

BIOTIME INC  
Form S-3/A  
July 21, 2010

As filed with the Securities and Exchange Commission on July 21, 2010

Registration No. 333-167822

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SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

AMENDMENT No. 1  
to  
FORM S-3

REGISTRATION STATEMENT UNDER  
THE SECURITIES ACT OF 1933

BIOTIME, INC.  
(Exact name of Registrant as specified in charter)

California  
(State or other jurisdiction of incorporation or  
organization)

94-3127919  
(I.R.S. Employer Identification Number)

1301 Harbor Bay Parkway, Suite 100  
Alameda, California 94502  
(510) 521-3390  
(Address, including zip code, and telephone number,  
including area code, of Registrant's principal executive  
offices)

Judith Segall, Vice-President and Secretary  
BioTime, Inc.  
1301 Harbor Bay Parkway, Suite 100  
Alameda, California 94502  
(510) 521-3390  
(Name, address, including zip code, and telephone number,  
including area code, of agent for service)

Copies of all communications, including all communications sent to the agent for service, should be sent to:

\_\_\_\_\_  
RICHARD S. SOROKO, ESQ.  
Thompson, Welch, Soroko & Gilbert LLP  
201 Tamal Vista Blvd.  
Corte Madera, California 94925  
Tel. (415) 927-5200  
\_\_\_\_\_

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to

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Rule 415 of the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. "

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934. (Check one):

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

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

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PROSPECTUS

BIOTIME, INC.

300,000 Warrants  
1,383,400 Common Shares  
300,000 Common Shares Issuable Upon Exercise of Warrants

This prospectus relates to 1,383,400 common shares and 300,000 common share purchase warrants, and the common shares that may be issued upon the exercise of the warrants, held by the selling security holders named in this prospectus who acquired the common shares and warrants from us in connection with our acquisition of ES Cell International Pte Ltd. We will receive the exercise price of the warrants when the warrants are exercised. However, all of the net proceeds from the sale of the common shares and warrants, and any common shares issued upon the exercise of the warrants, by the selling security holders will belong to the selling security holders and not to us.

The selling security holders may hold their common shares and warrants, and any common shares issued upon the exercise of their warrants, for investment purposes, or they may sell their common shares, including any common shares acquired through the exercise their warrants, from time to time on the NYSE Amex at prevailing market prices, or at prices related to the prevailing market price, or in privately negotiated transactions. The selling security holders may also sell some or all of their warrants in privately negotiated transactions.

The common shares are quoted on the NYSE Amex under the symbol BTIM. The closing price of the common shares on the NYSE Amex on July 15, 2010 was \$4.90.

These securities involve a high degree of risk and should be purchased only by persons who can afford the loss of their entire investment. See "Risk Factors" on page 9.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is July \_\_, 2010

Table of Contents

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Table of Contents

PROSPECTUS SUMMARY

The following summary explains only some of the information in this prospectus. More detailed information and financial statements appear elsewhere in this prospectus. Statements contained in this prospectus 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 “Risk Factors.”

BioTime, Inc.

Overview

We are a biotechnology company engaged in two areas of biomedical research and product development. Our first business segment is 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. Hypovolemia is a condition caused by low blood volume, often from blood loss during surgery or from injury. Hextend maintains circulatory system fluid volume and blood pressure and keeps vital organs perfused during surgery and trauma care.

Our second business segment is regenerative medicine. Regenerative medicine refers to therapies based on human embryonic stem (“hES”) cell and induced pluripotent stem (“iPS”) cell technology designed to rebuild cell and tissue function lost due to degenerative disease or injury. These novel stem 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.

The initial focus of our efforts in the regenerative medicine field has been the development and sale of advanced human stem cell products and technology that can be used by researchers at universities and other institutions, by companies in the bioscience and biopharmaceutical industries, and by other companies that provide research products to companies in those industries. Research-only products generally can be marketed without approval by regulatory agencies such as the United States Food and Drug Administration (“FDA”), and are therefore relatively near-term business opportunities when compared to therapeutic products. These products are currently being marketed through our subsidiaries, Embryome Sciences, Inc., BioTime Asia, Limited, and our recently acquired subsidiary ES Cell International Pte. Ltd.

We have also initiated development programs for human therapeutic applications of hES and iPS cells, focused primarily on the treatment of cancer, ophthalmologic, skin, musculo-skeletal system, and hematologic diseases. Cancer research and development programs will be conducted in the United States by our subsidiary OncoCyte Corporation. Our newly formed subsidiary OrthoCyte Corporation will work to develop therapeutic applications of stem cells to treat orthopedic diseases and injuries. BioTime Asia, Limited, a subsidiary formed as a Hong Kong corporation, will conduct research and development programs in the People’s Republic of China for the treatment of cancer and other diseases.

## Table of Contents

On May 3, 2010, we acquired ES Cell International Pte Ltd, a Singapore private limited company (“ESI”). Established in 2000, ESI has been at the forefront of advances in hES technology, being one of the earliest distributors of hES cell lines to the research community. More recently, ESI has produced an additional six new clinical-grade human embryonic stem cell lines that were derived following principles of good manufacturing practice (“GMP”) and currently offers them for potential use in therapeutic product development. ESI holds over 49% of the shares of Cell Cure Neurosciences Ltd. (“Cell Cure”), 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.

We acquired ESI by acquiring all of the ESI preferred shares and ordinary shares held by ESI shareholders, as well as secured convertible promissory notes, in the amount of approximately \$35,000,000 of principal and accrued interest, held by one of the ESI shareholders. We issued 1,383,400 BioTime common shares, and warrants to purchase an additional 300,000 BioTime common shares at an exercise price of \$10 per share, to acquire all of the ESI shares and promissory notes from the ESI investors. Upon completion of the acquisition of ESI, we became the owner of the ESI promissory notes, so that the notes have become an inter-company obligation of ESI payable to us. Therefore, we acquired ESI essentially free of indebtedness to third parties, and incurred no debt obligations of our own as a result of the acquisition.

We have filed an amended Current Report on Form 8-K that includes audited financial statements of ESI, and pro forma financial information showing the effect of our acquisition of ESI as if the acquisition took place on December 31, 2009. The pro forma effect of the acquisition of ESI on BioTime’s balance sheet and statement of operations, including the elimination of the \$35,000,000 of ESI notes as an inter-company obligation, is reflected in the pro forma financial statements included as an exhibit to our amended Form 8-K.

During 2009, we were awarded a \$4,721,706 grant from the California Institute of Regenerative Medicine (“CIRM”) for a stem cell research project related to our ACTCellerate™ embryonic stem cell technology that will address the need for industrial scale production of purified therapeutic cells for human therapeutic uses.

Human embryonic stem cell technology is approximately 10 years old and evolving rapidly. As a result, we cannot accurately forecast the amount of revenue that the new products we offer might generate.

Our principal office is located at 1301 Harbor Bay Parkway, Suite 100, Alameda, California 94502. Our telephone number is (510) 521-3390.

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

### Stem Cells and Products for Regenerative Medicine Research

We are developing products and technology for use in the emerging field of regenerative medicine. Regenerative medicine refers to therapies based on hES cell and iPS cell technology. Because these cells have the ability to transform into all of the cells of the human body (a property called pluripotency), they may provide a means of producing a host of new products of interest to medical researchers. For example, it may be possible to use hES and iPS cells to develop new cell lines designed to rebuild cell and tissue function lost due to degenerative disease or injury, and new cell lines for basic research and discovery of new drugs. Since embryonic stem cells can now be derived in a noncontroversial manner, including through the use of iPS technology, they are increasingly likely to be utilized in a wide array of future research programs in the attempt to restore the function of organs and tissues damaged by degenerative diseases such as heart failure, stroke, Parkinson’s disease, macular degeneration, diabetes,

arthritis, and other orthopedic diseases and injuries.

On March 16, 2010, we announced the publication of a scientific paper titled “Spontaneous Reversal of Developmental Aging in Normal Human Cells Following Transcriptional Reprogramming” which was published in the peer-reviewed journal *Regenerative Medicine*. The paper explains the use of iPS technology to reverse the developmental aging of normal human cells. Using precise genetic modifications, normal human cells were induced to reverse both the “clock” of differentiation (the process by which an embryonic stem cell becomes the many specialized differentiated cell types of the body), and the “clock” of cellular aging (telomere length). As a result, aged differentiated cells became young stem cells capable of regeneration. These findings may have significant implications for the development of new classes of cell-based therapies targeting age-related degenerative disease.

Table of Contents

On April 29, 2009, CIRM awarded us a \$4,721,706 grant for a stem cell research project related to our ACTCellerate™ embryonic stem cell technology. Our grant project is titled “Addressing the Cell Purity and Identity Bottleneck through Generation and Expansion of Clonal Human Embryonic Progenitor Cell Lines.” In our CIRM-funded research project we will work with human embryonic progenitor cells (“hEPCs”) generated using our ACTCellerate™ technology. These hEPCs are intermediate in the developmental process between embryonic stem cells and fully differentiated cells. The hEPCs may possess the ability to become a wide array of cell types with potential applications in research, drug discovery, and human regenerative stem cell therapy. The hEPCs are relatively easy to manufacture on a large scale and in a purified state, which may make it advantageous to work with these cells compared to the direct use of hES cells. We will work on identifying antibodies and other cell purification reagents that may be useful in the production of hEPCs that can be used to develop pure therapeutic cells such as nerve, blood vessel, heart muscle, and cartilage, as well as other cell types.

In addition to acquiring and developing hES cell, iPS cell, and hEPC technology, we have already commenced marketing our first stem cell products for research use through our subsidiaries, Embryome Sciences, Inc. and BioTime Asia, Limited. We are presently offering for sale 13 novel ACTCellerate™ hEPC lines and optimized ESspan™ growth media for the in vitro propagation of those hEPC lines. Embryome Sciences has entered into an agreement under which Millipore Corporation became a worldwide distributor of ACTCellerate™ hEPC lines. Millipore’s initial offering of Embryome Sciences’ products consists of six novel hEPC lines and optimized ESspan™ growth media for the in vitro propagation of each hEPC line. The companies anticipate jointly launching 29 additional hEPC lines and associated ESspan™ growth media within the coming 12 months. The Embryome Sciences products distributed by Millipore may also be purchased directly from Embryome Sciences at Embryome.com.

Embryome Sciences is also developing a relational database that will permit researchers to chart the cell lineages of human development, the genes expressed in those cell types, and antigens present on the cell surface of those cells that can be used in purification. This database will provide the first detailed map of the embryo and will aid researchers in navigating the complexities of human development and in identifying the many hundreds of cell types coming from embryonic stem cells. Our embryo map data base is now available at our website Embryome.com.

Embryome Sciences also plans to offer for sale 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 the disease states, which may in turn expedite the search for potential treatments. We intend to offer these hES cell lines for sale online at Embryome.com during 2010. 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.



Table of Contents

Embryome Sciences also plans to bring to market other new stem cell growth and differentiation factors that will permit researchers to manufacture specific cell types from hES cells, and purification tools useful to researchers in quality control of products for regenerative medicine. As new products are developed, they will become available for purchase on Embryome.com.

Our initial efforts to develop therapeutic stem cell products are being conducted through three subsidiaries, BioTime Asia, Limited, OncoCyte Corporation, and OrthoCyte Corporation. We organized BioTime Asia for the purpose of clinically developing and marketing therapeutic stem cell products in the People's Republic of China, and marketing stem cell research products in China and other countries in Asia. BioTime Asia will initially seek to develop the therapeutic products for the treatment of ophthalmologic, skin, musculo-skeletal 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.

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 has become a minority shareholder in BioTime Asia and will provide BioTime Asia with its initial laboratory facilities and an agreed number of research personnel, and will arrange financing for clinical trials.

We organized OncoCyte Corporation for the purpose of developing novel therapeutics for the treatment of cancer based on stem cell technology. We and Embryome Sciences will license certain technology to OncoCyte restricted to the field of cell-based cancer therapies, including early patent filings on targeting stem cells to malignant tumors. OncoCyte's new therapeutic strategy and goal will be to utilize human embryonic stem cell technology to create genetically modified stem cells capable of homing to specific malignant tumors while carrying genes that can cause the destruction of the cancer cells.

We recently organized a new subsidiary, OrthoCyte Corporation, for the purpose of developing novel therapeutics based on stem cell technology for the treatment of injuries and disorders affecting the musculoskeletal system, including therapeutics that would regenerate bone, cartilage, tendons, and ligaments. BioTime will transfer certain patents and license certain technology to OrthoCyte for use in the field of orthopedic therapies. OrthoCyte will initially work with ACTCellerate hEPC lines that show large concentrations of genetic markers associated with the production of cartilage.

## Table of Contents

Our acquisition of ESI will allow us to use ESI's clinical-grade hES cell lines with our ACTCellerate™ and ReCyte™ technologies that allow the derivation of hEPC lines with high levels of purity and scalability. Our goal will be to generate clonal clinical-grade hEPC lines for potential use in research products and therapeutic products with a level of purity and quality unsurpassed in the industry.

There is no assurance that BioTime Asia, OncoCyte, OrthoCyte, or ESI will be successful in developing any new technology or stem cell products, or that any technology or products that they may develop will be proven safe and effective in treating cancer or other diseases in humans, or will be successfully commercialized. Our potential therapeutic products are at a very early stage of preclinical development. Before any clinical trials can be conducted by us or by 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, and assemble a team of physicians and statisticians for the trials.

### Plasma Volume Expander Products

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

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

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

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

Table of Contents

Offering Summary

How to Exercise Warrants

The warrants are evidenced by warrant certificates.

Warrants may be exercised by completing the purchase form on the back of the warrant certificate and delivering it, together with payment of the exercise price, to BioTime, Inc., 1301 Harbor Bay Parkway, Suite 100, Alameda, California 94502; Attention: Chief Financial Officer.

Payment of the exercise price of the warrants must be made in cash or by certified or bank cashier's check or by wire transfer.

Other Terms of Warrants:

Each warrant entitles the holder to purchase one common share at a price of \$10.00 per share.

The warrants will expire at 5:00 p.m., New York time, on May 2, 2014 and may not be exercised after that time and date.

The number of common shares and the exercise price will be proportionally adjusted in the event of a stock split, stock dividend, combination, or similar recapitalization of the common shares.

The number of common shares will be adjusted according to a formula provided for in the warrants in the event that we issue rights, options, or warrants to our stockholders entitling them to purchase common shares at a price per share which is lower at the record date than the then current market price per share of common shares.

|                           |   |
|---------------------------|---|
| Common Shares Offered     | 1,383,400 outstanding common shares and 300,000 common shares issuable upon the exercise of the warrants are being offered by the selling security holders. |
| Warrants Offered          | 300,000 warrants are being offered by one of the selling security holders.  |
| Common Shares Outstanding | 39,935,766 as of June 15, 2010.   |



Table of Contents

RISK FACTORS

An investment in our shares and warrants involves a high degree of risk. You should purchase our shares and warrants only if you can afford to lose your entire investment. Before deciding to purchase any of the shares or warrants offered by this prospectus, you should consider the following factors which could materially adversely affect our proposed operations, our business prospects, and the value of an investment in our shares or warrants. There may be other factors that are not mentioned here or of which we are not presently aware that could also affect our operations.

Risks Related to Our Business Operations

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

Our net losses for the three months ended March 31, 2010 and the fiscal years ended December 31, 2009 and 2008 were \$1,286,764, \$5,144,499 and \$3,780,895, respectively, and we had an accumulated deficit of \$54,056,655, \$52,769,891 and \$47,625,392 as of March 31, 2010, December 31, 2009, and December 31, 2008, respectively. Since inception, we have primarily financed our operations through the sale of equity securities, licensing fees, royalties on product sales by our licensees, and borrowings. Also, we have recently been awarded a research grant from the California Institute of Regenerative Medicine for a particular project. Ultimately, our ability to generate sufficient operating revenue to earn a profit depends upon our success in developing and marketing or licensing our products and technology.

During its last two fiscal years, ending March 31, 2010 and 2009, respectively, ESI, which we acquired on May 3, 2010, incurred net losses from operating activities of approximately \$1.6 million and \$1.9 million, respectively, before certain finance costs, gains on a derivative financial instrument, and losses attributable to ESI's minority investment in Cell Cure, and without adjustment to United States generally accepted accounting principles.

Sales of Hextend to date have not been sufficient to generate an amount of royalties or licensing fees sufficient to cover our operating expenses

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

Table of Contents

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.

We may not succeed in marketing our plasma volume expander products due to the availability of competing products

Factors that affect the marketing of our products include the following:

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

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

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

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

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

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 on 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 \$1,159,951, \$2,968,987, and \$1,725,187 during the three months ended March 31, 2010 and the fiscal years ended December 31, 2009 and 2008, respectively.

Table of Contents

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 products such as PentaLyte may take longer and may be more costly than our Hextend clinical trials. The FDA permitted us to proceed directly into a Phase III clinical trial of Hextend involving only 120 patients because the active ingredients in Hextend had already been approved for use by the FDA in other products. Because PentaLyte contains a starch that has not been approved by the FDA for use in a plasma volume expander, we have had to complete Phase I and Phase II clinical trials of PentaLyte, and we will have to complete a Phase III trial that will involve more patients than our Hextend trials. We do not yet know the scope or cost of the Phase III clinical trials that the FDA will require for PentaLyte or the other products we are developing.

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

We are developing and marketing products for use in stem cell research, including products that we plan to sell to companies and institutions that are seeking to develop human therapeutic stem cell products.

The success of our business depends on the growth of stem cell research, without which there may be no market or only a very small market for our products and technology. The likelihood that stem cell research will grow depends upon the successful development of stem cell products that can be used to treat disease or injuries in people or that can be used to facilitate the development of other pharmaceutical products. However, stem cells have not been used in human medicine and have only been used in laboratory studies on animals.

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

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

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, and we 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.

Table of Contents

It is likely that additional sales of equity or debt securities will be required to meet our short-term capital needs, unless a substantial portion of the warrants are exercised, or we receive substantial revenues from the sale of our new products, or we are successful in 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 could result in the dilution of the interests of present shareholders.

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

We intend to use a substantial portion of any proceeds we receive from the exercise of the warrants to finance our research and development programs. However, we cannot predict in advance how many warrants will be exercised or when they will be exercised.

During 2009, we were awarded a \$4,721,706 grant for a stem cell research project, and we received \$8,000,000 through the sale of stock and warrants, and our subsidiary OncoCyte Corporation received \$4,000,000 through the sale of stock. During May 2010, we received \$8,000,000 through the exercise of warrants by two private investors. However, there can be no assurance that we will be able to raise additional funds on favorable terms or at all, or that any funds raised will be sufficient to permit us to develop and market our products and technology. Unless we 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.



Table of Contents

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 larger companies that have substantial income and available capital.

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

The pharmaceutical products that we develop cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. Hextend has been approved for use in the United States, Canada, and Korea only. One of our licensees has been conducting a Phase III equivalent clinical trial of Hextend in Japan. We have conducted a Phase II clinical trial of PentaLyte as a plasma volume expander in surgery but we do not have sufficient financing to commence a Phase III trial.

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 completing a Phase III clinical trial of PentaLyte necessary to obtain FDA approval cannot be presently determined but exceeds our current financial resources.

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

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 on the use of hES cells could prevent us from developing and successfully marketing stem cell products

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

Table of Contents

Government-imposed restrictions on the use of embryos or hES cells in the United States and abroad could generally constrain stem cell research, thereby limiting the market and demand for our products. During March 2009, President Obama lifted certain restrictions on federal funding of research involving the use of hES cells, and in accordance with President Obama's executive order, the National Institutes of Health 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.

California law requires that stem cell research be conducted under the oversight of a stem cell research oversight ("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.

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

Our success will depend in part on our ability to obtain and enforce patents and maintain trade secrets in the United States and in other countries. If we are unsuccessful in 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.

Table of Contents

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. We may also file additional new patent applications in the future 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, in the United States or abroad will result in the issuance of patents.

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

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

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

A patent interference proceeding may be instituted with the U.S. Patent and Trademark Office (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. Like US 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.

Table of Contents

Our patents may not protect our products from competition

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

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

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

In addition to interference proceedings, the U.S. PTO can reexamine 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 reexamination and may be lost if the outcome of the reexamination is unfavorable to us.

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 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 market place we will not know with certainty whether adequate health insurance, HMO, and government coverage will be available to permit the product to be sold at a price high enough for us to generate a profit. In some foreign countries, pricing or profitability of health care products is subject to government control which may result in low prices for our products. In the United States, there have been a number of federal and state proposals to implement similar government controls, and new proposals are likely to be made in the future.

Table of Contents

Risks Pertaining to Our Common Shares and Warrants

Before purchasing our common shares or warrants, investors should consider the price volatility of our shares and warrants and the fact that we do not pay dividends.

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

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

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

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

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

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

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 and warrants.

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.

There is no public market for the warrants offered by this prospectus

There is no public market for the warrants offered by this prospectus and no market for those warrants is expected to develop. Therefore, any investor who purchases warrants from a selling security holder may not be able to find a buyer for the warrants if the investor later desires to sell the warrants. Although we have other stock purchase warrants that are listed on the NYSE Amex and are publicly traded, the warrants offered by this prospectus have an exercise price, expiration date, and other terms that are different from the publicly traded warrants. The prices at which our publicly traded warrants trade on the NYSE Amex should not be considered indicative of the price or value of the warrants offered by this prospectus.

Table of Contents

The warrants cannot be exercised unless a registration statement is in effect under federal securities laws

A registration statement as defined under the Securities Act of 1933, as amended (the “Securities Act”), must be in effect in order for warrant holders to exercise their warrants. This means that we will have to periodically update our registration statement and prospectus by filing reports under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or by filing post-effective amendments to the registration statement of which this prospectus is a part. We intend to use our best efforts to keep our registration statement effective. However, if we are unable to do so for any reason, warrant holders will not be able to exercise their warrants at such time, even if the market price of our common shares is then greater than the exercise price.

As long as our common shares are listed on the NYSE Amex, they will be exempt from registration or qualification under state securities laws. If our common shares are not exempt from state registration or qualification, most states will require us to obtain a permit, issued through an application for registration or qualification, and to maintain that permit in effect in order for warrant holders in the state to exercise their warrants. Many states will only issue a permit if their securities regulatory agency determines that the securities are a suitable investment for public investors in their state, considering a variety of factors, including the financial performance and financial condition of the company issuing the securities. Because we have a history of operating losses, some or all of those states may decline to issue the permit required to permit warrant holders in those states to exercise their warrants.

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

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 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 shares of our common shares and our preferred shares.

Table of Contents

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 June 15, 2010, there were 39,935,766 common shares outstanding, 3,416,298 common shares reserved for issuance upon the exercise of outstanding options under our employee stock option plans, 125,000 common shares reserved for issuance upon the exercise of options issued outside of our employee stock option plan, 300,000 shares reserved for issuance upon the exercise of the warrants included in this prospectus, and 7,820,340 common shares reserved for issuance upon the exercise of other warrants that are not included in this prospectus. No preferred shares are presently outstanding.

We 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.

**MARKET FOR OUR COMMON EQUITY**

There is presently no public market for the warrants offered by this prospectus, and a public market for those warrants is not expected to develop.

BioTime common shares have been traded on the NYSE Amex since October 30, 2009 under the symbol BTIM. From July 15, 2005 until October 30, 2009, our common shares were traded on the OTC Bulletin Board (“OTCBB”).

The following table sets forth the range of high and low closing prices for the common shares for the fiscal years ended December 31, 2008 and 2009, and for the three-month periods ended March 31 and June 30, 2010 based on transaction data as reported by the OTCBB and the NYSE Amex:

| Quarter Ended      | High | Low  |
|--------------------|------|------|
| March 31, 2008     | 0.40 | 0.27 |
| June 30, 2008      | 0.60 | 0.29 |
| September 30, 2008 | 1.80 | 0.55 |
| December 31, 2008  | 2.30 | 0.95 |
| March 31, 2009     | 2.55 | 1.25 |
| June 30, 2009      | 3.00 | 1.57 |
| September 30, 2009 | 6.40 | 2.30 |
| December 31, 2009  | 6.35 | 3.59 |
| March 31, 2010     | 7.70 | 4.56 |
| June 30, 2010      | 8.11 | 5.72 |

Table of Contents

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

As of April 26, 2010, there were 11,230 holders of the common shares based on the share position listing.

BioTime has paid no dividends on its common shares since its inception and does not plan to pay dividends on its common shares in the foreseeable future.

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, 2009:

| 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 |
|---|--|--|--|
| Equity Compensation Plans Approved by Shareholders      | 3,477,000  | \$ 1.12  | 2,087,168  |
| Equity Compensation Plans Not Approved By Shareholders* | 849,167  | \$ 1.82  | -  |

\*We have granted 321,667 warrants to certain consultants for providing services to us, and we have granted 402,500 warrants to an investment banker for arranging a portion of the loans under our Revolving Line of Credit Agreement. We have also granted 125,000 options to a consultant for providing services to us. These warrants and options were issued without registration under the Securities Act of 1933, as amended, in reliance upon the exemption provided by Section 4(2) thereunder.

## USE OF PROCEEDS

All of the common shares and common shares issuable upon conversion of the warrants are being sold by selling security holders identified in this prospectus. All of the net proceeds from the sale of the common shares and warrants, and any common shares issued upon the exercise of the warrants, by the selling security holders will belong to the selling security holders and not to us.

The cash proceeds receivable from the exercise of the warrants included in this prospectus will be \$3,000,000, if all of the warrants are exercised at the exercise price of \$10 per share. We intend to use the proceeds from the exercise of the warrants as shown in the following table.

| Application                | Estimated Amount | Percent of Total |
|----------------------------|------------------|------------------|
| Research and Development   | \$ 1,950,000     | 65%              |
| General and Administrative | 450,000          | 15%              |
| Working Capital            | \$ 600,000       | 20%              |
| Total                      | \$ 3,000,000     | 100%             |





Table of Contents

Research and Development. Proceeds allocated to research and development may be used by us or invested in our subsidiaries, ESI, OncoCyte Corporation, OrthoCyte Corporation, and BioTime Asia, or in Cell Cure, to develop other new stem cell products and technology and to acquire new stem cell products and technology through licenses or similar agreements from other companies. We may also use proceeds for additional clinical trials of PentaLyte and to fund the cost of seeking regulatory approval of PentaLyte, and to begin human clinical trials for new indications of our lead product Hextend®, including the treatment of severe malaria by reducing the acidosis and hypovolemia that accompany that disease, and often result in fatalities, especially among children. We are also considering a number of opportunities to enter new market segments that may complement our current product development programs, and a portion of the proceeds may be used for those purposes.

General and Administrative. Portions of the proceeds may be used to defray overhead expenses, and may also be put toward future opportunities and contingencies that might arise, including the payment of costs incurred in retaining various personnel or securing various services necessary to support the advancement of our research and development programs. A portion of the salaries, benefits, and fees of employees and consultants who assist in the development of new products or in the preparation of patent applications or applications to the FDA and foreign regulatory agencies is allocable to general and administrative costs. We will also incur general and administrative expenses for payment of any of the various legal, accounting, governmental, and stock exchange costs inherent in operating as a publicly traded company. We expect that our general and administrative expenses will increase as we achieve progress in developing products and bringing them to market.

Working Capital. We intend to apply the balance of the proceeds from the exercise of the warrants to working capital. We will have broad discretion with respect to the use of such amounts. Proceeds allocated to working capital may also be reallocated to research and development expense or to general and administrative expense should such needs arise, and may be used to pay any of the costs of developing new products, obtaining new technology, or conducting clinical trials of our products.

The preceding table represents only an estimate of the allocation of the net proceeds of the exercise of the warrants based upon the current state of our product development program. The timeframe in which we will use the proceeds will depend upon a variety of factors, such as the pace at which we and our subsidiaries make progress in our research and development programs, the results of clinical trials that we may undertake, and any opportunities to acquire new products and technologies, or to enter into new market segments that may arise, and the amounts of revenues that we may receive from the sale and licensing of our products and technologies.

The development of new medical products and technologies often involves complications, delays, and costs that cannot be predicted, and may cause us to make a reallocation of proceeds among the categories shown above or to other uses. We may need to raise additional capital to pay operating expenses until such time as we are able to generate sufficient revenues from product sales, royalties, and license fees.

Table of Contents

Until used, the net proceeds from the exercise of the warrants will be invested in certificates of deposit, United States government securities, or other high quality, short-term, interest-bearing investments.

DESCRIPTION OF SECURITIES

Common Shares

Our Articles of Incorporation currently authorize the issuance of up to 75,000,000 common shares, no par value, of which 39,935,766 shares were outstanding at June 15, 2010. As of April 26, 2010, there were 11,230 holders of the common shares based on the share position listings. Each holder of record is entitled to one vote for each outstanding common share owned by him on every matter properly submitted to the shareholders for their vote.

Subject to the dividend rights of holders of any of the preferred shares that may be issued from time to time, holders of common shares are entitled to any dividend declared by the Board of Directors out of funds legally available for that purpose. We have not paid any cash dividends on our common shares, and it is unlikely that any cash dividends will be declared or paid on any common shares in the foreseeable future. Instead, we plan to retain our cash for use in financing our future operations and growth.

Subject to the prior payment of the liquidation preference to holders of any preferred shares that may be issued, holders of common shares are entitled to receive on a pro rata basis all of our remaining assets available for distribution to the holders of common shares in the event of the liquidation, dissolution, or winding up of our operations. Holders of common shares do not have any preemptive rights to become subscribers or purchasers of additional shares of any class of our capital stock.

Transfer Agent

The transfer agent and registrar for the common shares is American Stock Transfer and Trust Company, 59 Maiden Lane, New York, New York 10038.

Preferred Shares

Our Articles of Incorporation currently authorize the issuance of up to 1,000,000 preferred shares, no par value. We may issue preferred shares in one or more series, at any time, with such rights, preferences, privileges and restrictions as the Board of Directors may determine, all without further action of our shareholders. Any series of preferred shares which may be authorized by the Board of Directors in the future may be senior to and have greater rights and preferences than the common shares. There are no preferred shares presently outstanding and we have no present plan, arrangement, or commitment to issue any preferred shares.

Table of Contents

Warrants

There are 300,000 of the warrants offered by in this prospectus outstanding. In addition to those warrants, we have also issued 7,820,340 other warrants (“Other Warrants”) that have terms and conditions that are different from those of the warrants included in this prospectus. The following description of the warrants does not pertain to the Other Warrants, which are separately described below.

Each full warrant offered by this prospectus entitles the holder to purchase one common share at a price of \$10.00 per share. The number of common shares and exercise price will be proportionally adjusted in the event of a stock split, stock dividend, combination or similar recapitalization of the common shares. The number of common shares will be adjusted according to a formula provided for in the warrants in the event that we issue rights, options, or warrants to our stockholders entitling them to purchase common shares at a price per share which is lower at the record date than the then current market price per share of common shares. The warrants will expire on May 2, 2014 and may not be exercised after that date.

In order to exercise your warrants, in whole or in part, you must do all of the following:

Fill in and sign the purchase form that appears on the reverse side of the warrant certificate;

Deliver the completed and signed warrant certificate to us with your payment in full for the common shares you wish to purchase.

Make payment for your shares – the method of doing so is described below under “Payment for Shares.”

Ensure that properly completed and executed warrant certificates are received by us at the address set forth below prior to 5:00 p.m., New York time, on May 2, 2014.

You should send your warrant certificate, with the purchase form completed and signed, accompanied by payment of the exercise price, to:

BioTime, Inc.  
1301 Harbor Bay Parkway, Suite 100  
Alameda, California 94502  
Attention: Chief Financial Officer.

Payment of the exercise price of the warrants must be made in cash or by certified or bank cashier’s check drawn on a United States bank, or by wire transfer. We recommend that warrant holders who do not reside in the United States make their payment by wire transfer. All wire transfers should be directed to: Wells Fargo Bank, Emeryville, USA, ABA #121000248, Account #6783738021.

You may not revoke the exercise of your warrants.

Table of Contents

## Other Warrants

We have issued 7,820,340 Other Warrants that have exercise prices, expiration dates, and other terms that are different from the warrants included in this prospectus. None of the Other Warrants are offered by this prospectus. The following table shows certain information concerning the Other Warrants.

| Number of Warrants | Shares Issuable (1) | Exercise Price(1) | Expiration Date    |
|--------------------|---------------------|-------------------|--------------------|
| 7,370,340          | 7,370,340           | \$2.00(2)         | October 31, 2010   |
| 300,000            | 300,000             | \$3.00            | September 23, 2012 |
| 100,000            | 100,000             | \$0.68            | July 20, 2013      |
| 50,000             | 50,000              | \$10.00           | April 24, 2014     |

- (1) The number of common shares and exercise price will be proportionally adjusted in the event of a stock split, stock dividend, combination, or similar recapitalization of the common shares.
- (2) The exercise price is subject to a discount offer that permits the warrants to be exercised at a price of \$1.818 per share for a period of approximately 60 days, commencing on June 18, 2010 at 9:30 a.m., New York time, and ending on August 18, 2010 at 5:00 p.m., New York time.

Table of Contents

RESALE OF SHARES AND WARRANTS

The common shares and warrants, and the common shares that may be issued upon the exercise of the warrants, are being registered for sale for the account of the holders of those securities. The security holders for whose account common shares warrants are being registered through this prospectus are sometimes referred to in this prospectus as “selling security holders,” and information about them and the securities that they may sell through this prospectus is discussed in this section. The selling security holders may elect to sell some or all of their shares or warrants in reliance upon Rule 144 under the Securities Act rather than through this prospectus and the registration statement of which this prospectus is a part.

We will receive the exercise price of the warrants when the warrants are exercised. However, all of the net proceeds from the sale of the warrants and common shares by the selling security holders will belong to the selling security holder and not to us.

Plan of Distribution

We issued the common shares and warrants offered by this prospectus to the selling security holders in connection with our acquisition of ESI. The selling security holders have advised us that they may hold their common shares and warrants, and any common shares issued upon the exercise of their warrants, for investment purposes, or they may sell their common shares, including any common shares acquired through the exercise their warrants, from time to time on the NYSE Amex at prevailing market prices, or at prices related to the prevailing market price, or in privately negotiated transactions. The selling security holders may also sell some or all of their warrants in privately negotiated transactions.

The selling security holders will bear all broker-dealer commissions payable in connection with the sale of their common shares or warrants. Broker-dealers who acquire common shares or warrants from the selling security holders as principals may resell the common shares from time to time in transactions on the NYSE Amex, or may resell the common shares and warrants in negotiated transactions at negotiated prices, and may receive usual and customary commissions from the purchasers of the shares and warrants.

The selling security holders have advised us that during the time that they may be engaged in a distribution of their common shares and warrants they will (a) not engage in any stabilization activity in connection with our securities, (b) cause to be furnished to each broker through whom their shares or warrants may be offered the number of copies of this prospectus required by the broker, and (c) not bid for or purchase any of our securities or rights to acquire our securities, or attempt to induce any person to do so, other than as permitted under the Exchange Act. The selling security holders and any broker-dealers who participate in the sale of their common shares and warrants may be deemed to be “underwriters” as defined in the Securities Act. Any commissions paid or any discounts or concessions allowed to any broker-dealers in connection with the sale of the common shares and warrants, and any profits received on the resale of any shares and warrants purchased by broker-dealers as principals, may be deemed to be underwriting discounts and commissions under the Securities Act.

Table of Contents

The following table shows the number of our common shares beneficially owned by the selling security holders prior to this offering, the maximum number of common shares that may be sold by them through this prospectus, and the amount and percentage of the outstanding common shares that will be owned by them if they sell all of the shares registered for their respective accounts:

| Name  | Shares Owned(1) | Shares Offered(1) | Shares Owned After Offering(1) | Percentage of Outstanding Common Shares Owned After Offering(1) |
|---|-----------------|-------------------|--------------------------------|---|
| ES Cell Australia Limited                                     | 15,858          | 15,858            | 0                              | 0   |
| Pharmbio Growth Fund Pte Ltd(2)                               | 24,616          | 24,616            | 0                              | 0   |
| Biomedical Sciences Investment Fund Pte Ltd(3)                | 1,323,277       | 1,323,277         | 0                              | 0   |
| Curis Inc.  | 6,461           | 6,461             | 0                              | 0   |
| Monash Investment Holdings Pty Ltd                            | 3,692           | 3,692             | 0                              | 0   |
| NUS Technology Holdings Pte Ltd                               | 3,835           | 3,835             | 0                              | 0   |
| Hadasit Medical Research Services and Development Company Ltd | 3,692           | 3,692             | 0                              | 0   |
| Martin Frederick Pera   | 615             | 615               | 0                              | 0   |
| Wisconsin Alumni Research Foundation                          | 615             | 615               | 0                              | 0   |
| Christine Mummery   | 123             | 123               | 0                              | 0   |
| Hubrecht Institute  | 154             | 154               | 0                              | 0   |
| Nick Gough and Associates Pty Ltd                             | 462             | 462               | 0                              | 0   |

(1) Does not include shares issuable upon the exercise of the warrants including in this prospectus.

(2) Pharmbio Growth Fund Pte Ltd is wholly-owned by EDB Investments Pte Ltd, which is wholly-owned by the Economic Development Board of Singapore. No individual has beneficial ownership over shares held by Pharmbio Growth Fund Pte Ltd. Voting and investment decisions relating to these securities are made by the board of directors of Pharmbio Growth Fund Pte Ltd, which is currently comprised of Mr. Eugene Khoo Kay Jin and Ms. Ho Siu Gie. The board of directors of Pharmbio Growth Fund Pte Ltd acts by majority vote, and no board member may act individually to vote or sell these securities.

(3) Biomedical Sciences Investment Fund Pte Ltd is wholly-owned by EDB Investments Pte Ltd, which is wholly-owned by the Economic Development Board of Singapore. No individual has beneficial ownership over shares held by Biomedical Sciences Investment Fund Pte Ltd. Voting and investment decisions relating to these securities are made by the board of directors of Biomedical Sciences Investment Fund Pte Ltd, which is currently comprised of Ms. Chu Swee Yeok and Mr. Beh Kian Teik. The board of directors of Biomedical Sciences Investment Fund Pte Ltd acts by majority vote, and no board member may act individually to vote or sell these securities.





Table of Contents

The following table shows the number of warrants beneficially owned by the selling security holders prior to this offering, the maximum number of warrants that may be sold by them through this prospectus, and the amount and percentage of the outstanding warrants that will be owned by them if they sell all of the warrants registered for their respective accounts:

| Name   | Warrants Owned(1) | Warrants Offered(1) | Warrants Owned After Offering | Percentage of Outstanding Warrants Owned After Offering |
|--|-------------------|---------------------|-------------------------------|---|
| Biomedical Sciences Investment Fund Pte Ltd(2) | 300,000           | 300,000             | 0                             | 0   |

(1) Does not include any Other Warrants that the selling security owner may own or acquire.

(2) Biomedical Sciences Investment Fund Pte Ltd is wholly-owned by EDB Investments Pte Ltd, which is wholly-owned by the Economic Development Board of Singapore. No individual has beneficial ownership over shares held by Biomedical Sciences Investment Fund Pte Ltd. Voting and investment decisions relating to these securities are made by the board of directors of Biomedical Sciences Investment Fund Pte Ltd, which is currently comprised of Ms. Chu Swee Yeok and Mr. Beh Kian Teik. The board of directors of Biomedical Sciences Investment Fund Pte Ltd acts by majority vote, and no board member may act individually to vote or sell these securities.

## Table of Contents

### LEGAL MATTERS

The validity of the rights, common shares, and warrants will be passed upon for BioTime by Thompson, Welch, Soroko & Gilbert LLP, San Francisco and Corte Madera, California. A member of Thompson, Welch, Soroko & Gilbert LLP holds an option to purchase 20,000 BioTime common shares.

### EXPERTS

The financial statements incorporated in this prospectus by reference from BioTime's Annual Report on Form 10-K for the years ended December 31, 2009 and 2008 have been audited by Rothstein, Kass & Company, P.C. independent registered public accounting firm, to the extent and for the periods set forth in their report incorporated herein by reference, and are incorporated herein in reliance upon such report given upon the authority of said firm as experts in accounting and auditing.

The financial statements of ES Cell International Pte Ltd for the years ended March 31, 2010 and 2009 incorporated in this prospectus by reference from BioTime's Current Report on Form 8-K/A-1 have been audited by Ernst & Young, LLP, independent registered public accounting firm, to the extent and for the periods set forth in their report incorporated herein by reference, and are incorporated herein in reliance upon such report given upon the authority of said firm as experts in accounting and auditing.

### INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, Quarterly Report on Form 10-Q for the three months ended March 31, 2010, and Current Reports on Form 8-K filed by us with the Commission on January 6, 2010, March 10, 2010, March 16, 2010, April 29, 2010, May 3, 2010, May 5, 2010, May 10, 2010, June 14, 2010, June 18, 2010, July 7, 2010, July 16, 2010, and July 21, 2010 are hereby incorporated into this prospectus by reference. All other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended, prior to the termination of the offering covered by this prospectus shall be deemed incorporated into this prospectus by reference. A description of the common shares contained in a Registration Statement on Form 8-A filed under the Securities Exchange Act of 1934, as amended, is also incorporated into this prospectus by reference. We will provide without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request of such person, a copy of any and all of the information that has been incorporated by reference but not delivered with this prospectus. Such requests may be addressed to the Secretary of BioTime at 1301 Harbor Bay Parkway, Suite 100, California 94502; Telephone: (510) 521-3390. The reports and other documents incorporated by reference may be accessed at our internet website [www.biotimeinc.com](http://www.biotimeinc.com).

### WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and in accordance therewith file quarterly, annual, and current reports and proxy statements and other information with the Securities and Exchange Commission. The public may read and copy any materials we file with Securities and Exchange Commission at the Commission's Public Reference Room at 100 F Street N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the Commission at 1-800-SEC-0330.



Table of Contents

The Commission maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the Commission. The address of such site is <http://www.sec.gov>.

We make available free of charge on or through our Internet website [www.biotimeinc.com](http://www.biotimeinc.com) our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Commission.

We have filed with the Securities and Exchange Commission, 100 F Street N.E., Washington, D.C. a registration statement on Form S-1 under the Securities Act for the registration of the shares and warrants offered by this prospectus. This prospectus, which is part of the registration statement, does not contain all of the information contained in the registration statement. For further information with respect to us and the securities offered by this prospectus, you should refer to the registration statement, including the exhibits thereto, which may be inspected, without charge, at the Office of the Securities and Exchange Commission, or copies of which may be obtained from the Commission in Washington, D.C. upon payment of the requisite fees. Statements contained in this prospectus as to the content of any contract or other document referred to are not necessarily complete. In each instance reference is made to the copy of the contract or other document filed as an exhibit to the registration statement, and each such statement is qualified in all respects by reference to the exhibit.

Table of Contents

No dealer, salesperson or other person has been authorized in connection with this offering to give any information or to make any representations other than those contained in this Prospectus. This Prospectus does not constitute an offer or a solicitation in any jurisdiction to any person to whom it is unlawful to make such an offer or solicitation. Neither the delivery of this Prospectus nor any sale made hereunder shall, under any circumstances, create an implication that there has been no change in the circumstances of BioTime or the facts herein set forth since the date hereof.

TABLE OF CONTENTS

|  |    |
|--|----|
| <u>Prospectus Summary</u>                                | 3  |
| <u>Risk Factors</u>                                      | 9  |
| <u>Market For Our Common Equity</u>                      | 19 |
| <u>Use of Proceeds</u>                                   | 20 |
| <u>Description of Securities</u>                         | 22 |
| <u>Resale of Shares and Warrants</u>                     | 25 |
| <u>Legal Matters</u>                                     | 28 |
| <u>Experts</u>   | 28 |
| <u>Incorporation of Certain Information by Reference</u> | 28 |
| <u>Where You Can Find More Information</u>               | 28 |

1,383,400 Common Shares

300,000 Warrants

300,000 Common Shares Issuable Upon Exercise of Warrants and Options

PROSPECTUS

July \_\_, 2010

Table of Contents

## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

## Item 14. Other Expenses of Issuance and Distribution.

The estimated expenses of the Registrant in connection with the issuance and distribution of the securities being registered hereby are as follows:

|   |          |
|---|----------|
| Registration Fee-Securities and Exchange Commission | \$978    |
| Printing and Engraving Expenses                     | \$1,500  |
| Accounting Fees                                     | \$3,500  |
| Legal Fees  | \$10,000 |
| Miscellaneous Expenses                              | \$4,022  |
| Total   | \$20,000 |

## Item 15. Indemnification of Directors and Officers.

Section 317 of the California Corporations Code permits indemnification of directors, officers, employees and other agents of corporations under certain conditions and subject to certain limitations. In addition, Section 204(a)(10) of the California Corporations Code permits a corporation to provide, in its articles of incorporation, that directors shall not have liability to the corporation or its shareholders for monetary damages for breach of fiduciary duty, subject to certain prescribed exceptions. Article Four of the Articles of Incorporation of the Registrant contains provisions for the indemnification of directors, officers, employees and other agents within the limitations permitted by Section 317 and for the limitation on the personal liability of directors permitted by Section 204(b)(10), subject to the exceptions required thereby.

Table of Contents

Item 16. Exhibits and Financial Statement Schedules.

| Exhibit Numbers | Description  |
|-----------------|--|
| 4.1             | Specimen of Common Share Certificate(1)  |
| 4.2             | Warrant Agreement between BioTime, Inc. and Biomedical Sciences Investment Fund Pte Ltd(2) |
| 4.3             | Warrant†   |
| 5.              | Opinion of Counsel†  |
| <u>23.1</u>     | Consent of Rothstein, Kass & Company, P.C. *   |
| <u>23.2</u>     | Consent of Ernst & Young LLP *   |
| 23.3            | Consent of Counsel (Included in Exhibit 5)   |

(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 Quarterly Report on Form 10-Q for the three months ended March 31, 2010.

† Previously filed.

\* Filed herewith.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by final adjudication of such issue.

The undersigned undertakes:

(1) To file during any period in which offers or sales are being made, a post-effective amendment to this registration statement:





Table of Contents

- (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate represent a fundamental change in the information set forth in the registration statement;
  - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.
- (2) That for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser each prospectus filed pursuant to Rule 424(b) shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

Table of Contents

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Amendment to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Alameda, State of California on July 21, 2010.

BIOTIME, INC.

By                    /s/ Michael D. West  
Chief Executive Officer

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

| Signature                                     | Title  | Date          |
|---|--|---------------|
| /s/ Michael D. West<br>MICHAEL D. WEST, PH.D. | Chief Executive Officer and<br>Director (Principal Executive<br>Officer) | July 16, 2010 |
| /s/ Steven A. Seinberg<br>STEVEN A. SEINBERG  | Chief Financial Officer (Principal<br>Financial and Accounting Officer)  | July 16, 2010 |
| /s/ Neal C. Bradsher<br>NEAL C. BRADSHER      | Director   | July 16, 2010 |
| ARNOLD I. BURNS                               | Director   | July __, 2010 |
| /s/ Abraham E. Cohen<br>ABRAHAM E. COHEN      | Director   | July 16, 2010 |
| /s/ Alfred D. Kingsley<br>ALFRED D. KINGSLEY  | Director   | July 16, 2010 |
| /s/ Pedro Lichtinger<br>PEDRO LICHTINGER      | Director   | July 19, 2010 |
| /s/ Judith Segall<br>JUDITH SEGALL            | Director   | July 16, 2010 |