compatible, NIH-registered, ESI lines. These have been very extensively characterized by gene expression and surface antigen marker analysis and by functional analyses in vitro. In addition, extensive characterization of our ACTCellerate™ library of hEPC lines, which were clonally derived from hES cell lines and selected for scalability in cell culture, has resulted in the identification of several lines with endothelial cell characteristics. Initial preclinical functional studies in vivo on these cells using well-established small animal models of vascular disorders are in progress. An example of the cross-functional interactions among us and our subsidiary companies is OncoCyte's investigation of these cells for homing to tumor targets in model systems. The ultimate goal for this platform technology is to make these cells available as cellular therapeutics that can be infused into patients with vascular disorders in order to quickly restore blood vessel integrity.

Trophic Factors

It is increasingly recognized in the cellular therapy field that therapeutic effects attributed to grafts of adult stem cells and and other cell types obtained from bone marrow and blood are often the result of factors secreted by the cells, rather than the stable and functional integration of the cells themselves into the patient's damaged tissue. ReCyte Therapeutics' extensive characterization of our ACTCellerate™ library of hEPC lines has resulted in the identification of certain lines that are abundant natural sources of extracellular secreted products such as cytokines, growth factors, and ECM components. These substances are known as "trophic factors" and some have been shown to have angiogenic (blood vessel-forming), cytoprotective, neurogenic and/or cardiogenic properties. We believe that counterparts to some of these hEPC lines are present in developing embryos, where trophic factors may provide instructions for the generation of specific organ systems. ReCyte Therapeutics is working to more fully characterize these trophic factors and to use them as a source of novel therapeutic drugs for regenerative applications in patients with vascular disorders. This strategy could represent a significant breakthrough for improved drug biopotency. Additionally, acellular products may provide a more straightforward drug development pathway and broader off-the-shelf patient delivery capabilities than cellular products.

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.

During August 2011, we entered into a License Agreement with Cornell University for the worldwide development and commercialization of technology developed at Weill Cornell Medical College for the differentiation of hES cells into vascular endothelial cells. The technology may provide an improved means of generating vascular endothelial cells on an industrial scale, and will be utilized by us in diverse products, including those under development at ReCyte Therapeutics, to treat age-related vascular disease, and in products being developed at OncoCyte targeting the delivery of toxic payloads to cancerous tumors.

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ReCyte Therapeutics plans to use the Cornell technology with the ACTCellerate™ technology to produce highly purified monoclonal embryonic vascular endothelium.

In conjunction with the Cornell License Agreement, during August 2011, we also entered into a three year Sponsored Research Agreement under which scientists at Weill Cornell Medical College, led by Sina Y. Rabbany, PhD, will engage in research with the goals of (1) verifying the ability of progenitor cells, derived by ReCyte Therapeutics, to generate stable populations of vascular endothelial cells, (2) testing the functionality and transplantability of the vascular endothelial cells in animal models to see if the transplanted cells generate new vascular tissue, and (3) using HyStem® hydrogels, produced by our subsidiary OrthoCyte, and other materials as "scaffolds" for the three-dimensional propagation of vascular endothelial cells into vascular tissues suitable for transplantation.

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, 2011, options to purchase 1,050,000 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 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.

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, 2011, options to purchase 400 BioTime Asia ordinary shares had been granted.

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Other Subsidiaries

Life Map

LifeMap Sciences, Inc. and its wholly-owned subsidiary LifeMap Sciences, Ltd (collectively "LifeMap") are developing a web-based database that will aid academic and industry scientists in research and product development efforts with embryonic stem cells, progenitor cells, induced pluripotent stem cells. The database will permit users to follow the cellular ontology of embryonic development, from the zygote to the progenitor cells and cell lineages, leading to the developed organs. The database will provide access to available cell-related information and resources necessary to improve stem cell research and development of therapeutics based on regenerative medicine. LifeMap plans to make the database available for use by stem cell researchers at pharmaceutical and biotechnology companies and other institutions through paid subscriptions or on a fee per use basis. The data base may promote the sale of our ACTCellerate™ hEPC lines by permitting data base users to follow the development of hES cell lines to the purified hEPC state. This platform will also be utilized by us and our subsidiaries for internal and collaborative efforts.

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 and our subsidiaries 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.

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.

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ACTCellerate™ Technology

ReCyte Therapeutics has 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 200 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 hEPC 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.

ReCyte Therapeutics has 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, and also has 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 RPE cells, hemangioblasts, and myocardial cells, on an exclusive basis, and for hepatocytes, on a non-exclusive basis, for human therapeutic use. ACT will pay ReCyte Therapeutics $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. ReCyte Therapeutics has 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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iPS Cell Technology

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

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 hES 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 are related to technology to alter the state of a cell by exposing the cell's DNA to the cytoplasm of another reprogramming cell with differrent properties. ReCyte Therapeutics 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; and

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

ReCyte Therapeutics 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 ReCyte Therapeutics 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 (and not from iPS cells). In the therapeutic arena, ReCyte Therapeutics' use of the licensed iPS cell technology will be for applications such as its blood and vascular products.

The 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. ReCyte Therapeutics has the right to grant sublicenses to the other licensed ACT technology.

ReCyte Therapeutics 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.

ReCyte Therapeutics 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 ReCyte Therapeutics commits a breach or default in the performance of its obligations under the agreement and fail to cure the breach or default within the permitted cure periods. ReCyte Therapeutics has 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 ReCyte Therapeutics 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 that it may receive from sublicensing the Kirin technology to third parties. ReCyte Therapeutics 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.

ReCyte Therapeutics 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. ReCyte Therapeutics has the right to grant further sublicenses.

ReCyte Therapeutics will indemnify ACT for any products liability claims arising from products made by it and itssublicensees. 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 ReCyte Therapeutics commits a breach or default in the performance of its obligations under the agreement and fail to cure the breach or default within the permitted cure periods. ReCyte Therapeutics has 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.

HyStem® Hydrogel Technology

Through our acquisition of Glycosan, we acquired a license from the University of Utah to use certain patents in the production and sale of hydrogel products. Under the License Agreement, we will pay a 3% royalty on sales of products and services performed that utilize the licensed patents. Commencing in 2013, we will be obligated to pay minimum royalties to the extent that actual royalties on products sales and services utilizing the patents are less than the minimum royalty amount. The minimum royalty amounts are $15,000 in 2013, $22,500 in 2014, and $30,000 each year thereafter during the term of the License Agreement. We will also pay the University of Utah 30% of any sublicense fees or royalties received under any sublicense of the licensed patents.

We will pay the University of Utah $5,000 upon the issuance of each of the first five licensed patents issued in the U.S., subject to reduction to $2,500 for any patent that the University has licensed to two or more other licensees for different uses. We will also pay a $225,000 milestone fee within six months after the first sale of a “tissue engineered product” that utilizes a licensed patent. A tissue engineered product is defined as living human tissues or cells on a polymer platform, created at a place other than the point-of-care facility, for transplantation into a human patient.

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.

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.

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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 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.

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 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.

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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") permitting us and OncoCyte 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.

OncoCyte 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.

OncoCyte will reimburse SBMRI for 25% of its costs incurred in filing, prosecuting, and maintaining patent protection, subject to our approval of the costs. OncoCyte 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.

The 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. OncoCyte may terminate the license agreement by giving SBMRI 60-day notice. SBMRI may terminate the license agreement if OncoCyte fails 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.

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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 Neurosciences 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.

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.

Cornell University

During August, 2011, we entered into a License Agreement with Cornell University for the worldwide development and commercialization of technology developed at Weill Cornell Medical College for the differentiation of hES cells into vascular endothelial cells. The technology may provide an improved means of generating vascular endothelial cells on an industrial scale, and will be utilized by us in diverse products, including those under development at our subsidiary ReCyte Therapeutics to treat age-related vascular disease, and products being developed at our subsidiary OncoCyte targeting the delivery of toxic payloads to cancerous tumors.

Our license to use the technology and patent rights is worldwide and exclusive and permits us to use the licensed technology and patents rights for the fields of cell therapy for age- and diabetes-related vascular diseases and cancer therapy. The license also covers (i) products utilizing human vascular or vascular forming cells for the purpose of enhancing the viability of the graft of other human cells, and (ii) cell-based research products. We also have a non-exclusive right to use any related technology provided by Cornell within the same fields of use, and non-exclusive rights with respect to any non-cell-based products for the research market not covered by the licensed patent rights.

We have the right to permit our subsidiaries and other affiliates to use the licensed patent rights and technology, and we have the right to grant sublicenses to others.

Cornell will be entitled to receive an initial license fee and annual license maintenance fees. The obligation to pay annual license maintenance fees will end when the first human therapeutic license product is sold by us or by any of our affiliates or sublicensees. A “licensed product” includes any service, composition or product that uses the licensed technology, or is claimed in the licensed patent rights, or that is produced or enabled by any licensed method, or the manufacture, use, sale, offer for sale, or importation of which would constitute an infringement, an inducement to infringe, or contributory infringement of any pending or issued claim within the patent rights licensed to us. A “licensed method” means any method that uses the licensed technology, or is claimed in the patent rights licensed to us, the use of which would constitute an infringement, an inducement to infringe, or contributory infringement of any pending or issued claim within the patent rights licensed to us.

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We will pay Cornell a milestone payment upon the achievement of a research product sales milestone amount, and we will make milestone payments upon the attainment of certain FDA approval milestones, including (i) the first Phase II clinical trial dosing of a human therapeutic licensed product, (ii) the first Phase III clinical trial dosing of a human therapeutic licensed product, (iii) FDA approval of first human therapeutic licensed product for age-related vascular disease, and (iv) FDA approval of the first human therapeutic licensed product for cancer.

We will pay Cornell royalties on sales of licensed products by ourselves and our affiliates and sublicensees, and we will share with Cornell a portion of any cash payments, other than royalties, that we receive for the grant of sublicenses to non-affiliates. We will also reimburse Cornell for costs related to the patent applications and any patents that may issue that are covered by our license.

We will provide Cornell with periodic reports of progress made in our research and development and product commercialization programs, and in those programs conducted by our affiliates and sublicensees, using the licensed patents and technology. We and our affiliates and sublicensees will be required to keep accurate records of the use, manufacture and sale of licensed products, and of sublicense fees received. Cornell has the right to audit those records that we and our affiliates maintain.

The license will expire on the later of (i) the expiration date of the longest-lived licensed patent, or (ii) on a country-by-country basis, on the twenty-first anniversary of the first commercial sale of a licensed product. We have the right to terminate the License Agreement at any time and for any reason upon ninety (90) days written notice to Cornell. Cornell may terminate our license if we fail to perform, or if we violate, any term of the License Agreement, and we fail to cure that default within thirty (30) days after written notice from Cornell.

Cornell also may terminate the license or convert the exclusive license to a non-exclusive license if we fail to meet any of the following requirements: (i) diligently proceed with the development, manufacture and sale of licensed products; (ii) annually spend certain specified dollar amounts for the development of licensed products; (iii) submit an investigational new drug application covering at least one licensed product to the FDA within eight (8) years after the effective date of the License Agreement; (iv) initiate preclinical toxicology studies for at least one licensed product within six (6) years after the effective date of the License Agreement; (v) market at least one therapeutic licensed product in the U.S. within twelve (12) months after receiving regulatory approval to market the licensed product; or (vi) market at least one cell-based licensed product for the research market in the U.S. within twelve (12) months after the effective date of the License Agreement. We may fulfill the obligations described in (i) through (vi) through our own efforts or through the efforts of our affiliates and sublicensees.

Termination of the License Agreement by us or by Cornell or upon expiration will not relieve us of our obligations the make payments of fees owed at the time of termination, and certain provisions of the License Agreement, including the indemnification and confidentiality provisions, will survive termination. We may continue to sell all previously made or partially made licensed product for a period of one hundred and twenty (120) days after the License Agreement terminates, provided that the reporting and royalty payment provisions of the License Agreement will continue to apply to those sales.

We have agreed to indemnify Cornell; Cornell Research Foundation, Inc.; Howard Hughes Medical Institute; and their officers, trustees, employees, and agents, the sponsors of the research that led to the licensed patent rights; and the inventors and their employers, against any and all claims, suits, losses, damage, costs, fees, and expenses resulting from or arising out of exercise of the licenses and any sublicenses under the License Agreement. The indemnification will include, but not be limited to, patent infringement and product liability. We have also agreement to provide certain liability insurance coverage for Cornell and Howard Hughes Medical Institute.

Cornell and Howard Hughes Medical Institute will retain the right to use the licensed technology and patent rights for their own educational and research purposes. Cornell may also permit other nonprofit institutions to use the technology and patent rights for educational and research purposes.

In conjunction with the License Agreement, we also entered into a Sponsored Research Agreement under which scientists at Weill Cornell Medical College, led by Sina Y. Rabbany, PhD, will engage in research with the goals of (1) verifying the ability of progenitor cells, derived by ReCyte Therapeutics, to generate stable populations of vascular endothelial cells; (2) testing the functionality and transplantability of the vascular endothelial cells in animal models to see if the transplanted cells generate new vascular tissue; and (3) using HyStem® hydrogels and other materials as scaffolds for the three-dimensional propagation of vascular endothelial cells into vascular tissues suitable for transplantation. The Sponsored Research Agreement will have a term of three years, but we or Cornell can elect to terminate the agreement earlier by giving the other party thirty (30) days written notice.

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If the researchers make any patentable discoveries or inventions in the course of the sponsored research program, we will have an option to negotiate an exclusive, royalty-bearing license to use the invention. If we do license the invention, Cornell would retain a right to use it on a non-exclusive royalty-free basis for its own internal research and teaching purposes.

USCN Life Science, Inc.

During December 2011, we entered into two agreements with USCN Life Science, Inc. ("USCN"), a Chinese company. One agreement is a License Option Agreement that grants us the right, but not the obligation, to license from USCN certain technology and any related patents that may issue, and certain hybridoma cell lines for the purpose of deriving new products and technologies for use in diagnostic procedures and in therapeutics for the treatment of disease, as well as for products intended for research use only. A hybridoma cell line is an expandable culture of cells engineered to secrete a distinct antibody known as a monoclonal antibody that is directed to a specific protein. BioTime and OncoCyte scientists tested certain antibodies distributed by USCN and found them to be effective as components of PanC-DxTM. The other agreement we entered into with USCN is an assay kit Supply Agreement under which we will purchase a wide array of assay kits designed for enzyme-linked immunosorbent assay (ELISA) and chemiluminescent immuno assay (CLIA) directed to the stem cell research community and for research use only.

Under the License Option Agreement we have the option of acquiring world-wide licenses to technology and certain hybridoma cell lines, and any patents related to the licensed technology and hybridoma cell lines, that may issue, for the purpose of deriving new products and technologies for use in diagnostic procedures and in therapeutics for the treatment of disease.

We paid USCN a license fee which will be credited toward the license fee payable if we exercise our option to license at least one hybridoma cell line. We may exercise our option to license additional hybridomas and related technology and patent rights by paying an additional license fee per hybridoma cell line. We will pay to USCN a royalty calculated as a percent of net sales received by us and our affiliates for all licensed products sold, performed, or leased by us or any of our affiliates. As defined in the License Option Agreement, Net Sales means revenues received from the manufacture, use or sale or other disposition of licensed products, less the total of all (a) discounts allowed in amounts customary in the trade; (b) sales tariffs, duties and/or taxes imposed on the licensed products; or (c) outbound transportation prepaid or allowed; and (d) amounts allowed or credited on returns. Net Sales does not include revenues from the sale or other disposition of licensed products to (i) any of our affiliates, (ii) to any of our sublicensees or any sublicensees of our affiliates, or (iii) to any affiliate of our or our affiliates' sublicensees. No multiple royalties will be payable on the basis that any licensed product is covered by more than one licensed patent or patent application. "Licensed products" means any product, service and/or process that constitutes, incorporates or utilizes, wholly or in part, any of the technology, patent rights, or hybridomas licensed by USCN under the agreement. If a royalty bearing license to use a third party's patent is required to eliminate or avoid an infringement or claim of infringement or to settle any lawsuit or other proceeding alleging patent infringement from the use of USCN's patents or technology or the use, manufacture, production, distribution, or sale of the licensed hybridoma lines or a licensed product, then we and any of our affiliates and any sublicensees may deduct the royalties paid to the third party from the royalties payable to USCN, provided that the amount of the deduction may not reduce the royalty payable to USCN by more than 50%.

We have agreed to indemnify, defend and hold harmless USCN and USCN's affiliates, successors, assigns, agents, officers, directors, shareholders and employees against all liabilities of any kind whatsoever, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property resulting from the production, manufacture, sale, use, lease, performance, consumption or advertisement of licensed products or arising from any of our obligations, acts or omissions, or from a breach of any of our

representations or warranties, under the License Option Agreement, except for claims that result from (a) the willful misconduct or gross negligence of USCN or any other indemnitee, and (b) claims alleging that the use of any of the patent rights, technology or hybridomas licensed to us, when used within our permitted field of use, infringes upon any patent, trade secret, or moral right of any third party.

USCN has agreed to indemnify, defend and hold harmless us and our affiliates, and our respective successors, assigns, agents, officers, directors, shareholders and employees against all liabilities of any kind whatsoever, including legal expenses and reasonable attorneys' fees, arising out of any claim, demand, lawsuit or other proceeding alleging that the use of any patent rights, technology, or hybridoma licensed to us or to any of our affiliates or any sublicensee within the permitted field of use infringes any patent, trade secret, or moral right of any third party.

The License Option Agreement will terminate on its fifth anniversary if the option has not been exercised on or before that date. If we exercise our option, the agreement will terminate upon written notice from us to USCN that we, our affiliates, and all sublicensees have permanently discontinued the use of the licensed technology, patent rights, hybridomas and licensed products.

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We may terminate the agreement at any time on sixty (60) days prior written notice to USCN, and upon payment of all amounts due USCN through the effective date of the termination. USCN may terminate the agreement at any time if we breach or default in the performance of any of our obligations and the breach or default is not cured within thirty (30) days after a written request from USCN to remedy the breach or default, or if the breach or default cannot be cured within that thirty (30) day period, we fail within that thirty (30) day period to proceed with reasonable promptness thereafter to cure the breach. Termination of the License Option Agreement will not release a party from any obligation that matured prior to the effective date of the termination.

Under the Supply Agreement, USCN has agreed to sell us certain assay test kits. We plan to resell the kits through our subsidiary LifeMap via our new online database slated for launch in 2012. Our rights to purchase and resell the assay kits is “co-exclusive,” meaning that USCN and its affiliates retain the right to offer, sell, and distribute the kits, and to sell the kits to other third-party distributors. We may sell the kits to our customers for research purposes only, and not for the treatment or diagnosis of any disease, injury, or physical disorder in humans, or in any human clinical trial or other clinical use. We and our customers will not have license or other rights to manufacture or produce any of the kits.

The initial term of the Supply Agreement is five years. The Supply Agreement will automatically renew for successive one year periods, unless either party provides written notice to the other of its desire not to continue the agreement.

We may terminate the Supply Agreement at any time, for any reason or no reason at all, upon sixty (60) days written notice to USCN. USCN may terminate the Supply Agreement if we breach or default in the performance of any of our obligations and the breach or default is not cured within thirty (30) days after a written request from USCN to remedy the breach or default, or if the breach or default cannot be cured within the thirty (30) day period, we fail within that thirty (30) day period to proceed with reasonable promptness to cure the breach. Either party may terminate the Supply Agreement if the other party becomes insolvent or enters into any arrangement or composition with creditors, or makes an assignment for the benefit of creditors; if there is a dissolution, liquidation or winding up of the other party’s business; or if a trustee in bankruptcy is appointed for the assets of the other Party. The termination or expiration of the Supply Agreement will not act as a waiver of any breach of the agreement and will not release either party for any liability or obligation incurred under the agreement through the expiration or termination date.

Upon termination of the Supply Agreement, USCN shall have the right, but not the obligation, to repurchase all assay kits that we and our affiliates have remaining in inventory, at the original invoiced cost, plus all costs of shipping, insurance, duties, and taxes incurred in connection with the return shipment. If USCN does not elect to repurchase unsold inventory, we and our affiliates may continue to sell the remaining inventory.

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Research and Development Strategy

A significant part of our activities is devoted to research and development, focused primarily on the development of stem cell products and technology. During 2011, 2010, and 2009, we spent $13,699,691, $8,191,314, and $3,181,729, 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.”

Our research and development strategy works in tandem with our commercial strategy of focusing on near-term commercial opportunities in the research product market, mid-term opportunities in the medical device market, as well as longer term opportunities to provide therapies for the treatment of age related degenerative diseases. In addition to developing our own technologies and products, we have obtained products and technologies through the acquisition of other companies and by licensing rights to use technologies and stem cell lines developed by other companies and universities. We believe that obtaining rights to these technologies, cell lines, and other products has jump-started our assemblage of an array of products for stem cell research and the research and development efforts of our subsidiaries

A portion of our near-term product development 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. These research products include ACTCellerateTM hEPC lines and associated ESpanTM culture media, HyStem® hydrogels, and ESI’s hES cell lines. By focusing a portion of our resources on research products and technology, we believe that we will be able to develop and commercialize revenue producing new products in less time and using less capital than is required to develop and commercialize therapeutic products and medical devices, whereby generating near term product revenues that would not be possible if we focused solely on therapeutic product development.

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

Hystem®-Rx and PanC-Dx™ are part of our strategy to develop products with a mid-term revenue horizon. Our goals are to initiate clinical trials of Hystem®-Rx in the EU later this year and for OncoCyte to obtain approval to market PanC-Dx™ in the EU during 2014.

Through our subsidiaries, OncoCyte, OrthoCyte, ReCyte Therapeutics, and Cell Cure Neurosciences, 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 is utilizing hES 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 is developing cellular therapeutics for the treatment of orthopedic degenerative diseases, disorders and injuries. ReCyte Therapeutics is developing therapeutic products for cardiovascular and blood diseases and disorders. Cell Cure Neurosciences is developing therapeutic products for retinal and neurological degenerative diseases and disorders.

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 these GMP-grade cell lines available 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 that 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.

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Plasma Volume Expanders and Related Products

Our business was initially focused on blood plasma volume expanders and related 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, a condition caused by low blood volume, often due to blood loss during surgery or 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 and thus its use avoids the risk of infection. Health insurance reimbursements and HMO coverage now include the cost of Hextend® used in surgical procedures.

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 it was used to treat hypovolemia in cardiac surgery. Our ability to commence and complete additional clinical studies of PentaLyte® depends on licensing and development arrangements with a pharmaceutical company capable of manufacturing and marketing PentaLyte®. We are not actively working on PentaLyte® and we will need to find a licensee or co-developer to further develop and advance the commercialization of PentaLyte®.

Hextend® is manufactured and distributed in the U.S. by Hospira, Inc., and in South Korea by CJ CheilJedang ("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

Blood transfusions are often necessary during surgical procedures and are sometimes required to treat patients suffering severe blood loss due to traumatic injury. Many surgical and trauma cases do not require blood transfusions but do involve significant bleeding that can place a patient at risk of suffering from shock caused by the loss of fluid volume (or 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.

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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 thiose required with colloid products such as Hextend®.

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 when the patient is more capable of quickly restoring lost blood proteins.

Certain clinical test results indicate that Hextend® is effective at maintaining blood calcium levels when it is 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. If developed, we expect that PentaLyte® will also be able to maintain blood calcium levels and acid-base balance, as 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 our 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 in which logistics render blood use impracticable.

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Licensing and Sale of Plasma Volume Expander Products

Hospira

Hospira has the exclusive right to manufacture and sell Hextend® in the U.S. and Canada under a license agreement with us. Hospira is presently marketing Hextend® in the U.S. 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.

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.

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.

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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.

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 us 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 U.S., plus 8% of any license fees that we receive in consideration of granting a license to develop, manufacture, and market PentaLyte® in the U.S.. "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 U.S., and (b) all fees and expenses payable by us to the 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.

Major Customers

During 2011, 2010, and 2009 all of our royalty revenues were generated through sales of Hextend® by Hospira in the U.S. and by CJ in the Republic of Korea. We also earned license fees from CJ, Summit and the Betalogics division of Johnson & Johnson. The following table shows the relative portions of our Hextend®, PentaLyte® and certain GMP compliant cell lines royalty and license fees, and revenues paid by Hospira, CJ, Summit and Betalogics that were recognized during the past three fiscal years.

	% of Total Revenues for the Year Ending December 31,		
Licensee	2011	2010	2009
Hospira	63%	68%	73%
CJ	15%	20%	17%
Summit	14%	12%	10%
Betalogics	8%	-	-

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Royalty Revenues and License Fees by Geographic Area

The principal source of revenues has been from royalties from the sale of our product. During the past three years, we received $753,140, $945,461, and $1,079,950 in royalty payments from Hospira and CJ from the sale of Hextend®. The following table shows the source of our 2011, 2010, and 2009 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	2011	2010	2009
Domestic	$ 719,958	$ 839,740	$ 996,681
Asia	300,680	398,625	376,102
Total Revenues	$ 1,020,638	$ 1,238,365	$ 1,372,783

Manufacturing

Facilities Required—Stem Cell Products

We lease a 19,000 square-foot building in Alameda, California. The building is cGMP-capable and has previously been certified as Class 1,000 and Class 10,000 laboratory space, and includes cell culture and manufacturing equipment previously validated for use in the cGMP of cell-based products. Our subsidiaries, OncoCyte, OrthoCyte, and ReCyte Therapeutics are also conducting their research and development activities at our Alameda 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.

Facilities Required—Plasma Volume Expanders

Any products that are used in clinical trials for regulatory approval in the U.S. 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 cGMP.

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 our other 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 as we do not have facilities to manufacture our plasma volume expander products in commercial quantities, or under cGMP. 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.

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Raw Materials—Plasma Volume Expanders

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 cGMP. 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 BioTime by ReCyte Therapeutics during 2012 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.

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 biotimeinc.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.

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Plasma Volume Expanders

Hextend® is being distributed in the U.S. 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 our other plasma volume expander 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.

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 our other 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, an independent study in hemodynamically unstable trauma patients conducted at the Ryder Trauma Center at University of Miami reported that initial resuscitation with Hextend® was associated with reduced mortality and no obvious coagulopathy compared to fluid resuscitation without Hextend®. This study was published in the May 2010 issue of the Journal of the American College of Surgeons. The outcome of future medical studies and timing of the publication or presentation of the results could have an effect on Hextend® sales.

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Patents and Trade Secrets

We rely primarily on patents and contractual obligations with employees and third parties to protect our proprietary rights. We have sought, and intend to continue to seek, appropriate patent protection for important and strategic components of our proprietary technologies by filing patent applications in the U.S. and certain foreign countries. There can be no assurance that any of our patents will guarantee protection or market exclusivity for our products and product candidates. We also use license agreements both to access technologies developed by other companies and universities and to convey certain intellectual property rights to others. Our financial success will be dependent in part on our ability to obtain commercially valuable patent claims and to protect our intellectual property rights and to operate without infringing upon the proprietary rights of others. As of March 14, 2012, we owned or controlled or licensed 81 issued or allowed U.S. patents and we also owned or controlled over 30 pending U.S. patent applications, including provisional patent applications, to protect our proprietary technologies.

Our patents and patent applications are directed to compositions of matter, formulations, methods of use and/or methods of manufacturing, as appropriate. The patent positions of pharmaceutical and biotechnology companies, including ours, are generally uncertain and involve complex legal and factual questions. Our business could be negatively impacted by any of the following:

- the claims of any patents that are issued may not provide meaningful protection, may not provide a basis for commercially viable products or may not provide us with any competitive advantages;
- our patents may be challenged by third parties;
- others may have patents that relate to our technology or business that may prevent us from marketing our product candidates unless we are able to obtain a license to those patents;
- the pending patent applications to which we have rights may not result in issued patents;
- we may not be successful in developing additional proprietary technologies that are patentable

In addition, others may independently develop similar or alternative technologies, duplicate any of our technologies and, if patents are licensed or issued to us, design around the patented technologies licensed to or developed by us. Moreover, we could incur substantial costs in litigation if we have to defend ourselves in patent lawsuits brought by third parties or if we initiate such lawsuits

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.

Patents Used in Our Plasma Volume Expander Business

We currently hold 26 issued U. S. 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 U.S., 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®. U.S.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.

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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 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.

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.

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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 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. was working on stem cell-derived treatments for cancer and cartilage repair and its intended products; however, they recently announced their intention to terminate their stem cell programs and potentially sell or license this technology to another company.

We may also face competition from companies that have filed patent applications relating to the cloning or differentiation of stem cells. Those companies include ACT, which has had claims allowed on a patent for RPE cells. 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.

Plasma Volume Expanders

Our plasma volume expander solutions, including Hextend®, 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. 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®. Hospira, which markets Hextend® in the U.S., is also the leading seller of generic 6% hetastarch in saline solution, and 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. 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 of both hetastarch products and albumin have declined which has forced Hospira and other vendors of hetastarch products to make additional price cuts in order to maintain their share of the market.

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.

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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 U.S., 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 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 U.S. 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 are 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 to sell products in the U.S. are likely to be more 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 cGMP (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 drug or biological 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 U.S. 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 U.S. 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 NIH 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 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 U.S. District Court issued a temporary injunction against the implementation of the new NIH guidelines, but the District Court's ruling was vacated by the U.S. Court of Appeals and upon remand, on July 27, 2011 the District Court ruled in favor of the NIH, declining to invalidate the NIH guidelines. However, the plaintiffs in the case have filed a notice of 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 U.S. 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 IVF 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 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 been:

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

deposited in the United Kingdom Stem Cell Bank; or

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

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

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,

(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.

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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; and

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, 2011, we employed 59 persons on a full-time basis and 4 persons on a part-time basis. Twenty-four full-time employees and one part-time employee hold Ph.D. Degrees in one or more fields of science. None of our employees are covered by a collective bargaining agreement.

COMPANY INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's Public Reference Room at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 or e-mail the SEC at publicinfo@sec.gov for more information on the operation of the public reference room. Our SEC filings are also available at the SEC's website at http://www.sec.gov. Our Internet address is: http://www.biotimeinc.com. There we make available, free of charge, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the SEC.

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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 comprehensive net losses for the fiscal years ended December 31, 2011, 2010 and 2009 were $17,535,587, $ 10,287,280, and $5,144,499, respectively, and we had an accumulated deficit of $80,470,009, $63,954,509, and $52,769,891 as of December 31, 2011, 2010, and 2009, 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 $13,699,691, $8,191,314, and $3,181,729 during the fiscal years ended December 31, 2011, 2010, and 2009, 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.

Future clinical trials of new therapeutic products, particularly those products that are regulated as drugs or biological, 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.

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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 research 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 (hES) 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.

We plan to invest in the development of a stem cell data base but there is no assurance that the data base, if successfully completed, can be profitably commercialized

We formed a new subsidiary, LifeMap Sciences, to advance the development and commercialization of our embryonic stem cell database. We have invested approximately $1,333,280 in LifeMap Sciences and we plan to invest approximately $666,640 more by July 1, 2012 if certain database development milestones are attained and certain other conditions are met. Our plan is to make the database available for use by stem cell researchers at pharmaceutical and biotechnology companies and other institutions through paid subscriptions or on a fee per use basis, but there is no assurance that the data base will be successfully completed or that LifeMap Sciences will be able to generate sufficient paid subscriptions for use of the data base to allow us to recover our investment or earn a profit.

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 U.S. 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.

Sales of the products we may develop will be adversely impacted by the availability of competing products

Sales of Hextend® have already been adversely impacted by the availability of other products that are commonly used in surgery and trauma care and sell at low 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.

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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®. Hospira also markets Voluven®, a plasma volume expander containing a 6% low molecular weight hydroxyethyl starch in saline solution.

Competing products for the diagnosis and treatment of cancer are being manufactured and marketed by established pharmaceutical companies, and more cancer diagnostics and therapeutics are being developed by those companies and by other smaller biotechnology companies. Other companies, both large and small, are also working on the development of stem cell based therapies for the same diseases and disorders that are the focus of the research and development programs of our subsidiaries.

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 regulatory approval to market our pharmaceutical and medical device products, depends upon the amount of money we have

At December 31, 2011, we had $22,211,897 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.

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.

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If we make strategic acquisitions, we will incur a variety of costs and might never realize the anticipated benefits

Despite our acquisitions of ESI in 2010 and Glycosan and CTI in 2011, we have limited experience in independently identifying acquisition candidates and integrating the operations of acquisition candidates with our company. If appropriate opportunities become available, we might attempt to acquire approved products, additional drug candidates, technologies or businesses that we believe are a strategic fit with our business. If we pursue any transaction of that sort, the process of negotiating the acquisition and integrating an acquired product, drug candidate, technology or business might result in operating difficulties and expenditures and might require significant management attention that would otherwise be available for ongoing development of our business, whether or not any such transaction is ever consummated. Moreover, we might never realize the anticipated benefits of any acquisition. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities, or impairment expenses related to goodwill, and impairment or amortization expenses related to other intangible assets, which could harm our financial condition.

Failure of our internal control over financial reporting could harm our business and financial results

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with accounting principles generally accepted in the U.S. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of the financial statements; providing reasonable assurance that receipts and expenditures of our assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected. Our growth and entry into new products, technologies and markets will place significant additional pressure on our system of internal control over financial reporting. Any failure to maintain an effective system of internal control over financial reporting could limit our ability to report our financial results accurately and timely or to detect and prevent fraud.

Our business and operations could suffer in the event of system failures

Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Such events could cause interruption of our operations. For example, the loss of data for our product candidates could result in delays in our regulatory filings and development efforts and significantly increase our costs. To the extent that any disruption or security breach was to result in a loss of or damage to our data, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the development of our product candidates could be delayed.

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 regulatory approvals we will not be permitted to sell our pharmaceutical and medical device products

The pharmaceutical and medical device 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.

Clinical trials and the regulatory approval process for a pharmaceutical product can take several years to complete. As a result, 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.

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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.

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 hES 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 U.S. 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 U.S. District Court issued a temporary injunction against the implementation of the new NIH guidelines, but the District Court's ruling was vacated by the U.S. Court of Appeals, and upon remand, on July 27, 2011 the District Court ruled in favor of the NIH, declining to invalidate the NIH guidelines. However, the plaintiffs in the case have filed a notice of 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.

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.

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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 U.S. 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 U.S. 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 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.

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 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 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.

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Our patents may not protect our products from competition

We or our subsidiaries have patents and patent applications pending in the U.S., 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, certain stem cell products, HyStem® and other hydrogels, certain genes related to the development of cancer, and other technologies.

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 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.

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 U.S., 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.

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Risks Related to our Dependence on Third Parties

We may become dependent on our collaborative arrangements with third parties for a substantial portion of our revenue, and our development and commercialization activities may be delayed or reduced if we fail to initiate, negotiate or maintain successful collaborative arrangements.

We may become dependent on possible future collaborators to develop and commercialize many of our product candidates and to provide the regulatory compliance, sales, marketing and distribution capabilities required for the success of our business. If we fail to secure or maintain successful collaborative arrangements, our development and commercialization activities will be delayed, reduced or terminated, and our revenues could be materially and adversely impacted. Over the next several years, we may depend on these types of collaboration partnerships for a significant portion of our revenue. The expected future milestone payments and cost reimbursements from collaboration agreements could provide an important source of financing for our research and development programs, thereby facilitating the application of our technology to the development and commercialization of our products. These collaborative agreements might be terminated either by us or by our partners upon the satisfaction of certain notice requirements. Our partners may not be precluded from independently pursuing competing products and drug delivery approaches or technologies. Even if our partners continue their contributions to our collaborative arrangements, of which there can be no assurance, they may nevertheless determine not to actively pursue the development or commercialization of any resulting products. Our partners may fail to perform their obligations under the collaborative arrangements or may be slow in performing their obligations. In addition, our partners may experience financial difficulties at any time that could prevent them from having available funds to contribute to these collaborations. If our collaboration partners fail to conduct their commercialization, regulatory compliance, sales and marketing or distribution activities successfully and in a timely manner, or if they terminate or materially modify their agreements with us, the development and commercialization of one or more product candidates could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue such development and commercialization on our own.

We have very limited experience in marketing, selling or distributing our products, and we may need to rely on marketing partners or contract sales companies.

Even if we are able to develop our products and obtain necessary regulatory approvals, we have very limited experience or capabilities in marketing, selling or distributing our products. We rely entirely on Hospira and CJ for the sale of Hextend®. We currently have only limited sales, marketing and distribution resources for selling our stem cell research products, and no marketing or distribution resources for selling any of the medical devices or pharmaceutical products that we are developing. Accordingly, we will be dependent on our ability to build our own marketing and distribution capability for our new products, which would require the investment of significant financial and management resources, or we will need to find collaborative marketing partners or contract sales companies for commercial sale of those products. Even if we find a potential marketing partner, of which there can be no assurance, we may not be able to negotiate a licensing or marketing contract on favorable terms to justify our investment or achieve adequate revenues.

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.

Because we are engaged in the development of medical 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 therapy or medical device, even though the outcome of those trials and the likelihood of ultimate FDA or foreign regulatory 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 or foreign regulatory 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.

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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.

You may experience dilution of your ownership interests because of the future issuance of additional 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 5, 2012, there were 50,321,962 common shares outstanding; 3,418,905 common shares reserved for issuance upon the exercise of outstanding options under our employee stock option plans; and 636,613 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.

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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 19,000 square feet of office and research laboratory space. The facility is cGMP-capable and has previously been certified as Class 1,000 and Class 10,000 laboratory space, and includes cell culture and manufacturing equipment previously validated for use in cGMP 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.

Base monthly rent for this facility was $28,445 during 2011, and will be $29,107 during 2012. 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 $6,700 as base monthly rent for the laboratory space and $1,600 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. LifeMap leases approximately 1,500 square feet of office space in Tel Aviv, Israel under two leases. LifeMap paid approximately $3,000 as base monthly rent under the terms of one lease, which commenced in April 2011, and an additional $1,200 as base monthly rent under the terms of the other lease, which commenced in October 2011. In addition to base rent, LifeMap 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. Mine Safety Disclosures

Not applicable

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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, 2010 and 2011 based on transaction data as reported by the NYSE Amex:

Quarter Ended	High	Low
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
March 31, 2011	9.53	6.08
June 30, 2011	7.92	4.11
September 30, 2011	5.94	4.01
December 31, 2011	6.20	3.55

On March 1, 2012 the closing price of our common stock reported on the NYSE Amex was $5.03 per share.

As of February 13, 2012, there were 14,635 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, 2011:

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	3,408,905	$ 2.18	1,303,193
BioTime Equity Compensation Plans Not Approved by Shareholders*	130,000	$ 5.76	-

*We have granted 130,000 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.

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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, 2011:

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**	2,355,000	$ 0.08	1,645,000
OncoCyte Equity Compensation Plans Approved by Shareholders**	2,730,000	$ 0.75	1,270,000
ReCyte Therapeutics Equity Compensation Plans Approved by Shareholders**	1,050,000	$ 2.05	2,950,000
BioTime Asia Equity Compensation Plans Approved by Shareholders**	400	$ .01	1,200
Cell Cure Neurosciences Compensation Plans Approved by Shareholders**	23,978	$ 27.94	1,860
LifeMap Equity Compensation Plans Approved by Shareholders**	2,650,000	$ 0.08	5,350,000

**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.

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.

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Performance Measurement Comparison (1)

The following graph compares total stockholder returns of BioTime, Inc. for the last five fiscal years beginning December 31, 2006 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

		2006	2007	2008	2009	2010	2011
BioTime, Inc.	Return %		54.74	331.63	138.98	96.93	-30.24
	Cum $	100.00	154.74	667.89	1,596.13	3,143.22	2,192.56
AMEX Market Value (US Companies)	Return %		3.60	-36.26	22.30	27.22	-8.89
	Cum $	100.00	103.60	66.04	80.76	102.75	93.61
Amex Biotechnology Index	Return %		4.26	-17.71	45.56	45.23	-15.85
	Cum $	100.00	104.26	85.79	124.88	181.37	152.63

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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, 2006. The cumulative total return on BioTime stock has been computed based on a price of $0.27 per share, the price at which BioTime’s shares closed on ecember 27, 2006.

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Item 6. Selected Financial Data

	Year Ended December 31,				
	2011	2010	2009	2008	2007
Consolidated Statements of Operations Data:					
REVENUES:					
License fees	$ 263,757	$ 292,904	$ 292,832	$ 277,999	$ 255,549
Royalty from product sales	756,881	945,461	1,079,951	1,203,453	776,679
Grant income	2,767,181	2,336,325	546,795	-	13,893
Sales of research products	566,943	105,610	5,590	22,340	-
Total revenues	4,354,762	3,680,300	1,925,168	1,503,792	1,046,121
EXPENSES:					
Research and development	(13,699,691)	(8,191,314)	(3,181,729)	(1,895,241)	(1,071,068)
General and administrative	(9,341,502)	(5,341,119)	(2,263,705)	(2,431,183)	(1,197,426)
Total expenses	(23,041,193)	(13,532,433)	(5,445,434)	(4,326,424)	(2,268,494)
Loss from operations	(18,686,431)	(9,852,133)	(3,520,266)	(2,822,632)	(1,222,373)
OTHER INCOME (EXPENSES):					
Interest income/(expense)	29,727	(124,300)	(1,653,755)	(965,781)	(232,779)
Gain/(loss) on sale of fixed assets	(6,246)	-	-	-	-
Modification cost of warrants	-	(2,142,201)	-	-	-
Other income/(expense), net	219,067	(68,573)	30,112	7,518	16,926
Total other income/(expenses), net	242,548	(2,335,074)	(1,623,643)	(958,263)	(215,853)
NET LOSS	(18,443,883)	(12,187,207)	(5,143,909)	(3,780,895)	$ (1,438,226)
Net loss/(income) attributable to the noncontrolling interest	1,928,383	1,002,589	(590)	-	-
Net loss attributable to BioTime, Inc.	(16,515,500)	(11,184,618)	(5,144,499)	(3,780,895)	(1,438,226)
Foreign currency translation (loss)/gain	(1,020,087)	897,338	-	-	-
COMPREHENSIVE NET LOSS	$ (17,535,587)	$ (10,287,280)	$ (5,144,499)	$ (3,780,895)	$ (1,438,226)
BASIC AND DILUTED LOSS PER COMMON SHARE	$ (0.35)	$ (0.28)	$ (0.18)	$ (0.16)	$ (0.06)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:BASIC AND DILUTED	47,486,941	40,266,311	29,295,608	23,749,933	22,853,278

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	December 31,				
	2011	2010	2009	2008	2007
Consolidated Balance Sheet Data:					
Cash and cash equivalents	$ 22,211,897	$ 33,324,924	$ 12,189,081	$ 12,279	$ 9,501
Total assets	45,829,695	53,272,659	13,433,071	1,035,457	110,082
Long-term liabilities	1,224,859	1,367,045	1,223,823	2,003,754	1,763,489
Accumulated deficit	(80,470,009)	(63,954,509)	(52,769,891)	(47,625,392)	(43,844,497)
Total equity/(deficit)	$ 41,458,181	$ 49,425,657	$ 11,046,989	$ (4,346,814)	$ (3,046,389)

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, 2011 reflect asset acquired from CTI and merger with Glycosan during the year. See Notes13 and 14 to Consolidated Financial Statements.

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 11, 12, and 20 to Consolidated Financial Statements.

Grant income and research and development expenses during 2010 and 2011 reflect our receipt of research grant payments from CIRM during 2010 and 2011, from the U.S. Qualifying Therapeutic Discovery Project during 2010, from the Office of the Chief Scientist of the Ministry of Industry, Trade, and Labor of Israel during 2011, and from the National Institutes of Health during 2011.

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 7 to Consolidated Financial Statements.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to provide information necessary to understand our audited consolidated financial statements for the two-year period ended December 31, 2010, and highlight certain other information which, in the opinion of management, will enhance a reader's understanding of our financial condition, changes in financial condition and results of operations. In particular, the discussion is intended to provide an analysis of significant trends and material changes in our financial position and the operating results of our business during the year ended December 31, 2011 as compared to the year ended December 31, 2010, and during the year ended December 31, 2010 as compared to the year ended December 31, 2009. This discussion should be read in conjunction with our consolidated financial statements for the two-year period ended December 31, 2011 and related notes included elsewhere in this Annual Report on Form 10-K. These historical financial statements may not be indicative of our future performance. This Management's Discussion and Analysis of Financial Condition and Results of Operations contains a number of forward-looking statements, all of which are based on our current expectations and could be affected by the uncertainties and risks described throughout this filing, particularly in "Item 1A. Risk Factors."

Stem Cells and Products for Regenerative Medicine Research

We are marketing our stem cell products for research through our website biotimeinc.com. By an agreement with ReCyte Therapeutics, Millipore Corporation became a worldwide distributor of certain ACTCellerate™ hEPC lines and related ESpan™ growth media. These lines 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 biotimeinc.com. In addition to the products that we are co-marketing with Millipore, we now offer 92 other ACTCellerate™ hEPC lines for sale on our website, 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.

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 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 biotimeinc.com.

Plasma Volume Expander Products

Royalties and licensing fees related to our plasma volume expander products, primarily Hextend®, comprise a significant part of our operating revenues. 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 of the U.S. Armed Forces.

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 revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place.

Royalties on sales of Hextend® that occurred during the fourth quarter of 2010 through the third quarter of 2011 are reflected in our financial statements for the year ended December 31, 2011. We received $630,858 in royalties from Hextend® sales by Hospira during 2011. Royalties for 2011 decreased 25% from $839,740 in royalties from Hospira

on Hextend® sales in 2010. In addition, we received royalties from CJ in the amount of $122,282 for the period ended December 31, 2011, representing a 16% increase from $105,721 in royalties received for the period ended December 31, 2010.

Based on sales of Hextend® that occurred during the fourth quarter of 2011, we received royalties of $118,565 from Hospira and $28,819 from CJ during the first quarter of 2012. Total royalties of $147,384 for the quarter decreased 32% from royalties of $215,971 received during the same period last year. These royalties will be reflected in our financial statements for the first quarter of 2012.

The decrease in royalties received from Hospira based on sales during 2011 is generally due to the rapid decline in the price of hetastarch products, including Hextend® in the market. The blood volume expander marketing is shrinking overall and hospitals have shifted their purchases to albumin products. Hospira has reported that they have seen a rapid decline in the price of hetastarch-based plasma expanders in the market which could continue to have a possible negative impact on royalties from the sales of Hextend®. Hospira has implemented further price reductions for Hextend® during 2012 in an attempt to maintain market share.

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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.

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.

Company	Program	Status	2011 R & D Expenses
BioTime(1) and ES Cell International Pte. Ltd. ("ESI")	ACTCellerate™ cell lines/growth media/reagent kits for stem cell research	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	$2,884,216
	GMP hES cell lines	ESI has developed and offers for sale GMP hES cell lines for research purposes. Six ESI hES cell lines have been approved by the NIH for use in federally funded research.	
BioTime(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.	1,715,386
OncoCyte (2)			2,376,444

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 cells with levels of purity and efficiency 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 can be induced at the site of tumors to destroy cancer cells.
Genetic markers for cancer diagnosis	Demonstrated that many of the same genes associated with the normal growth of embryonic stem cells are abnormally reactivated by cancer cells. Based on this finding, and utilizing its proprietary algorithms, OncoCyte has discovered and filed patent applications on over 100 novel cancer-associated genes. Initiated development of PanC-DX™, a novel blood-based diagnostic screening test designed to detect the presence of multiple cancer types with superior accuracy

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Company	Program	Status	2011 R & D Expenses
OrthoCyte (3)	Cartilage repair using embryonic progenitor cells Biocompatible hydrogels that mimic the human extracellular matrix	Identified several cell lines that displayed molecular markers consistent with the production of definitive human cartilage. Confirmed chondrogenic potential in joint defects in rat models of osteoarthritis. Demonstrated that those cell lines can be combined with BioTime's HyStem®-Rx matrices to formulate a combination product for treating cartilage deficits. Developed Extralink®, PEGgel™, and HyStem® hydrogel products for basic laboratory research use Conducted pre-clinical development of HyStem®-Rx as an implantable cell delivery device Conducted toxicology studies of Hystem®-Rx in the brains of laboratory mice. Results show no difference in reactive astrocytes, macrophages/microglia, neuronal number or blood vessel structure between saline controls and Hystem®-Rx. There was no evidence of granulomata or foreign body reaction around either saline or Hystem®-Rx injection sites. Two U.S. patents issued on hydrogels	1,902,503
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. Through BioTime, formed a collaboration with researchers at Cornell Weill Medical College to derive clinical vascular endothelium for the treatment of age-related vascular disease. Demonstrated the feasibility of producing highly purified product using ACTCellerate™ technology.	626,248
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.	308,471
BioTime Asia	Distributing ACTCellerate™ hEPC lines growth media and reagents	Initial sales of cell lines, growth media, and differentiation kits, to customers in Asia.	175,539
Cell Cure Neurosciences	OpRegen™ and OpRegen-Plus™ for	Conducted animal model studies to establish proof of concept.	3,197,597

(4)	treatment of age related macular degeneration	Developed directed differentiation as efficient method for short culture period to produce a supply of retinal pigment epithelial cells. Granted Teva Pharmaceutical Industries, Ltd. an option to complete clinical development of, and to manufacture, distribute, and sell, OpRegen™ and OpRegen-Plus™.	
LifeMap (5)	Stem cell database	Developing a database that will permit users to follow the development of embryonic stem cell lines to the thousands of progenitor cell lines and cell lineages branching from them. We aim to enable researchers to determine which cells they need for their research and provide the cell-related information necessary to better understand and develop therapeutics for various diseases such as diabetes, Parkinson's disease, heart failure, arthritis, muscular dystrophy, spinal cord injury, macular degeneration, hearing loss, liver failure, and many other disorders where cells and tissues become dysfunctional and need to be replaced.	513,287

(1) During late December 2010, our subsidiary, Embryome Sciences, Inc., 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. The hydrogel products were acquired in 2011 through the merger of Glycosan into OrthoCyte, but were assigned to BioTime in January 2012.

(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.

(5) LifeMap was organized during April 2011.

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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 2012. 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 $13,699,691 allocated to our primary research and development projects during the year ended December 31, 2011:

Company	Program	Percent
BioTime, ReCyte Therapeutics and ESI	ACTCellerate™ hPECs, GMP hES cell lines, and related research products	21%
BioTime	CIRM sponsored ACTCellerate™ technology	13%
OncoCyte	Cancer therapy and diagnosis	17%
OrthoCyte	Orthopedic therapy; hydrogel products	14%
ReCyte Therapeutics	IPS and vascular therapy	5%
BioTime	Hextend®	2%
BioTime Asia	Stem cell products for research	1%
Cell Cure Neurosciences	OpRegen™, OpRegen-Plus™, and neurological disease therapies	23%
LifeMap	Stem cell database	4%

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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 reports are 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, consulting fees, 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 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 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.

Treasury stock – We account for BioTime common shares issued to subsidiaries for future potential working capital needs as treasury stock on the consolidated balance sheet. We have the intent and ability to register any unregistered shares to support the marketability of the shares.

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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 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 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 7 to the Consolidated Financial Statements.

Principles of consolidation – Our consolidated financial statements include the accounts of our wholly-owned subsidiaries, OrthoCyte, LifeMap Sciences, 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, 2011; the accounts of OncoCyte, a subsidiary of which we owned approximately 75% of the outstanding shares of common stock as of December 31, 2011; the accounts of BioTime Asia, a subsidiary of which we owned approximately 81% of the outstanding shares as of December 31, 2011, and the accounts of Cell Cure Neurosciences, a subsidiary of which we owned approximately 54% of the outstanding shares as of December 31, 2011. 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 U.S. 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. For example, royalties on sales made during the fourth quarter of 2010 were not recognized until the first quarter of fiscal year 2011.

	Years Ended December 31,			2011 vs. 2010 Change		2010 vs. 2009 Change	
	2011	2010	2009	$	%	$	%
Revenue							
License and other revenue	$4,354,762	$3,680,300	$1,925,168	$674,462	18.33 %	$1,755,132	91.17 %
Operating expenses							
Research and development	(13,699,691)	(8,191,314)	(3,181,729)	(5,508,377)	67.25 %	(5,009,586)	157.45 %
Selling, general and administrative	(9,341,502)	(5,341,119)	(2,263,705)	(4,000,383)	74.90 %	(3,077,413)	135.95 %
Total operating expenses	(23,041,193)	(13,532,433)	(5,445,434)	(9,508,760)	70.27 %	(8,086,999)	148.51 %
Interest income/(expense)	29,727	(124,300)	(1,653,755)	154,027	-123.92%	1,529,455	-92.48 %
Other income/(expense)	219,067	(68,573)	30,112	287,640	-419.47%	(98,685)	-327.73%
Loss on write off of fixed asset	(6,246)	-	-	(6,246)	0.00 %	-	0.00 %
Modification cost of warrants	-	(2,142,201)	-	2,142,201	-100.00%	(2,142,201)	0.00 %
Net loss	$(18,443,883)	$(12,187,207)	$(5,143,909)	$(6,256,676)		$(7,043,298)	

Year Ended December 31, 2011 and Year Ended December 31, 2010

Our royalty revenues for the year ended December 31, 2011 consist of royalties on sales of Hextend® made by Hospira and CJ during the period beginning October 1, 2010 and ending September 30, 2011. Royalty revenues recognized for that period were $753,140 compared with $945,461 recognized for the year ended December 31, 2010. This 20% decrease in royalties is attributable to a decrease in Hextend® sales in the U.S., which was slightly offset by an increase in sales in the Republic of Korea. The decrease in royalties received from Hospira based on sales during 2011 is generally due to the rapid decline in the price of hetastarch-based products in the market. The blood volume expander marketing is shrinking overall and hospitals have shifted their purchases to albumin products. Hospira has reported that they have seen a rapid decline in the price of hetastarch-based plasma expanders in the market which could continue to have a negative impact on revenues from the sale of Hextend®. Hospira has implemented further price reductions for Hextend® during 2012 in an attempt to maintain market share.

We recognized as revenue $178,399 and $292,904 of license fees from CJ and Summit during 2011 and 2010, 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 $1,570,663 from our research grant from CIRM during the year ended December 31, 2011. Because grant income is recognized as revenue when earned, and these amounts received covered the period of March 1, 2011 through February 28, 2012, only $1,308,886 of the CIRM grant earned during the 2011 fiscal year was recognized in our consolidated financial statements and the balance will be recognized as revenue during the first quarter of 2012. Total grant income from CIRM recognized during the year amounted to $1,570,663, which includes $261,777 of a payment received in 2010 that was recognized as revenues in 2011.

In 2011, grant income included $27,917 of a $335,900 grant awarded by the NIH. The grant period runs from September 30, 2011 through September 29, 2012.

Grant income also included awards from other sources in the amount of $1,073,668 recognized through Cell Cure Neurosciences and $94,933 through OncoCyte and OrthoCyte during 2011.

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Research and development expenses increased to $13,699,691 for the year ended December 31, 2011, from $8,191,314 for the year ended December 31, 2010. Increase is partially attributed to the increase in research and development expenses incurred by ESI and Cell Cure Neurosciences to $4,801,382 in 2011 compared to $1,938,130 in 2010. The increase from prior year is primarily attributed to full year's worth of activity in 2011 compared to eight months and three months for ESI and Cell Cure Neurosciences, respectively in 2010. These amounts include $1,499,726 in 2011 and $790,117 in 2010 of amortization expense of patent technology acquired from the acquisition of those subsidiaries in May and October 2010, respectively. Furthermore, in 2011, research and development expenses also included $491,474 in amortization expense related to the patent technology acquired from CTI in Jan 2011 and through the acquisition of Glycosan in March 2011. Aside from these expenses, the increase in research and development expense during 2011 is primarily attributable to an increase of $768,305 in employee compensation and related costs allocated to research and development expense, an increase of $348,282 in outside research and laboratory costs, an increase of $411,688 in stock-based compensation allocated to research and development expense of which $236,942 arises from Cell Cure Neurosciences, an increase of $189,406 in expenditures made to cover laboratory expenses and supplies, an increase of $170,365 in rent expenses allocated to research and development expense, an increase of $86,284 for patent related legal expenses, an increase of $89,563 in depreciation expenses allocated to research and development expense, and $402,089 in expenses related to the HyStem®-RX project, a new project in 2011. These increases were offset to some extent by decreases of $76,749 in scientific consulting fees. Research and development expenses include laboratory study expenses, patent and technology license fees, employee salaries and benefits, stock compensation expense, rent, insurance and science-related consultants' fees.

General and administrative expenses increased to $9,341,502 for the year ended December 31, 2011 from $5,341,119 for the year ended December 31, 2010. Increase is partially attributed to the increase in general and administrative expenses incurred by Cell Cure Neurosciences to $544,020 in 2011 compared to $7,506 in 2010, which we acquired in October of 2010. The general and administrative expenses for ESI decreased to $294,310 in 2011 compared to $428,403 in 2010, although acquired in May 2010. This decrease is largely attributed to certain non-recurring audit and accounting fees incurred in 2010 in connection with the acquisition of approximately $183,000 and further attributed to the recognition of bad debt expense of approximately $31,000. There were no such expenses in 2011. Excluding these non-recurring expenses, general and administrative expenses for ESI increased by approximately $80,000. The overall increase is further attributable to increase of $2,190,753 in employee compensation, bonuses and related costs allocated to general and administrative expense, an increase of $424,442 in consulting fees, an increase of $191,172 in stock-based compensation to employees and consultants, an increase of $157,576 in cash and stock-based compensation paid to our independent directors, an increase of $262,205 in travel, lodging and entertainment expense, an increase in recruiting and hiring expense of $174,818, an increase of $103,062 in stock subscription, registration and agent fees, marketing and advertisement expenses of $81,595, an increase of $100,230 in bad debt expense and an increase of $57,180 in rent expenses allocated to general and administrative expense. These increases were offset to some extent by decreases of $133,526 in investor and public relations fees. General and administrative expenses include salaries and benefits allocated to general and administrative accounts, stock compensation expense, 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.

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 U.S., which was slightly offset by an increase in sales in the Republic of Korea. The decrease in sales in the U.S. market was 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 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.

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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. We also recognized $1,073,668 of grant income from the Office of the Chief Scientist of the Ministry of Industry, Trade, and Labor of Israel during 2011 through our ownership interest in Cell Cure Neurosciences.

Research and development expenses increased to $8,191,314 for the year ended December 31, 2010, from $3,181,729 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 $790,117 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 $227,167 of amortization of deferred license fees of which $121,200 represents 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, an increase of $580,524 in expenditures made to cover laboratory expenses and supplies and an increase of $83,620 in patent related legal fees. 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, employee salaries and benefits, stock compensation expense, rent, insurance and science-related consultants' fees.

General and administrative expenses increased to $5,341,119 for the year ended December 31, 2010 from $2,263,705 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 $260,864 in legal fees, an increase of $307,7531 in consulting and outside services related, an increase of $133,369 in accounting fees, an increase of $113,986 in investor and public relations expenses and an increase of $58,507 in travel, lodging and entertainment expense. General and administrative expenses include salaries and benefits allocated to general and administrative accounts, stock compensation expense, 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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Interest and Other Income (Expense)

During 2011, we earned $30,053 of interest income, net of $326 of interest expense. Interest income is generally attributed to interest earned on higher cash balances held during 2011 compared to 2010.

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

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, 2011 we had a cumulative net operating loss carryforward of approximately $67,000,000 for federal income tax purposes and $42,000,000 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, 2011, we had $22,211,897 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, QTDP, and NIH 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 636,613 common share purchase warrants, of which 556,613 are exercisable at a price of $10.00 per share and 80,000 at $3.00 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 2011, we received $3,729,400 of cash in our operations. Our sources of that cash were $630,900 of royalty revenues from Hospira, $122,400 of royalty revenues from CJ, $123,100 of research grant payment from the NIH, a $256,700 payment from a QTDP research grant, $340,900 from the sale of research products, $684,800 in foreign grants, and a $1,570,700 research grant payment from CIRM.

Cash used in operations

During 2011, our total research and development expenditures were $13,699,700 and our general and administrative expenditures were $9,341,500. Net loss for the year ended December 31, 2011 amounted to $16,515,500. Net cash used in operating activities during this period amounted to $13,593,900. The difference between the net loss and net cash used in operating activities during 2011 was primarily attributable to amortization of $1,991,200 in intangible assets, $1,217,500 in stock-based compensation paid to employees and consultants, $584,900 in options issued as independent director compensation, $598,500 amortization of deferred consulting fees, $109,500 amortization of deferred license fees, $71,100 in amortization of deferred rent, $373,300 in depreciation expense, established a $100,000 allowance for uncollectible accounts, $261,800 in grant receivable, and $600,400 in accounts payable and accrued liabilities. This overall difference was offset to some extent by amortization of $234,800 in deferred license revenues, $120,700 in accounts receivable, $706,800 in prepaid expenses and other current assets, and net loss of $1,928,300 allocable to the noncontrolling interest in our subsidiaries.

Cash flows from investing activities

During the year ended December 31, 2011, $1,202,700 was used for investing activities. The primary components of this cash were approximately $960,300 used in the purchase of equipment and $250,000 used in the acquisition of CTI. This cash expenditure was offset to some extent by $9,100 of cash acquired in connection with the asset purchase transaction with CTI and the merger with Glycosan.

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Cash generated by financing activities

During the year ended December 31, 2011, $3,862,400 in net cash was provided from our financing activities. During this period, we received $223,900 in connection with the exercise of 450,660 options, $425,000 in connection with the exercise of 219,000 warrants, $213,500 from issuance of ReCyte Therapeutics common shares, and $3,000,000 in cash from the sale of OncoCyte common stock.

Contractual obligations

As of December 31, 2011, 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)	$ 1,919,496	$ 586,010	$ 919,817	$ 413,669	$ -

(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, LifeMap, and Cell Cure Neurosciences.

Recent Financing Activities

During August 2011, OncoCyte sold 3,000,000 shares of common stock to a private investor who is also a BioTime shareholder for $3,000,000 in cash, and OncoCyte sold to us 7,000,000 shares of OncoCyte common stock for $1,000,000 in cash and 1,286,174 BioTime common shares having a market value of $6,000,000. These BioTime common shares are accounted for as treasury stock as of December 31, 2011.

Future capital needs

We currently depend upon revenue from the sale of our stem cell research products, HyStem® hydrogel for research use, royalties from the sale of Hextend® by Hospira and CJ, and our research grants from CIRM, SBIR and the Office of the Chief Scientist of the Ministry of Industry, Trade, and Labor of Israel. Any significant loss in any of these revenue sources could impact our future capital needs. Our product sales and royalty revenues may be supplemented by any license fees that we may receive if we enter into new commercial license agreements for our products or technology.

The amount and pace of research and development that we 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, are highly dependent upon the amount of capital we have. 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 our projects.

The market value and the volatility of our stock price, as well as general market conditions, could impact our ability to raise capital on favorable terms, or at all. Any equity financing we obtain may further dilute or otherwise impair the ownership interests of our current shareholders. If we fail to generate positive cash flows or fail to obtain additional capital when required, we could modify, delay or abandon some or all of our programs.

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Off-Balance Sheet Arrangements

As of December 31, 2011, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

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 U.S. 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, 2011, currency exchange rates did not have a material impact on our intercompany transactions with our foreign subsidiaries. Most of the foreign exchange loss reflected on our statement of operations reflects the impact of foreign exchange rates on amortization of assets held by our foreign subsidiaries, rather than transactional costs. 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.

Credit Risk

We place most of our cash in U.S. banks and we invest some of our cash in interest bearing instruments issued by U.S. banks or the U.S. 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 U.S. 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, 2011, 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, 2011. We have also audited the Company's internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). The Company's management is responsible for 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 (U.S.). 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.

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, 2011, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2011 in conformity with accounting principles generally accepted in the UnitedStates of America. Also in our opinion, the Company maintained, in all

material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control – Integrated Framework issued by COSO.

Rothstein Kass
Roseland, New Jersey
March 14, 2012

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Item 8. Financial Statements and Supplementary Data

BIOTIME, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2011	December 31, 2010
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 22,211,897	$ 33,324,924
Inventory	51,174	45,470
Prepaid expenses and other current assets	2,692,303	2,202,284
Total current assets	24,955,374	35,572,678
Equipment, net	1,347,779	710,766
Deferred license and consulting fees	843,944	1,550,410
Deposits	63,082	51,900
Intangible assets, net	18,619,516	15,386,905
TOTAL ASSETS	$ 45,829,695	$ 53,272,659
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	$ 2,681,111	$ 1,929,874
Deferred grant income	261,777	261,777
Deferred license revenue, current portion	203,767	288,306
Total current liabilities	3,146,655	2,479,957
Commitments and contingencies		
LONG-TERM LIABILITIES		
Deferred license revenue, net of current portion	899,551	1,048,757
Deferred rent, net of current portion	66,688	-
Other long term liabilities	258,620	318,288
Total long-term liabilities	1,224,859	1,367,045
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; 50,321,962 and 47,777,701 issued, and 49,035,788 and 47,777,701 outstanding at December 31, 2011 and 2010, respectively	115,144,787	101,135,428
Contributed capital	93,972	93,972
Accumulated other comprehensive income	(122,749)	897,338
Accumulated deficit	(80,470,009)	(63,954,509)
Treasury stock at cost: 1,286,174 and nil shares at December 31, 2011 and 2010, respectively	(6,000,000)	-
Total shareholders' equity	28,646,001	38,172,229
Noncontrolling interest	12,812,180	11,253,428
Total equity	41,458,181	49,425,657

TOTAL LIABILITIES AND EQUITY	$ 45,829,695	$ 53,272,659

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2011	2010	2009
REVENUES:			
License fees	$ 263,757	$ 292,904	$ 292,832
Royalties from product sales	756,881	945,461	1,079,951
Grant income	2,767,181	2,336,325	546,795
Sale of research products	566,943	105,610	5,590
Total revenues	4,354,762	3,680,300	1,925,168
EXPENSES:			
Research and development	(13,699,691)	(8,191,314)	(3,181,729)
General and administrative	(9,341,502)	(5,341,119)	(2,263,705)
Total expenses	(23,041,193)	(13,532,433)	(5,445,434)
Loss from operations	(18,686,431)	(9,852,133)	(3,520,266)
OTHER INCOME (EXPENSES):			
Interest income/(expense), net	29,727	(124,300)	(1,653,755)
Gain/(loss) on sale of fixed assets	(6,246)	-	-
Modification cost of warrants	-	(2,142,201)	-
Other income/(expense), net	219,067	(68,573)	30,112
Total other income/(expenses), net	242,548	(2,335,074)	(1,623,643)
NET LOSS	(18,443,883)	(12,187,207)	(5,143,909)
Net loss/(income) attributable to the noncontrolling interest	1,928,383	1,002,589	(590)
NET LOSS ATTRIBUTABLE TO BIOTIME, INC.	(16,515,500)	(11,184,618)	(5,144,499)
Foreign currency translation (loss)/gain	(1,020,087)	897,338	-
COMPREHENSIVE LOSS	$ (17,535,587)	$ (10,287,280)	$ (5,144,499)
BASIC AND DILUTED LOSS PER COMMON SHARE	$ (0.35)	$ (0.28)	$ (0.18)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING: BASIC AND DILUTED	47,486,941	40,266,311	29,295,608

See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Common Shares		Treasury Shares						
	Number of Shares	Amount	Number of Shares	Amount	Contributed Capital	Accumulated Deficit	Noncontrolling Interest	Accumulated other comprehensive income	Total Equity/ (Deficit)
ANCE									
UARY 1,	25,076,798	$ 43,184,606			$ 93,972	$ (47,625,392)	$ -	$ -	$ (4,346
of Cyte diary s to ontrolling st							4,000,000		4,000
mon s issued ew loans xtension e of credit	153,206	304,181							304
mon s issued onversion e of credit ccrued st	2,493,374	4,134,424							4,134
s granted rvices	135,000	229,500							229
s granted censing	65,278	120,000							120
mon s issued sh	4,400,000	8,000,000							8,000
cise of ns	535,832	848,449							848
ants ised	808,171	1,616,342							1,616
ants d for line dit		398,548							398
ants d for ces		93,304							93
		488,564							488

options ed for ensation									
ficial ersion re		304,400							304
LOSS						(5,144,499)	590		(5,143
ANCE EMBER 009	33,667,659	$ 59,722,318	-	$ -	$ 93,972	$ (52,769,891)	$ 4,000,590	$ -	$ 11,046
of ReCyte diary s to ontrolling st							2,300,000		2,300
ontrolling st in Cell							5,894,255		5,894
mon s issued rt of sition of	1,383,400	11,011,864							11,011
mon s retired yment for ise of ns	(40,125)	(249,978)							(249
ise of ns	526,410	855,977							855
ants ised	12,240,357	22,861,458							22,861
ants d as part quisition I		1,778,727							1,778
ants d for ces		1,979,036							1,979
fication of nts		2,142,202							2,142
options ed for ensation		1,033,824							1,033
options ed for ensation bsidiary							61,172		61
								897,338	897

gn ncy ation gain									
LOSS						(11,184,618)	(1,002,589)		(12,187
ANCE EMBER 010	47,777,701	$ 101,135,428	-	$ -	$ 93,972	$ (63,954,509)	$ 11,253,428	$ 897,338	$ 49,425
mon s issued t of sition of ssets	261,959	2,300,000							2,300
mon s issued t of er with osan	332,903	2,600,000							2,600
ury s issued t of tment in diary	1,286,174	6,000,000	(1,286,174)	(6,000,000)					
mon s retired yment for ise of ns	(6,435)	(28,067)							(28
ise of ns	450,660	251,981							251
ants ised	219,000	425,000							425
ants d as part rger with osan		954,879							954
de tment in diaries							3,213,500		3,213
options ed for ensation		1,505,566							1,505
options ed for ensation bsidiary							273,635		273
gn ncy ation gain								(1,020,087)	(1,020
LOSS						(16,515,500)	(1,928,383)		(18,443
	50,321,962	$ 115,144,787	(1,286,174)	$ (6,000,000)	$ 93,972	$ (80,470,009)	$ 12,812,180	$ (122,749)	$ 41,458

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See Notes to the Consolidated Financial Statements.

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BIOTIME, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2011	2010	2009
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss attributable to BioTime, Inc.	$ (16,515,500)	$ (11,184,618)	$ (5,144,499)
Adjustments to reconcile net loss attributable to BioTime, Inc to net cash used in operating activities:			
Depreciation and amortization of capital leased assets	373,349	138,659	34,591
Loss on sale or write-off of equipment	6,416	993	1,159
Write off of security deposit	2,443	-	-
Write off of expired inventory	1,510	4,008	-
Bad debt expense	100,230	-	2,538
Reclassification of licensing fees expensed in prior year	-	-	(10,000)
Amortization of intangible assets	1,991,200	790,117	-
Amortization of deferred consulting fees	598,465	520,212	102,059
Amortization of deferred license fees	109,500	227,167	-
Amortization of deferred finance cost on lines of credit	-	-	782,542
Amortization of deferred rent	71,118	21,029	(3,339)
Amortization of deferred royalty fees	1,982	-	-
Amortization of deferred license revenues	(234,781)	(292,904)	(292,904)
Amortization of deferred grant revenues	-	(1,620)	(20,000)
Stock-based compensation	1,217,522	638,709	260,840
Options issued as independent director compensation	584,891	455,022	227,724
Stock appreciation rights compensation liability	-	-	(483,688)
Warrants issued for outside services	-	-	93,304
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
Share in net loss of associated company	-	258,493	-
Net (loss)/income allocable to noncontrolling interest	(1,928,383)	(1,002,589)	590
Changes in operating assets and liabilities:			
Accounts receivable, net	(120,678)	(77,907)	(349)
Grant receivable	261,777	(256,714)	-
Inventory	31,094	(11,094)	(38,384)
Prepaid expenses and other current assets	(706,836)	(392,820)	(146,200)
Accounts payable and accrued liabilities	600,398	254,090	(419,456)
Interest on lines of credit	-	-	(40,108)
Other long term liabilities	(39,633)	-	-
Deferred revenues	-	36,682	75,000
Deferred grant revenues	-	-	263,397
Net cash used in operating activities	(13,593,916)	(7,732,884)	(4,259,938)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Payments of license fees	(1,500)	(215,000)	-
Purchase of equipment	(960,281)	(220,771)	(61,276)

Cash paid, net of cash acquired for CTI assets	(246,850)	-	-
Cash acquired in connection with merger with Glycosan	5,908	-	-
Cash acquired, net of cash paid for Cell Cure Neurosciences shares	-	3,733,110	-
Note and related interest accrued converted to Cell Cure Neurosciences 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)	10	3,922	15,050
Net cash provided by/(used in) investing activities	(1,202,713)	3,197,419	(46,226)

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	Year Ended December 31,		
	2011	2010	2009
CASH FLOWS FROM FINANCING ACTIVITIES:			
Repayments of lines of credit	-	-	(263,825)
Borrowings under lines of credit	-	-	2,310,000
Deferred debt cost	-	-	(28,000)
Proceeds from exercises of stock options	223,914	605,998	848,449
Proceeds from exercises of warrants	425,000	22,861,458	1,616,342
Proceeds from issuance of common shares	-	-	8,000,000
Proceeds from sale of common shares of subsidiary	3,213,500	2,300,000	4,000,000
Net cash provided by financing activities	3,862,414	25,767,456	16,482,966
Effect of exchange rate changes on cash and cash equivalents	(178,812)	(96,148)	-
NET CHANGE IN CASH AND CASH EQUIVALENTS	(11,113,027)	21,135,843	12,176,802
CASH AND CASH EQUIVALENTS:			
At beginning of year	33,324,924	12,189,081	12,279
At end of year	$ 22,211,897	$ 33,324,924	$ 12,189,081
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid during year for interest	$ 326	$ 1,315	$ 415,330
SUPPLEMENTAL SCHEDULE OF NONCASH FINANCING AND INVESTING ACTIVITIES :			
Common shares issued in connection with investment in subsidiary (Treasury shares)	$ 6,000,000	$ -	$ -
Common shares issued in connection with the purchase of assets from CTI	$ 2,300,000	$ -	$ -
Common shares issued as part of merger with Glycosan	$ 2,600,000	$ -	$ -
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
Common shares issued for new loans and extension of line of credit	$ -	$ -	$ 304,181
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 merger with Glycosan	$ 954,879	$ -	$ -
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
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. BioTime's primary focus is in the field of regenerative medicine; specifically 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 products and technologies to diagnose and 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. Cell Cure Neurosciences Ltd. (“Cell Cure Neurosciences”), is 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. LifeMap Sciences, Inc. (“LifeMap”) is advancing the development and commercialization of BioTime’s embryonic stem cell database and plans to make the database available for use by stem cell researchers at pharmaceutical and biotechnology companies and other institutions through paid subscriptions or on a fee per use basis.

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 primarily from royalties and licensing fees related to the sale of its plasma volume expander product, 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 in the near term 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 and is paid in quarterly installments. During 2011, BioTime received four quarterly payments totaling $1,570,663. Grant revenues in 2011 also include $27,917, $44,544, $50,389 and $1,073,668 from other grants received by BioTime, OncoCyte, OrthoCyte, and Cell Cure Neurosciences, respectively. During 2010, BioTime received $476,724 of a $733,438 grant awarded under the U.S. Government’s Qualifying Therapeutic Discovery Project (“QTDP”). BioTime received the remaining QTDP award in the amount of $256,714 in February 2011. The entire award from QTDP was recognized as revenues in 2010.

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The consolidated balance sheets as of December 31, 2011 and 2010, the consolidated statements of operations for the years ended December 31, 2011, 2010, and 2009, the consolidated statements of changes in equity for the years ended December 31, 2011, 2010, and 2009, and the consolidated statements of cash flows for the years ended December 31, 2011, 2010, and 2009 have been prepared by BioTime's management in accordance with instructions from Form 10-K.

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	75.3%	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
LifeMap Sciences, Inc.	100%	USA
LifeMap Sciences, Ltd.	100% (1)	Israel

(1) LifeMap Sciences, Ltd. is a wholly-owned subsidiary of LifeMap Sciences, Inc.

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 U.S. and with the accounting and reporting requirements of Regulation S-X of the Securities and Exchange Commission ("SEC"). As of December 31, 2011, we consolidated OncoCyte, ReCyte Therapeutics, ESI, Cell Cure Neurosciences, BioTime Asia, and LifeMap Sciences 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 FDA and foreign regulatory approval to market its pharmaceutical and medical device 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 reports are 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 and the sale of research products are recognized as revenue when earned. Revenues from the sale of research products are primarily derived from the sale of hydrogels and stem cell products.

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 $353,000 and $125,000 and grants receivable amounted to $630,000 and $543,000 as of December 31, 2011 and December 31, 2010, respectively. Some of these amounts are deemed uncollectible; as such BioTime recognized allowance for doubtful accounts in the amount of $100,000 and nil as of December 31, 2011 and December 31, 2010, respectively. 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 will be recorded if 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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Treasury stock – BioTime accounts for BioTime common shares issued to subsidiaries for future potential working capital needs as treasury stock on the consolidated balance sheet. BioTime has the intent and ability to register any unregistered shares to support the marketability of the shares.

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.

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

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, consulting fees, research and laboratory fees, and license fees paid to acquire patents or licenses to use patents and other technology from third parties.

Foreign currency translation gain/(loss) and 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 period. Resulting translation adjustments are recorded as a component of accumulated other comprehensive income on the consolidated balance sheet. For the fiscal years ended December 31, 2011 and 2010, comprehensive loss includes loss and gain of $1,020,087 and $897,338, respectively which is largely from foreign currency translation. For the fiscal year ended December 31, 2011 and 2010, foreign currency transaction loss and gain amounted to $14,829 and $5,781, respectively.

Income taxes – BioTime accounts for income taxes in accordance with the accounting principles generally accepted in the UnitedStates of America ("GAAP") 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. 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, 2011 and 2010. 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 utilizes the Black-Scholes Merton option pricing model. BioTime's determination of fair value of share-based payment awards on the date of grant using that 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, including Black-Scholes Merton, 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 will 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 will be 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 the value of warrants issued to third parties for services and to the minority shareholder in BioTime Asia for consulting services, and 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 7.

Loss per share – Basic net loss per share is computed by dividing net loss attributable to BioTime, Inc. 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 and warrants (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 years ended December 31, 2011, 2010, and 2009 excludes any effect from 3,408,905 options and 636,613 warrants, and 3,320,590 options and 649,000 warrants, 3,602,000 options and 12,264,345 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.

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. The adoption of these provisions did not have a material impact on BioTime's consolidated financial statements.

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.

In June 2011, the FASB issued ASU No. 2011-05, Comprehensive Income (ASC Topic 220): Presentation of Comprehensive Income, ("ASU 2011-05") which amends current comprehensive income guidance. This accounting

update eliminates the option to present the components of other comprehensive income as part of the statement of shareholders' equity. Instead, BioTime must report comprehensive income in either a single continuous statement of comprehensive income which contains two sections, net income and other comprehensive income, or in two separate but consecutive statements. ASU 2011-05 became effective for public companies during the interim and annual periods beginning after December 15, 2011 with early adoption permitted. BioTime does not believe that the adoption of ASU 2011-05 will have a material impact on its consolidated results of operation and financial condition.

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3. Inventory

At December 31, 2011, BioTime, held $37,096 of inventory of finished products on-site at its corporate headquarters in Alameda, California. At that same date $14,078 of inventory of finished products was held by a third party on consignment. At December 31, 2010, ReCyte Therapeutics, in which BioTime owns approximately a 95% interest, held $29,600 of inventory of finished products at its corporate headquarters and $15,870 of inventory of finished products was held by a third party on consignment. The inventory held by ReCyte Therapeutics was transferred to BioTime 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

At December 31, 2011 and December 31, 2010, equipment, furniture and fixtures were comprised of the following:

	2011	2010
Equipment, furniture and fixtures	$ 1,900,090	$ 876,708
Accumulated depreciation	(552,311)	(165,942)
Equipment net of accumulated depreciation	$ 1,347,779	$ 710,766

Depreciation expense amounted to $373,349 and $138,659 for the years ended December 31, 2011 and 2010, respectively. The difference between the depreciation expense recognized in the consolidated statement of operations and the increase in accumulated depreciation of $386,369 per the consolidated balance sheet is entirely attributed to foreign currency rates.

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5. Intangible assets

At December 31, 2011 and December 31, 2010, intangible assets and accumulated intangible assets were comprised of the following:

	2011	2010
Intangible assets	$ 21,429,488	$ 16,208,116
Accumulated amortization	(2,809,972)	(821,211)
Intangible assets, net	$ 18,619,516	$ 15,386,905

BioTime amortizes its intangible assets over an estimated period of 10 years on a straight line basis. BioTime recognized $1,991,200 in amortization expense of intangible assets during the year ended December 31, 2011. The difference between the amortization expense recognized in the consolidated statement of operations and the increase in accumulated amortization of $1,988,761 per the consolidated balance sheet is entirely attributed to foreign currency rates. In 2010, BioTime had accounted for intangible assets acquired upon acquisition of ESI and investment in Cell Cure Neurosciences in May and October of 2010, respectively at their respective functional currencies. In 2011, however BioTime modified its procedure to account for these intangible assets and related amortization expense in the functional currency of the parent - U.S. dollar (“USD”). Because BioTime has modified its procedure for accounting for intangible assets for the year ended December 31, 2011, this has resulted in differences in BioTime’s research and development expenses, total expenses, net loss, foreign currency translation gain/(loss), and comprehensive loss for the year ended December 31, 2011 as compared to the year ended December 31, 2010. The difference totaling $44,529 was recorded against research and development expenses in 2011. BioTime does not believe that the effect of this difference in its financial statements for the year ended December 31, 2011 and 2010 have a material impact on those financial statements. See Note 11, 12, 13, and 14.

Amortization of intangible assets for periods subsequent to December 31, 2011 is as follows:

Year Ended December 31,	Amortization Expense
2012	$ 2,142,949
2013	2,142,949
2014	2,142,949
2015	2,142,949
2016	2,142,949
Thereafter	7,904,771
Total	$ 18,619,516

6. Accounts Payable and Accrued Liabilities

At December 31, 2011 and 2010, accounts payable and accrued liabilities consist of the following:

	December 31, 2011	2010
Accounts payable	$ 1,118,112	$ 1,036,145
Accrued bonuses	583,620	367,822
Other accrued liabilities	979,379	525,907
	$ 2,681,111	$ 1,929,874

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7. 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 ReCyte Therapeutics 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 extended to March 2, 2010. The licensing fees less the amortized portion were included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2011 and 2010.

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 less the amortized portion is included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2011 and 2010.

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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 less the amortized portion is included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2011 and 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 less the amortized portion is included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2011 and 2010.

On February 29, 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 less the amortized portion is included in deferred license fees in BioTime's consolidated balance sheet as of December 31, 2011 and 2010.

Through BioTime's acquisition of the assets of Cell Targeting, Inc. during March 2011, BioTime 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 BioTime's own proprietary technology or that of a third party. BioTime assigned the SBMRI license to OncoCyte during July 2011. OncoCyte will pay SBMRI a royalty of 4% on the sale of pharmaceutical products, and 10% on the sale of any research-use products that OncoCyte develops using or incorporating the licensed technology; and 20% of any payments OncoCyte receives 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 OncoCyte's royalty payment obligations for the applicable year. OncoCyte will reimburse SBMRI for 25% of the costs incurred in filing, prosecuting, and maintaining patent protection, subject to OncoCyte's approval of the costs. OncoCyte incurred no royalty expenses during the year. See Note 13.

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Cell Cure Neurosciences has entered into an Amended and Restated Research and License Agreement with Hadasit Medical Research Services and Development, Ltd. ("Hadasit") under which Cell Cure Neurosciences 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 Pharmaceutical Industries Ltd. ("Teva") exercises its option to license OpRegen™ or OpRegen-Plus™ under the terms of a Research and Exclusive License Option Agreement (the "Teva License Option Agreement"), Cell Cure Neurosciences will pay Hadasit 30% of all payments made by Teva to Cell Cure Neurosciences, 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 Neurosciences 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.

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.

Through the merger of Glycosan into OrthoCyte during March 2011, BioTime acquired a license from the University of Utah to use certain patents in the production and sale of certain hydrogel products. Under the License Agreement, BioTime will pay a 3% royalty on sales of products and services performed that utilize the licensed patents. Commencing in 2013, BioTime will be obligated to pay minimum royalties to the extent that actual royalties on products sales and services utilizing the patents are less than the minimum royalty amount. The minimum royalty amounts are $15,000 in 2013, $22,500 in 2014, and $30,000 each year thereafter during the term of the License Agreement. BioTime shall also pay the University of Utah 30% of any sublicense fees or royalties received under any sublicense of the licensed patents. See Note 14.

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BioTime will pay the University of Utah $5,000 upon the issuance of each of the first five licensed patents issued in the U.S., subject to reduction to $2,500 for any patent that the University has licensed to two or more other licensees for different uses. BioTime will also pay a $225,000 milestone fee within six months after the first sale of a "tissue engineered product" that utilizes a licensed patent. A tissue engineered product is defined as living human tissues or cells on a polymer platform, created at a place other than the point-of-care facility, for transplantation into a human patient.

On August 23, 2011, BioTime entered into a License Agreement with Cornell University for the worldwide development and commercialization of technology for the differentiation of human embryonic stem cells into vascular endothelial cells.

Cornell will be entitled to receive a nominal initial license fee and nominal annual license maintenance fees. The obligation to pay annual license maintenance fees will end when the first human therapeutic products developed under the license is sold. BioTime will pay Cornell a milestone payment upon the achievement of a research product sale milestone amount, and will make milestone payments upon the attainment of certain FDA approval milestones for therapeutic products developed under the license, including (i) the first Phase II clinical trial dosing of a human therapeutic product, (ii) the first Phase III clinical trial dosing of a human therapeutic product; (iii) FDA approval of the first human therapeutic product for age-related vascular disease; and (iv) FDA approval of the first human therapeutic product for cancer.

BioTime will pay Cornell royalties on the sale of products and services using the license, and will share with Cornell a portion of any cash payments, other than royalties, that BioTime receives for the grant of sublicenses to non-affiliates. The potential royalty percentage rates to be paid to Cornell will be in the low to mid-single digit range depending on the product. BioTime will also reimburse Cornell for costs related to the patent applications and any patents that may issue that are covered by the license.

In conjunction with the License Agreement, BioTime also entered into a Sponsored Research Agreement under which scientists at Weill Cornell Medical College will engage in certain research for BioTime over a three year period beginning August 2011.

As of December 31, 2011, amortization of deferred license fees was as follows:

Year Ended December 31,	Deferred License Fees
2012	$ 109,500
2013	109,500
2014	109,500
2015	109,500
2016	109,500
Thereafter	210,833
Total	$ 758,333

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8. 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,
2011	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 90,000	$ -	$ -	$ (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.

9. Equity

BioTime, as part of rights offerings and other agreements, has issued warrants to purchase its common shares. Activity related to warrants in 2011, 2010, and 2009 is presented in the table below:

	Number of Warrants	Per share exercise price	Weighted Average Exercise Price
Outstanding, January 1, 2009	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
Exercised in 2010	(24,988)	2.00	2.00
Outstanding, December 31, 2010	649,000	.68 - 10.00	6.42

Granted in 2011	206,613	10.00	10.00
Exercised in 2011	(219,000)	.68 - 3.00	1.94
Outstanding, December 31, 2011	636,613	$ 3.00 - 10.00	$ 9.13

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At December 31, 2011, 636,613 warrants to purchase common shares with a weighted average exercise price of $9.13 and a weighted average remaining contractual life of 1.68 years were outstanding.

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, 2010, and 2011 subsidiary option plans for subsidiaries (see Note 10) for the years ended December 31, 2011 and 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 in 2010	12,001,600	-		-
Granted in 2010	(4,308,240)	4,308,240		0.74
Forfeited/Exercised in 2010	-	-		-
December 31, 2010	7,703,060	4,312,640	$	0.74
Added upon adoption of option plan in 2011	8,000,000	-		-
Granted in 2011	(4,685,000)	4,685,000		0.36
Forfeited/Exercised in 2011	200,000	(200,000)		0.05
December 31, 2011	11,218,060	8,797,640	$	0.56

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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, 2011 and 2010, BioTime has no issued and outstanding preferred shares.

Common shares

BioTime is authorized to issue 75,000,000 common shares with no par value. As of December 31, 2011 and 2010, BioTime has issued and outstanding 50,321,962 and 47,777,701 common shares, respectively.

Significant common share transactions during the year ended December 31, 2011 are as follows:

BioTime received total cash of $223,914 and $425,000 for the exercise of 450,660 options and 219,000 warrants, respectively. Average cash receipts were $0.50 for options and $1.94 for warrants.

BioTime issued 261,959 common shares as part of its consideration for the assets acquired from CTI.

BioTime issued 332,903 common shares and 206,613 warrants as consideration for acquisition of Glycosan.

BioTime retired 6,435 common shares as payment for the exercise of employee options.

BioTime issued 1,286,174 common shares in connection with its investment in OncoCyte. This increased its equity ownership interest in OncoCyte to approximately 75.3%. These shares are presented as treasury stock on the consolidated balance sheet.

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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 consideration for the acquisition of ESI.

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

BioTime retired 40,125 common shares received 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.

10. Stock Option Plans

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, 2011, BioTime had granted to certain employees, consultants, and directors, options to purchase a total of 3,408,905 common shares at exercise prices ranging from $0.5 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 1,032,030 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, 2011, 2010, and 2009, which was allocated as follows:

	Year Ended December 31,		
	2011	2010	2009
All stock-based compensation expense:			
Research and Development	$ 885,581	$ 473,893	$ 150,899
General and Administrative	916,832	619,838	337,665
Stock appreciation rights/(reversal)	-	-	(483,688)
All stock-based compensation expense included in expenses	$ 1,802,413	$ 1,093,731	$ 4,876

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, 2011, total unrecognized compensation costs related to unvested stock options was $3,567,312, which is expected to be recognized as expense over a weighted average period of approximately 4.9 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.

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The weighted-average estimated fair value of stock options granted during the years ended December 31, 2011 and 2010 was $4.89 and $6.75 per share, respectively, using the Black-Scholes Merton model with the following weighted-average assumptions:

	Year Ended December 31,			
	2011		2010	
Expected life (in years)	6.46		5.92	
Risk-free interest rates	1.9	%	2.05	%
Volatility	106.5	%	112.85	%
Dividend yield	0	%	0	%

General Option Information

A summary of all option activity under the 1992 Plan and 2002 Plan for the years ended December 31, 2011, 2010, and 2009 is as follows:

	Options Available for Grant	Number of Options Outstanding	Weighted Average Exercise Price
January 1, 2009	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
Granted	(560,443)	560,443	4.89
Exercised 1	-	(450,660)	0.50
Forfeited/expired	21,468	(21,468)	5.60
December 31, 2011	1,303,193	3,408,905	$ 2.18

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, 2011 is as follows:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Avg. Remaining Contractual Life (years)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
$0.50	1,970,400	2.78	0.50	1,637,067	0.50
0.74	20,000	2.42	0.74	20,000	0.74
2.30-8.58	1,418,505	4.99	4.53	718,983	4.14
$0.50-$8.58	3,408,905	3.70	$ 2.18	2,376,050	$ 1.60

During 2011, BioTime's subsidiary, LifeMap adopted a stock option plan that has substantially the same operative provisions as the BioTime 2002 Stock Option Plan. The LifeMap stock option plan authorizes the sale of up to 8,000,000 shares of its common stock through the exercise of stock options or under restricted stock purchase agreements.

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 each 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 (years)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
$0.003-$0.10	7,209,800	7.39	$ 0.27	1,976,075	$ 0.24
1.00	530,000	6.34	1.00	4,167	1.00
2.05	1,050,000	8.89	2.05	252,083	2.05
27.00-42.02	7,840	8.80	37.35	2,613	32.02
$0.003-$42.02	8,797,640	7.51	$ 0.56	2,234,938	$ 0.48

No other options were granted under the other subsidiary Stock Option Plans as of December 31, 2011.

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11. 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 Neurosciences	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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12. 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 and -HBL- Hadasit Bio-Holdings, Ltd (“HBL”) concurrently completed their acquisition of Cell Cure Neurosciences 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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13. Cell Targeting, Inc. Asset Purchase

On January 28, 2011, BioTime acquired substantially all of the assets of Cell Targeting, Inc. ("CTI"), a company that was engaged in research in regenerative medicine. The assets acquired consist primarily of patents, patent applications, and licenses to use certain patents. BioTime issued 261,959 of common shares and paid CTI $250,000 in cash to acquire the assets. The assets will be used by OncoCyte, which is developing cellular therapeutics for the treatment of cancer using vascular progenitor cells engineered to destroy malignant tumors.

The asset purchase is being accounted for as a business combination under the acquisition method of accounting. This means that even though BioTime did not directly assume and will not directly pay CTI's debts or other liabilities, for financial accounting purposes CTI's financial statements as of January 28, 2011, the date of the acquisition, are being consolidated with those of BioTime. In accordance with ASC 805, the total purchase consideration is allocated to the net tangible and identifiable intangible assets acquired and the CTI liabilities outstanding based on the estimated fair value of the assets and the amount of the liabilities as of January 28, 2011. BioTime amortizes intangible assets over their useful lives, which BioTime estimates to be 10 years.

The total purchase price of $2,550,000 is being allocated as indicated as follows:

Components of the purchase price:	
BioTime common shares	$ 2,300,000
Cash	250,000
Total purchase price	$ 2,550,000
Preliminary allocation of purchase price:	
Assets acquired and liabilities assumed:	
Cash	$ 3,150
Other current assets	2,443
Due from sellers	593,353
Intangible assets	2,419,287
Current liabilities	(468,233)
Net assets acquired	$ 2,550,000

The fair value of the shares issued was $8.78, the average closing price per share of BioTime common shares as reported on the NYSE Amex for the twenty (20) trading days immediately preceding the third trading day prior to the closing date, January 28, 2011.

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14. Merger with Glycosan BioSystems, Inc.

On March 21, 2011, BioTime completed the acquisition of Glycosan BioSystems, Inc. (“Glycosan”) through a merger of Glycosan into OrthoCyte. Through the merger, OrthoCyte acquired all of Glycosan's assets, including manufacturing equipment, inventory, and technology licenses, and assumed Glycosan's obligations, which at March 18, 2011 totaled approximately $252,000 and primarily consisted of trade payables, accrued salaries, legal fees, and repayment of amounts advanced to Glycosan. BioTime issued 332,903 common shares and 206,613 warrants to purchase BioTime common shares in connection with the merger.

The merger is being accounted for under the acquisition method of accounting. In accordance with 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 March 21, 2011. BioTime amortizes intangibles over their useful lives, which BioTime estimates to be 10 years. In accordance with ASC 805, BioTime does not amortize goodwill. The purchase price was allocated using the information currently available, and may be adjusted after obtaining more information regarding, among other things, asset valuations, liabilities assumed, and revisions of preliminary estimates.

The total purchase price for the merger of $3,554,879 is being allocated as indicated:

Components of the purchase price:	
BioTime common shares	$2,600,000
BioTime warrants	954,879
Total purchase price	$3,554,879
Allocation of purchase price:	
Assets acquired and liabilities assumed:	
Cash	$5,908
Other current assets	64,520
Property, plant and equipment, net	81,183
Intangible assets	3,592,039
Current liabilities	(188,771)
Net assets acquired	$3,554,879

The fair value of the shares issued was $7.81, the average closing price of BioTime common shares as reported on the NYSE Amex for the 10 trading days immediately preceding February 11, 2011, the date of the Merger Agreement. 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 three years, which is equal to the contractual life of the warrants; risk-free rate of 1.12%; no expected dividend yield; 109.01% expected volatility; a stock price of $7.56; and an exercise price of $10.

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15. Commitments and Contingencies

On August 17, 2011, BioTime amended its lease agreement dated October 22, 2010 for its principal office and laboratory facilities located at 1301 Harbor Bay Parkway, Alameda, California to accommodate expanded space. The amended term commenced August 1, 2011 and expires on February 29, 2016 as per the original lease. 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 17,000 square feet to approximately 19,000 square feet. Base rent will be $28,142 per month and will increase by three percent each year. 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.

On April 4, 2011, LifeMap entered into a new lease for office space, and on October 3, 2011 entered into a second new lease for additional office space in Tel Aviv, Israel. The total leased area is approximately 1,500 square feet. Total base rent under the two leases will be approximately ILS 15,000 ($4,200) per month. Both leases expire on April 30, 2012. In addition to base rent, LifeMap 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.

On January 12, 2011, ESI renewed its annual lease for office space of 590 square feet, and on October 1, 2011 renewed its annual lease for laboratory space of 1,290 square feet in the Biopolis, a research and development park in Singapore devoted to the biomedical sciences. ESI paid approximately $6,700 as base monthly rent for the laboratory space and $1,600 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. The lease expires in 2014.

Rent expenses totaled $1,058,170, $656,883, and $682,982 for the years ended December 31, 2011, 2010, and 2009, respectively. Remaining minimum annual lease payments under the various operating leases for the year ending after December 31, 2011 are as follows:

Year Ending December 31,	Minimum lease payments
2012	$ 586,010
2013	492,605
2014	427,212
2015	381,044
2016	32,625
Thereafter	-

16. Income Taxes

The primary components of the net deferred tax assets at December 31, 2011 and 2010 were as follows:

	2011	2010

Deferred tax assets:		
Net operating loss carryforwards	$ 32,580,000	$ 27,435,000
Research & development and other credits	1,764,000	1,915,000
Other, net	596,000	418,000
Total	34,940,000	29,768,000
Valuation allowance	(34,940,000)	(29,768,000)
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,		
	2011	2010	2009
Computed tax benefit at federal statutory rate	(34%)	(34%)	(34%)
Permanent differences	(1%)	8%	0%
Losses for which no benefit has been recognized	41%	32%	41%
State tax benefit, net of effect on federal income taxes	(6%)	(6%)	(6%)
Research and development and other credits	-	-	(1%)
	0%	0%	0%

As of December 31, 2011, BioTime has net operating loss carryforwards of approximately $67,000,000 for federal and $42,000,000 for state tax purposes, which expire through 2031. In addition, BioTime has tax credit carryforwards for federal and state tax purposes of $892,000 and $872,000, respectively, which expire through 2031. As of December 31, 2011, BioTime's subsidiaries have foreign net operating loss carryforwards of approximately $42,000,000 which carry forward indefinitely.

No tax benefit has been recorded through December 31, 2011 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.

BioTime files an income tax return in the U.S. federal jurisdiction, and may file income tax returns in various U.S. states and foreign jurisdictions. Generally, BioTime is no longer subject to income tax examinations by major taxing authorities for years before 2008.

BioTime may be subject to potential examination by U.S. federal, U.S. states or foreign jurisdiction authorities in the areas of income taxes. These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with U.S. federal, U.S. state and foreign tax laws. BioTime's management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

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17. 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, diagnostic products for the early detection of cancer, and hydrogel products that may be used in surgery, 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.

18. 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,		
	2011	2010	2009
Domestic	$ 2,980,413	$ 3,283,493	$ 1,549,066
Asia	1,374,349	396,807	376,102
Total revenues	$ 4,354,762	$ 3,680,300	$ 1,925,168

Major Sources of Revenues

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

All of BioTime's royalty revenues were generated through sales of Hextend® by Hospira in the U.S. 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, 2011 and 2010, BioTime had received payments from CIRM totaling $1,570,663 and $1,575,523, respectively. BioTime recognized $1,570,663 and $1,577,142 as revenues as of December 31, 2011 and 2010, respectively.

During 2011, BioTime also received and recognized as revenues $27,917 of a $335,900 grant awarded by the NIH. The grant started on September 30, 2011 and ends on September 29, 2012.

During 2011, grant income also included awards from other sources in the amount of $94,933 was recognized through OncoCyte and OrthoCyte.

During 2011, grant income from the Office of the Chief Scientist of the Ministry of Industry, Trade, and Labor of Israel ("OCS") in the amount of $1,073,668 was also recognized through our ownership interest in Cell Cure Neurosciences. No grant income from OCS was recognized in 2010.

During 2010, BioTime 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. BioTime received the remaining

award amount of $256,714 in February 2011.

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The following table shows the relative portions of BioTime's Hextend® and PentaLyte® royalty and license fee revenues paid by Hospira, CJ, Summit and the Betalogics division of Johnson & Johnson that were recognized during the years ended December 31, 2011, 2010, and 2009, and the OCS, CIRM and QTDP grant payments recognized during the same periods:

Sources of Revenues	% of Total Revenues for Year ended December 31,		
	2011	2010	2009
Hospira	14.5%	22.8%	51.8%
CJ	3.6%	7.0%	12.0%
Summit	3.3%	3.9%	7.6%
CIRM	36.1%	42.8%	27.7%
QTDP	-	19.9%	-
OCS	23.4%	-	-
Betalogics	9.0%	-	-
Others	10.1%	3.6%	0.9%

19. Selected Quarterly Financial Information (UNAUDITED)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Year Ended December 31, 2011				
Revenues	$ 824,629	$ 755,553	$ 1,143,054	$ 1,631,526
Operating expenses	4,850,516	5,736,547	5,375,419	7,078,711
Loss from operations	(4,027,887)	(4,980,994)	(4,232,365)	(5,447,185)
Net loss attributable to BioTime, Inc.	(3,362,132)	(4,277,928)	(3,737,626)	(5,137,814)
Basic and diluted net loss per share	(0.07)	(0.06)	(0.08)	(0.10)
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)

BioTime did not amortize deferred license fees until the fourth quarter of 2010. Because BioTime 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 effect 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 7 for an explanation of the effect on BioTime's financial statements for the years ended December 31, 2010, 2009, and 2008.

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20. Pro Forma Financial Information for Fiscal Years Ended December 31, 2011 and 2010 (UNAUDITED)

The following unaudited pro forma information gives effect to the acquisitions of ESI, Cell Cure Neurosciences, CTI assets and merger with Glycosan, as if the transactions took place on January 1, 2010. 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,	
	2011	2010
Revenues	$ 4,406,075	$ 4,840,333
(Loss) available to common shareholders	$ (16,560,381)	$ (14,082,702)
(Loss) per common share – basic	$ (0.35)	$ (0.34)
(Loss) per common share – diluted	$ (0.35)	$ (0.34)

21. Subsequent Events

In January 2012, BioTime entered into a License Agreement and a Sponsored Research Agreement with The Wistar Institute in Philadelphia, PA through which it obtained an exclusive license to use technology related to a gene called SP100. The Wistar Institute will be entitled to receive an initial license fee, annual license maintenance fees, royalties based on the sale of any products BioTime or its subsidiaries may develop and sell using the licensed technology, sublicense fees if it sublicenses the technology to third parties, and a milestone payment upon the attainment of the initial approval of the FDA or other foreign regulatory agency for the marketing of the first product that utilizes the licensed technology. BioTime also agreed to fund research at The Wistar Institute to advance the technology, and we will receive certain rights to negotiate additional licenses for any technologies invented as a result of the research.

Subsequent events – These consolidated financial statements were approved by management and the Board of Directors, and were issued on March 14 2012. Subsequent events have been evaluated through that date.

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 Annual Report on Form 10-K. 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.

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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.

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 subsidiaries.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2011. 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, 2011. The attestation is included in the accounting firm's report on our audited consolidated financial statements.

Item 9B. Other Information

Not applicable

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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 2012 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 2012 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 2012 Annual Meeting of Shareholders, and is incorporated herein by reference.

Item 11. Executive Compensation

Information on compensation of our executive officers is reported under the caption “Executive Compensation” in our Proxy Statement for our 2012 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 2012 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 2012 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 2012 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.

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. 22
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
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

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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. 22
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). 22
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. 22
10.35	Additional Research Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. 22
10.36	Exclusive License Agreement, dated November 20, 2007, between Cell Targeting, Inc. and Burnham Institute for Medical Research. 22
10.37	Stock Purchase Agreement, dated December 29, 2010, between Embryome Sciences, Inc. and Life Extension Foundation. 22
10.38	Stock Purchase Agreement, dated December 30, 2010, between Embryome Sciences, Inc. and Geothermal Coring, S.A. 22
10.39	Co-Exclusive Supply Agreement, Dated December 8, 2010, between BioTime Asia Limited and Shanghai Genext Medical Technology Co. Ltd. 22
10.40	OncoCyte Corporation 2010 Stock Option Plan; Form of OncoCyte Corporation Stock Option Agreement. 22
10.41	OrthoCyte Corporation 2010 Stock Option Plan; Form of OrthoCyte Corporation Stock Option Agreement. 22
10.42	BioTime Asia, Limited 2010 Stock Option Plan; Form of BioTime Asia Limited Stock Option Agreement. 22
10.43	ReCyte Therapeutics, Inc. 2010 Stock Option Plan; Form of ReCyte Therapeutics, Inc. Stock Option Agreement. 22
10.44	Lease, dated October 28, 2010, between SKS Harbor Bay Associates, LLC and BioTime, Inc. 22

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. 22
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. 22
10.47	Employment Agreement, dated June 28, 2011, between Biotime, Inc., OrthoCyte Corporation, and William P. Tew. 23
10.48	License Agreement between BioTime, Inc. and Cornell University (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 24
10.49	Employment Agreement, dated October 3, 2011, between BioTime, Inc. and Peter S. Garcia. 24
10.50	License Option Agreement, dated December 15, 2011 between BioTime, Inc. and USCN Life Sciences, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment) *
10.51	LifeMap, Inc. 2011 Stock Option Plan; Form of LifeMap, Inc. Stock Option Agreement*

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21.1	List of Subsidiaries.*
23.1	Consent of Rothstein, Kass & Company, P.C.*
31	Rule 13a-14(a)/15d-14(a) Certification. *
32	Section 1350 Certification.*
101	Interactive Data File. *
101.INS	XBRL Instance Document. *
101.SCH	XBRL Taxonomy Extension Schema. *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase. *
101.LAB	XBRL Taxonomy Extension Label Linkbase. *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase. *

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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.

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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.

22 Incorporated by reference to BioTime's Form 8-K 10-K for the year ended December 31, 2010.

23 Incorporated by reference to BioTime's Form 10-Q for the quarter ended June 30, 2011.

24	Incorporated by reference to BioTime's Form 10-Q for the quarter ended September 30, 2011.
*	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 14th day of March, 2012.

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 14, 2012
/s/Peter S. Garcia PETER S. GARCIA	Chief Financial Officer (Principal Financial and Accounting Officer)	March 14, 2012
/s/ Neal C. Bradsher NEAL C. BRADSHER	Director	March 14, 2012
/s/ Arnold I. Burns ARNOLD I. BURNS	Director	March 14, 2012
/s/ Abraham E. Cohen ABRAHAM E. COHEN	Director	March 14, 2012
ALFRED D. KINGSLEY	Director	March __, 2012
/s/ Pedro Lichtinger PEDRO LICHTINGER	Director	March 14, 2012
/s/Judith Segall JUDITH SEGALL	Director	March 14, 2012
/s/Andrew von Eschenbach ANDREW VON ESCHENBACH	Director	March 14, 2012

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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. 22
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
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. 22
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).22
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. 22
10.35	Additional Research Agreement, dated October 7, 2010, between Hadasit Medical Research Services and Development Ltd. and Cell Cure Neurosciences Ltd. 22
10.36	Exclusive License Agreement, dated November 20, 2007, between Cell Targeting, Inc. and Burnham Institute for Medical Research. 22
10.37	Stock Purchase Agreement, dated December 29, 2010, between Embryome Sciences, Inc. and Life Extension Foundation. 22
10.38	Stock Purchase Agreement, dated December 30, 2010, between Embryome Sciences, Inc. and Geothermal Coring, S.A. 22
10.39	Co-Exclusive Supply Agreement, dated December 8, 2010, between BioTime Asia Limited and Shanghai Genext Medical Technology Co. Ltd. 22
10.40	OncoCyte Corporation 2010 Stock Option Plan; Form of OncoCyte Corporation Stock Option Agreement. 22
10.41	OrthoCyte Corporation 2010 Stock Option Plan; Form of OrthoCyte Corporation Stock Option Agreement. 22
10.42	BioTime Asia, Limited 2010 Stock Option Plan; Form of BioTime Asia Limited Stock Option Agreement. 22

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10.43	ReCyte Therapeutics, Inc. 2010 Stock Option Plan; Form of ReCyte Therapeutics, Inc. Stock Option Agreement. 22
10.44	Lease, dated October 28, 2010, between SKS Harbor Bay Associates, LLC and BioTime, Inc. 22
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. 22
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. 22
10.47	Employment Agreement, dated June 28, 2011, between Biotime, Inc., OrthoCyte Corporation, and William P. Tew. 23
10.48	License Agreement between BioTime, Inc. and Cornell University (Portions of this exhibit have been omitted pursuant to a request for confidential treatment). 24
10.49	Employment Agreement, dated October 3, 2011, between BioTime, Inc. and Peter S. Garcia. 24
10.50	License Option Agreement, dated December 15, 2011 between BioTime, Inc. and USCN Life Sciences, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment) *
10.51	LifeMap, Inc. 2011 Stock Option Plan; Form of LifeMap, Inc. Stock Option Agreement*
21.1	List of Subsidiaries.*
23.1	Consent of Rothstein, Kass & Company, P.C.*
31	Rule 13a-14(a)/15d-14(a) Certification. *
32	Section 1350 Certification.*
101	Interactive Data File. *
101.INS	XBRL Instance Document. *
101.SCH	XBRL Taxonomy Extension Schema. *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase. *
101.LAB	XBRL Taxonomy Extension Label Linkbase. *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase. *

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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.

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