Registration No. 333 Valia

# SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

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AMENDMENT NO. 2

FORM S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

BIOTIME, INC.

(Exact name of Registrant as specified in charter)

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California (State or other jurisdiction of incorporation or organization) 94-3127919 (I.R.S. Employer Identification Number)

935 Pardee Street
Berkeley, California 94710
(510) 845-9535
(Address, including zip code,
and telephone number, including area code,
of Registrant's principal executive offices)

Paul E. Segall, Chief Executive Officer
BioTime, Inc.
935 Pardee Street
Berkeley, California 94710
(510) 845-9535

(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. Lippenberger, Thompson, Welch, Soroko & Gilbert LLP 250 Montgomery Street, Suite 500 San Francisco, California 94104 Tel. (415) 421-5300

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 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.  $[\mathsf{X}]$ 

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 delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. [  $\,$ ]

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.

## BIOTIME, INC. 501,654 COMMON SHARES

Issuable Upon the Exercise of Subscription Rights

BioTime, Inc. is issuing new securities called "rights." Holders of the
rights will be entitled to purchase up to an aggregate of 501,654 BioTime common
shares. You will receive rights from BioTime if you owned BioTime shares as of
the close of business on January 5, 1999, which has been set as the record date.
You will receive one right for each common share that you owned on the record
date. The rights will entitle you to subscribe for and purchase one new common
share for every 20 rights you hold. The subscription price is \$ per
share.

The rights will expire at 5:00 p.m. New York City time on March \_\_\_, 1999.

By exercising your rights, you will be able to purchase BioTime shares at a price below market, without incurring broker's commissions. By over-subscribing, you may be able to purchase any shares that are left over by shareholders who fail to exercise their rights. BioTime may also issue up to 250,000 additional shares to fill over-subscriptions.

The common shares are authorized for trading on the Nasdaq National Market under the symbol BTIM. The rights will be transferable and have been approved for trading on the Nasdaq SmallCap Market under the symbol BTIMR.

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 7.

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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.

Expenses of the rights offer are estimated to be \$115,000. No underwriting discounts or commissions will be paid.

The date of this prospectus is February \_\_\_\_\_, 1999

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#### PROSPECTUS SUMMARY

The following summary explains only some of the information in this prospectus. More detailed information about BioTime and the rights offer, and financial statements appear elsewhere in this prospectus or in the documents incorporated by reference into this prospectus.

This prospectus is part of a registration statement on Form S-3 that we have filed with the Securities and Exchange Commission. The SEC allows us to "incorporate by reference" information that we file with them. This means that we can disclose important information to you by referring you to other documents that we have filed with the SEC. The information that is incorporated by reference is considered part of this prospectus, and information that we file later will automatically update and may supersede this information. For further information about BioTime and the securities being offered, you should refer to the registration statement and the documents that are incorporated by reference. See "Incorporation of Certain Information by Reference" 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."

#### The Company

BioTime is developing synthetic solutions that can be used as blood plasma volume expanders, blood replacement solutions during "hypothermic" low temperature surgery, and organ preservation solutions. Plasma volume expanders are used to treat decreased blood volume resulting from blood loss in surgical or trauma patients. We are developing products that may be used in large volumes, even when blood loss becomes so severe that a transfusion of packed red blood cells or other blood products is required. We are also developing a specially formulated hypothermic blood replacement solution that would be used for the replacement of a patient's circulating blood volume during cardiac surgery, neurosurgery and other surgeries that involve lowering the patient's body temperature.

Our first three blood volume replacement products are Hextend(R), PentaLyte(R), and HetaCool(TM). Hextend and PentaLyte are our proprietary hydroxyethyl starch-based synthetic blood plasma volume expanders designed to treat loss of blood volume in surgery and trauma care patients. Hextend and PentaLyte may be used in similar surgical and trauma care procedures, but Hextend is designed for use when for medical reasons a physician determines to use a plasma volume expander that remains in the patient's blood stream longer. HetaCool is a modified formulation of Hextend and is specifically designed for use at low temperatures.

We have completed the submission of a new drug application to the United States Food and Drug Administration, seeking approval to market Hextend in the United States. The FDA has completed its review of our application, and during November 1998 we received an action letter from them requesting several clarifications. We have responded to the FDA's request and we are presently awaiting their approval.

BioTime and Abbott Laboratories have entered into a license agreement under which we granted to Abbott an exclusive license to manufacture and sell Hextend in the United States and Canada for all therapeutic uses other than those involving hypothermic surgery, or the replacement of substantially all of a patient's circulating blood volume. We still retain all rights to manufacture, sell or license Hextend and other products in all other countries.

BioTime was incorporated under the laws of the State of California on November 30, 1990. BioTime's principal office is located at 935 Pardee Street, Berkeley, California 94710. Its telephone number is (510) 845-9535.

Hextend(R) and PentaLyte(R) are registered trademarks, and HetaCool(TM) is a trademark, of BioTime, Inc.

## Purpose of the Rights Offer

- \* Costs of conducting additional clinical trials of BioTime products;
- \* Costs of seeking foreign regulatory approval of Hextend;
- \* Continued research and product development; and
- \* General and administrative expenses.

We are issuing the rights to raise additional capital without diluting the ownership interests of existing shareholders who exercise their rights, and without paying underwriting commissions and expenses. Shareholders who exercise their rights will be able to purchase shares at a price below market, without incurring broker's commissions.

Generally, shareholders who exercise their rights in full will be able to maintain their prorata share of BioTime's outstanding common shares. However, if the rights offer is over-subscribed and BioTime issues additional common shares to fill over-subscriptions, shareholders who do not purchase their prorata portion of those additional shares by over-subscribing would experience a reduction in their percentage interests in BioTime's outstanding shares. The distribution of the rights to shareholders will also afford those shareholders who choose not to exercise their rights the potential of receiving a cash payment upon the sale of their rights. Therefore, the receipt of rights by shareholders who choose not to exercise their rights may be viewed as compensation for the possible dilution.

## Terms of The Rights Offer

Securities Offered ....... The rights will entitle you to subscribe for and

	purchase one new common share for every 20 rights you hold.
Subscription Price	The subscription price per common share is \$
Over-Subscription Privilege	Shareholders who fully exercise the rights initially issued to them will be entitled to the additional privilege of subscribing for and purchasing any common shares not acquired by other holders of rights. See "The Rights OfferOver-Subscription Privilege."

How to Exercise Rights .....

The rights will be evidenced by subscription certificates, which will be distributed to shareholders. You may exercise your rights by completing the subscription certificate and delivering it, together with payment of the subscription price, to the subscription agent, American Stock Transfer & Trust Company, 40 Wall Street, 46th Floor, New York, New York 10005. Payment may be made either by check drawn on a United States bank, or by notice of guaranteed delivery, as explained under "The Rights Offer--Payment for Shares." Rights must be exercised no later than the expiration date. You may not rescind a purchase after exercising your rights.

Sale of Rights .....

The rights are transferable until the last business day prior to the expiration date. A business day is a day on which Nasdaq trades. The rights have been authorized for trading on Nasdaq. Trading of the rights will be conducted on a regular-way basis from February , 1999 through the last business day prior to the expiration date. Any commissions in connection with the sale of rights will be paid by the selling rights holder. BioTime and the subscription agent cannot assure that a market for the rights will develop, or the prices at which rights may be sold if a market does develop.

Participation by Officers, Directors and Certain Financial Consultants ..... Officers,

directors, and certain financial consultants of BioTime who own, in the aggregate, 2,341,989 common shares, have informed BioTime that they intend to purchase up to 117,099 common shares through the exercise of rights distributed to them, provided that suitable financial arrangements can be made, but they are not legally bound to do so.

Foreign Restrictions ......

Subscription certificates will not be mailed to shareholders whose addresses of record are outside the United States. The rights will be held by the subscription agent for foreign shareholders' accounts until instructions are received to exercise, sell or transfer the rights. If no instructions are received by 12:00 noon, New York time on March, 1999, which is three business days prior to the expiration date, the subscription agent will use its best efforts to sell the rights of foreign shareholders. The net proceeds, if any, from such a sale will be paid to the foreign shareholders on a prorata basis. See "The Rights Offer--Foreign Rights Offer--Foreign Shareholders."

Important Dates to

Remember ..... Record Date: January 5, 1999

Expiration Date: March \_\_, 1999
Last Date of Guaranteed Delivery: March \_\_, 1999

Amendment, Extension or Termination of

or Termination of
the Rights Offer .......

BioTime may, in its sole discretion: (a)
terminate the rights offer prior to delivery of
the common shares for which rights holders have
subscribed; (b) extend the expiration date to a
later date; (c) change the record date prior to
the distribution of the rights to shareholders;
or (d) amend or modify the terms of the rights
offer.

#### RISK FACTORS

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

If We Do Not Receive FDA And Other Regulatory Approvals We Will Not Be Permitted To Sell Our Products

The products that we develop cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. This means that:

- \* We will have to conduct expensive and time consuming clinical trials of new products;
- \* We will incur the expense and delay inherent in seeking FDA approval of new products;
- \* 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.

Because Our Products Are Not Yet On The Market, We Cannot Be Sure If We Will Receive Revenues From Product Sales

- \* Our products are not yet on the market;
- \* Our products cannot be sold until the products are approved by the FDA and foreign regulatory authorities;
- \* We have not yet received FDA approval to sell any of our products; and
- \* It can take several months for a pharmaceutical company to introduce a new product to the market.

We May Not Succeed In Marketing Our Products Due To The Availability Of Competing Products

Our ability to generate operating revenue depends upon our success in developing and marketing our products. There can be no assurance that any of our products will be successfully marketed or that we will receive sufficient revenues from product sales to meet our operating expenses or to earn a profit.

- \* 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.
- \* Our plasma expander products will compete with other products, including albumin and other colloid solutions, and crystalloid solutions. Some of these products, in particular crystalloid solutions, are commonly used in surgery and trauma care and sell at low prices.
- \* In order to compete with other products, particularly those that sell at lower prices, BioTime products will have to be recognized as providing medically significant advantages.
- \* Competing products are being manufactured and marketed by established pharmaceutical companies with more resources than BioTime. For example, DuPont Pharmaceuticals presently markets Hespan, an artificial plasma volume expander, and Viaspan, a solution for use in the preservation of kidneys, livers and pancreases for surgical transplant. Abbott manufactures and sells a generic equivalent of Hespan.
- \* There also is a risk that BioTime's 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 BioTime's experimental products and technologies have not been applied in human medicine and have only been used in laboratory studies on animals, and there can be no assurance that those products will prove to be useful in human medicine.
- \* The experimentation we are doing is costly, time consuming and uncertain as to its results.
- \* 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.

We Might Not Be Able To Raise Additional Capital Needed To Pay Our Operating Expenses

We may need to raise additional capital after the rights offer. 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 BioTime to develop and market its products. Unless BioTime is able to generate sufficient revenue or raise additional funds when needed, it is likely that it will be unable to continue its planned activities, even if it is making progress with its research and development projects. We believe that our cash on hand before the rights offer will be sufficient to permit BioTime to continue in operation for at least 12 months. We expect to continue to incur substantial research, product development, and regulatory expenses.

If We Are Unable To Enter Into Additional Licensing Or Manufacturing Arrangements, We May Have To Incur Significant Expenses To Acquire Manufacturing Facilities And A Marketing Organization

BioTime presently does not have adequate facilities or resources to manufacture its products or the hydroxyethyl starches used in its products. We have granted Abbott an exclusive license to manufacture and market Hextend in the United States and Canada, and we plan to enter into arrangements with pharmaceutical companies for the production and marketing of BioTime products in other countries. Although a number of other pharmaceutical companies have expressed their interest in obtaining licenses to manufacture and market BioTime products in other countries, there can be no assurance that we will be successful making other licensing arrangements. If additional licensing or manufacturing arrangements cannot be made on acceptable terms, we may have to construct or acquire our own manufacturing facilities and to establish our own marketing organization, which would entail significant expenditures of time and money.

Our Patents May Not Protect Our Products From Competition

BioTime has patents in the United States, Israel, and South Africa, and has filed patent applications in other foreign countries, for certain products, including Hextend, HetaCool, and PentaLyte. No assurance can be given that any additional patents will be issued to us, or that, if issued, those patents will provide BioTime with meaningful patent protection, or that others will not successfully challenge the validity or enforceability of any patent issued to BioTime. The costs required to uphold the validity and prevent infringement of any patent issued to BioTime could be substantial, and we might not have the resources available to defend our patent rights.

The Price And Sales Of Our Products May Be Limited By Health Insurance Coverage And Government Regulation

Success in selling BioTime's 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. There can be no assurance that adequate health insurance, HMO, and government coverage will be available to permit our products to be sold at prices high enough for us to generate a profit. In some foreign countries, pricing or profitability of

health care products is subject to government control. 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.

Our Business Could Be Adversely Affected If We Lose The Services Of The Key Personnel Upon Whom We Depend

BioTime depends to a considerable degree on the continued services of its executive officers. Although BioTime maintains key man life insurance in the amount of \$1,000,000 on the life of Dr. Paul Segall, the loss of the services of any of the executive officers could have a material adverse effect on BioTime. In addition, our success will depend, among other factors, upon successful recruitment and retention of additional highly skilled and experienced management and technical personnel.

Sales Of Our Products Could Be Impaired If Year 2000 Problems Impede Our Manufacturers And Suppliers

Because we do not have our own pharmaceutical production facilities, we will rely upon Abbott and others to manufacture and distribute our products. Our future sales could be adversely affected if year 2000 problems were to impede the ability of those companies to manufacture and distribute our products or to provide raw materials used in the manufacture of our products. We do not have a contingency plan to address those problems if they were to arise, and we may not be able to replace Abbott or any other company that may obtain a license to manufacture and distribute our products. Abbott has announced the implementation of a program to assess and remedy any year 2000 problems that may affect its operations, and has asked its key suppliers to certify that their systems are year 2000 compliant. The results of the year 2000 compliance programs implemented by Abbott and its suppliers are not presently known.

Because We Do Not Pay Dividends,  $\,$  Our Stock May Not Be A Suitable Investment For Anyone Who Needs To Earn Dividend Income

BioTime does not pay cash dividends on its common shares. For the foreseeable future we anticipate that any earnings generated in our business will be used to finance the growth of BioTime 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.

Because We Are A Drug Development Company, The Price Of Our Stock May Rise And Fall Rapidly

The common shares are traded on Nasdaq. The market price of the common shares, like that of the common stock of many biotechnology companies, has been highly volatile. The price of BioTime shares may rise rapidly in response to certain events, such as the commencement of clinical trials of an experimental new drug, even though the outcome of those trials and the likelihood of ultimate FDA approval remains uncertain. Similarly, prices of BioTime shares may fall rapidly in response to certain events such as unfavorable results of clinical trials or a delay or failure to obtain FDA approval. In the event that BioTime achieves earnings from the sale of products, securities analysts may begin predicting quarterly earnings. The failure of BioTime's earnings to meet analysts' expectations could result in a significant rapid decline in the market price of BioTime's common shares. In addition, the stock market has experienced and continues to experience extreme price and volume fluctuations which have affected the market price of the equity securities of many biotechnology companies and which have often been unrelated to the operating performance of these companies. Broad market fluctuations, as well as general economic and political conditions, may adversely affect the market price of the common shares.

The Market Price Of Our Common Shares Could Decline If We Do Not Meet The Requirements For Continued Listing On Nasdaq

BioTime's common shares are traded on the Nasdaq National Market, which has adopted rules that establish criteria for initial and continued listing of securities. Under the rules for continued

listing on the Nasdaq National Market, a company must maintain at least \$4,000,000 of net tangible assets, or a market capitalization of at least \$50,000,000, or total assets and total revenue of at least \$50,000,000 for the most recently completed fiscal year or two of the three most recently completed fiscal years. Although BioTime had a market capitalization in excess of \$50,000,000 on the date of this prospectus, and will have net tangible assets in excess of \$4,000,000 if a sufficient number of common shares are sold in the Rights offer, future losses from operations could cause BioTime's net tangible assets or market capitalization to decline below the Nasdaq listing criteria in the future. If the common shares are delisted from the Nasdaq National Market, trading in the common shares could be conducted on the Nasdaq SmallCap Market or on an electronic bulletin board established for securities that do not meet the Nasdaq listing requirements. If the common shares were delisted from the Nasdaq National Market and were not listed on the Nasdaq SmallCap Market, they would be subject to the so-called penny stock rules that impose restrictive sales practice requirements on broker-dealers who sell those securities. Consequently, delisting, if it occurred, could affect the ability of shareholders to sell their common shares in the secondary market.

#### THE COMPANY

BioTime is developing synthetic solutions that can be used as blood plasma volume expanders, blood replacement solutions during "hypothermic" or low temperature surgery, and organ preservation solutions. Plasma volume expanders are used to treat decreased blood volume resulting from blood loss in surgical or trauma patients. We are developing products that may be used in large volumes, even when blood loss becomes so severe that a transfusion of packed red blood cells or other blood products is required. We are also developing a specially formulated hypothermic blood replacement solution that would be used for the replacement of a patient's circulating blood volume during cardiac surgery, neurosurgery and other surgeries that involve lowering the patient's body temperature.

Our first three blood volume replacement products are Hextend, PentaLyte, and HetaCool. Hextend and PentaLyte are our proprietary hydroxyethyl starch-based synthetic blood plasma volume expanders designed to treat loss of blood volume in surgery and trauma care patients. Hextend and PentaLyte may be used in similar surgical and trauma care procedures, but Hextend is designed for use when for medical reasons a physician determines to use a plasma volume expander that remains in the patient's blood stream longer. HetaCool is a modified formulation of Hextend and is specifically designed for use at low temperatures.

Hextend, PentaLyte and HetaCool have been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. Other products, known as colloid and crystalloid solutions, are being marketed by other companies for use in maintaining patient fluid volume in surgery and trauma care, but the use of those solutions can contribute to patient morbidity, including conditions such as hypovolemia, edema, impaired blood clotting, acidosis, and other biochemical imbalances. Hextend, PentaLyte, and HetaCool contain ingredients that may prevent or reduce the physiological imbalances that can cause those problems. Our products do not contain albumin. Albumin produced from human plasma is expensive and subject to supply shortages, and a recent FDA warning has cautioned physicians about the risk of administering albumin to seriously ill patients.

We have submitted a new drug application to the FDA, seeking approval to market Hextend in the United States. The FDA has completed its review of our application, and during November 1998 we received an action letter from them requesting several clarifications. We have responded to the FDA's request and we are presently awaiting their approval.

The new drug application includes data from our Phase III clinical trials, in which the primary endpoints were successfully met when Hextend was used as a plasma volume expander in surgery. An important goal of the Hextend development program was to produce a product that can be used in multi-liter volumes to treat patients who have lost a large volume of blood. An average of 1.6 liters of Hextend was used in the clinical trials, and volumes ranging from two to five liters were used in some

of the higher blood loss cases. The safety related secondary endpoints targeted in the study included those involving coagulation. We believe that the low incidence of adverse events related to blood clotting in the Hextend patients demonstrates that Hextend may be safely used in large amounts. However, the FDA will make its own evaluation of the clinical trial data and there is no assurance that the FDA will approve BioTime's new drug application.

On April 23, 1997, BioTime and Abbott Laboratories entered into a license agreement under which we granted to Abbott an exclusive license to manufacture and sell Hextend in the United States and Canada for all therapeutic uses other than those involving hypothermic surgery or the replacement of substantially all of a patient's circulating blood volume. We still retain all rights to manufacture, sell or license Hextend and other products in all other countries.

Under the license agreement, Abbott agreed to pay BioTime up to \$40,000,000 in license fees based upon product sales and the achievement of certain milestones. So far, we have received \$1,650,000 of license fee milestone payments. In addition to the license fees, Abbott will pay us a royalty on annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each \$1,000,000 of total annual net sales, up to a maximum annual royalty rate of 36%. The royalty rate for each year will be applied on a total net sales basis so that once the highest royalty rate for a year is determined, that rate will be paid with respect to all sales for that year. Abbott's obligation to pay royalties on sales of Hextend will expire in the United States or Canada when all patents protecting Hextend in the applicable country expire and any third party obtains certain regulatory approvals to market a generic equivalent product in that country. Abbott also agreed to manufacture Hextend for sale by BioTime in the event that Abbott's exclusive license is terminated prior to expiration.

In order to preserve its rights to obtain an exclusive license for PentaLyte under the license agreement, Abbott notified us that Abbott will supply BioTime with batches of PentaLyte, characterization and stability studies, and other regulatory support needed for BioTime to file an investigational new drug application and to conduct clinical studies.

We plan to enter global markets through licensing agreements with over-seas pharmaceutical companies. We are in various stages of negotiations to license our products to pharmaceutical companies in countries outside the United States and Canada. By licensing our products abroad, we will avoid the capital costs and delays inherent in acquiring or establishing our own pharmaceutical manufacturing facilities and establishing an international marketing organization.

A number of pharmaceutical companies in Europe, Asia and other markets around the world have expressed their interest in obtaining licenses to manufacture and market BioTime products. We met with representatives of Nihon Pharmaceutical Company, Ltd. in Japan to discuss the development of BioTime products for the Japanese market, and the development of a clinical trial program to obtain Japanese regulatory approval. Nihon previously signed a letter of intent to negotiate a licensing agreement to manufacture and market our products in Japan. Nihon is a subsidiary of Takeda Chemical Industries, Japan's largest pharmaceutical manufacturer.

We are also pursuing a global clinical trial strategy, the goal of which is to permit BioTime to obtain regulatory approval for its products as quickly and economically as practicable. For example, the United States Phase III clinical trials of Hextend involved 120 patients and were completed in less than 12 months. Although regulatory requirements vary from country to country, we may be able to file applications for foreign regulatory approval of our products based upon the results of the United States clinical trials. Based upon discussions with the Canadian Bureau of Pharmaceutical Assessment, we plan to file for Canadian market approval based upon the results of our United States clinical trials. Regulatory approvals for countries that are members of the European Union may be obtained through a mutual recognition procedure. We plan to determine whether one or more member nations will accept an application based upon the United States clinical trials. If approvals based upon those trials can be obtained in the requisite number of member nations, then we would be permitted to market Hextend in all 16 member nations.

We are conducting a pilot study of the use of Hextend to treat hypovolemia in geriatric patients undergoing high blood loss surgery. This new clinical trial is a double blind study designed to compare

Hextend with a hetastarch in saline solution and is intended to confirm and expand upon the results of the United States Phase III trials. This pilot study may be used to design larger scale trials that may be needed to obtain regulatory approval in Western Europe. Approximately 62 patients 65 years of age or older will be studied. The geriatric population generally experiences a higher degree of inter-operative and post-operative mortality and morbidity than younger patients undergoing similar major surgery. We believe that in a study involving geriatric patients the advantages of Hextend will most clearly and consistently be seen. The trial is being conducted at the Middlesex and Royal Free Hospitals of the University College London Hospitals in London, England.

## Issuance of Rights

BioTime is issuing "Rights" to subscribe for common shares. The Rights will be issued to shareholders who owned BioTime shares as of the close of business on January 5, 1999, which has been set as the record date. Beneficial owners of shares held in the name of Cede & Co. as nominee for The Depository Trust Company, or in the name of any other depository or nominee, on the record date will also receive Rights. Each shareholder will be issued one Right for each common share owned on the record date. No fractional Rights will be issued. The Rights entitle the holders to acquire one common share for each 20 Rights held by paying the subscription price. Any shareholder who is issued fewer than 20 Rights may subscribe for one full common share at the subscription price. The Rights will be evidenced by subscription certificates (see Appendix A) which will be mailed to shareholders other than foreign shareholders whose record addresses are outside the United States. The United States includes the fifty states, the District of Columbia, U.S. territories and possessions.

The Rights issued to foreign shareholders will be held by the subscription agent for their accounts until instructions are received to exercise, sell, or transfer those Rights. Foreign shareholders may exercise their Rights only if it is permissible to do so under applicable foreign securities laws. If no instructions have been received by 12:00 noon, New York City time, three business days prior to the expiration date, the subscription agent will use its best efforts to sell the Rights of those foreign shareholders on Nasdaq. The net proceeds from the sale of those Rights will be paid to the foreign shareholders. See "Sale of Rights".

Officers, directors, and certain financial consultants of BioTime who own, in the aggregate, 2,341,989 common shares, have informed BioTime that they intend to purchase up to 117,099 common shares through the exercise of the Rights distributed to them, provided that suitable financial arrangements can be made, but they are not legally bound to do so. Any common shares acquired by officers, directors and other persons who are "affiliates" of BioTime, as that term is defined under the Securities Act of 1933, may only be sold in accordance with Rule 144 under the Securities Act or pursuant to an effective registration statement under the Securities Act. In general, under Rule 144, as currently in effect, an "affiliate" of BioTime is entitled to sell, within any three-month period, a number of shares that does not exceed the greater of 1% of the then-outstanding common shares or the average weekly reported trading volume of the common shares during the four calendar weeks preceding the sale. Sales under Rule 144 are also subject to certain restrictions on the manner of sale, to notice requirements and to the availability of current public information about BioTime.

## Purpose of the Rights Offer

The Board of Directors of BioTime has determined that it is necessary for BioTime to raise additional capital at this time to finance its operations, including:

- \* Costs of conducting additional clinical trials of BioTime products;
- \* Costs of seeking foreign regulatory approval of Hextend;
- \* Continued research and product development; and
- \* General and administrative expenses.

BioTime is waiting for FDA approval to market Hextend in the United States. Abbott Laboratories has the exclusive right to market Hextend in the United States following FDA approval, but several months will elapse between the commencement of marketing and the payment of royalties and licensing fees on the sale of Hextend. Until BioTime begins to receive sufficient revenues from product sales and licensing fees from Abbott or other companies that may obtain a license to sell BioTime products, it will have to finance its operations with its cash on hand, the funds received from shareholders who exercise their Rights, and any additional capital raised through other sales of equity securities.

The Rights offer provides an opportunity for BioTime to raise additional capital without diluting the ownership interests of existing shareholders who exercise their Rights, and without paying underwriting commissions and expenses. Shareholders who exercise their Rights will be able to purchase BioTime shares at a price below market, without incurring broker's commissions. Generally, shareholders who exercise their Rights in full will be able to maintain their prorata share of BioTime's outstanding common shares. However, if the Rights offer is over-subscribed and BioTime issues additional common shares to fill over-subscriptions, shareholders who do not purchase their prorata portion of those additional shares through the over-subscription privilege would experience a reduction in their percentage interests in BioTime's outstanding shares. The distribution of the Rights to shareholders will also afford those shareholders who choose not to exercise their Rights the potential of receiving a cash payment upon the sale of their Rights. Therefore, the receipt of Rights by shareholders who choose not to exercise their Rights may be viewed as compensation for the possible dilution of their interest in BioTime.

We considered other financing alternatives, including a private placement or underwritten public offering of newly issued shares. Those alternatives would have entailed the payment of commissions and fees to broker-dealers, and would also have been dilutive to BioTime shareholders because the shares would have been sold to new investors. In the case of a private placement, the sale would probably have been made at a discount to market. In contrast, the sale of shares through the Rights offer will permit BioTime to incur lower transaction fees in raising capital and will permit the shareholders who exercise their Rights to enjoy the price discount that might otherwise have been realized by new investors. During January and February 1997, BioTime conducted a similar subscription rights offer that was over-subscribed, leading BioTime to conclude that the Rights offer might be a better alternative to the other sources of financing.

## The Subscription Price

The subscription price for the common shares to be issued pursuant to the Rights offer is \$\_\_\_\_\_\_. We announced the Rights offer on December 18, 1998. The last reported sale price of the common shares on Nasdaq on December 18, 1998 and February \_\_\_, 1999, was \$\_\_\_\_\_ and \$\_\_\_\_\_, respectively.

## Expiration of the Rights Offer

The Rights offer will expire at 5:00~p.m., New York City time, on March  $\_$ , 1999, the expiration date. Rights will expire on the expiration date and may not be exercised after that date.

## Exercise of Rights

In order to exercise your Rights you must do all of the following:

- \* Fill in and sign the reverse side of the subscription certificate which accompanies this prospectus;
- \* Deliver the completed and signed subscription certificate to the subscription agent with your payment in full for the common shares you wish to purchase. You may use the enclosed envelope to mail the subscription certificate and payment to the subscription agent or you may arrange for one of the alternative methods of delivery described below.
- \* The method of making payment for your shares is described below under "Payment for Shares."
- \* Properly completed and executed subscription certificates must be received by the subscription agent at the offices of the subscription agent at the address set forth below prior to 5:00 p.m., New York City time, on the expiration date, unless payment is effected by means of a notice of guaranteed delivery as described below under "Payment for Shares."
- \* Rights may also be exercised through a broker, who may charge you a servicing fee.

You should send your signed subscription certificates, accompanied by payment of the subscription price, to American Stock Transfer & Trust Company, the subscription agent, by one of the methods described below:

(1) By mail or by hand:

American Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005

(2) By express mail or overnight courier:

American Stock Transfer & Trust Company Exchanges and Tenders 40 Wall Street, 46th Floor New York, New York 10005

(3) By facsimile (telecopier):

(718) 236-4588 or (718) 234-5001

You should confirm that your facsimile has been received by contacting the subscription agent by telephone at (718) 921-8200. If you deliver your subscription certificate by telecopier, you must send the original subscription certificate to the subscription agent by mail or hand delivery.

Do not send subscription certificates to BioTime.

A subscription will be deemed accepted by the subscription agent when payment, together with a properly completed and executed subscription certificate, is received by the subscription agent at its Exchanges and Tenders Department.

If you are issued fewer than 20 Rights, you may subscribe for one full common share. Fractional shares will not be issued, and if after exercising your Rights you are left with fewer than 20 Rights, you will not be able to exercise your remaining Rights.

If you do not indicate the number of Rights you are exercising, or if you do not deliver full payment of the subscription price for the number of shares that you indicate you are subscribing for, then you will be deemed to have exercised Rights to purchase the maximum number of common shares determined by dividing the total subscription price you paid by the subscription price per share.

If you submit payment for more shares than may be purchased through the regular exercise of your Rights, your excess payment will be deemed to be a subscription payment for additional shares through the over-subscription privilege. The number of additional shares that you will be deemed to have subscribed for in the over-subscription privilege will be determined by dividing the amount of the excess payment by the subscription price per share.

All questions concerning the timeliness, validity, form and eligibility of any exercise of Rights or subscriptions pursuant to the over-subscription privilege will be determined by BioTime. BioTime's determination will be final and binding. BioTime in its sole discretion may waive any defect or irregularity, or may permit any defect or irregularity to be corrected, within such time as BioTime may determine. BioTime may reject, in whole or in part, the purported exercise of any Right or any subscription pursuant to the over-subscription privilege. Neither BioTime nor the subscription agent will be under any duty or obligation to give any notification or to permit the cure of any defect or irregularity in connection with the submission of any subscription certificate, the exercise or attempt to exercise any Right or the over-subscription privilege, or the payment of the subscription price. Subscriptions through the exercise of Rights or the over-subscription privilege will not be deemed to have been received or accepted by BioTime until all irregularities or defects have been waived by BioTime or cured to the satisfaction of, and within the time allotted by, BioTime in its sole discretion.

The over-subscription privilege may allow you to acquire more common shares than the number issuable upon the exercise of the Rights initially issued to you. By exercising the over-subscription privilege, you may purchase any shares that are left over by shareholders who fail to exercise their Rights.

The over-subscription privilege may only be exercised by Rights holders who were shareholders on the record date and who exercise all of the Rights they received from BioTime. Any person who purchases Rights and who was not a shareholder on the record date may not exercise the over-subscription privilege. Shareholders such as broker-dealers, banks, and other professional intermediaries who hold shares on behalf of clients, may participate in the over-subscription privilege for the client if the client fully exercises all Rights attributable to him.

If you are eligible to exercise the over-subscription privilege and you wish to do so, you should indicate on your subscription certificate how many common shares you are willing to acquire through the over-subscription privilege. If sufficient common shares remain unsold, all over-subscriptions will be honored in full.

If you were a shareholder on the record date and you wish to exercise the over-subscription privilege through The Depository Trust Corporation, you must properly execute and deliver to the subscription agent a DTC Participant Over-Subscription Form, together with payment of the subscription price for the number of common shares that you wish to purchase through the over-subscription privilege. Copies of the DTC Participant Over-Subscription Form may be obtained from the subscription agent. Your properly executed DTC Participant Over-Subscription Form and payment must be received by the subscription agent at or prior to 5:00 p.m., New York City time on the expiration date.

If you are eligible to exercise the over-subscription privilege but you do not deliver full payment of the subscription price for the number of shares that you indicate you are subscribing for through the over-subscription privilege, then you will be deemed to have exercised the over-subscription privilege to purchase the maximum number of common shares determined by dividing the total subscription price paid (in excess of the subscription price for the number of common shares you purchased through the full exercise of your Rights) by the subscription price per share.

If subscriptions for common shares through the over-subscription privilege exceed the initial 501,654 common shares being offered by BioTime through the exercise of the Rights, BioTime may issue up to 250,000 additional common shares to fill all or a portion of the over-subscriptions. The issuance of additional common shares to fill over-subscriptions may dilute the percentage ownership interests of other shareholders.

BioTime will not be obligated to issue any common shares to fill over-subscriptions, but it may do so in its sole and absolute discretion. BioTime reserves the right to limit the number of common shares issued to fill an over-subscription from any single shareholder or from shareholders that are known or believed by BioTime to be under common control or acting as a group for the purpose of acquiring common shares.

Subject to the right of BioTime to limit the number of common shares issuable to any shareholder, if the Rights offer is over-subscribed so that over-subscriptions cannot be filled in full, the available common shares will be allocated among those who over-subscribe based on the number of Rights originally issued to them, so that the number of common shares issued to shareholders who subscribe pursuant to the over-subscription privilege will generally be in proportion to the number of common shares owned by them on the record date. The percentage of available common shares each over-subscribing shareholder may acquire may be rounded up or down to result in delivery of whole shares. The allocation process may involve a series of allocations in order to assure that the total number of shares available for over-subscriptions is distributed on a prorata basis. If you are not allocated the full amount of shares that you subscribe for pursuant to the over-subscription privilege, you will receive a refund of the subscription price you paid for shares that are not allocated to and purchased by you. The refund will be made by a check mailed by the subscription agent.

If you wish to exercise your Rights or to acquire common shares pursuant to the over-subscription privilege, you may choose between the following methods of payment:

1. You may send to the subscription agent full payment for all of the common shares you wish to acquire. Include full payment for any additional common shares that you desire to acquire through the over-subscription privilege, if you are entitled to exercise the over-subscription privilege. Make sure that your payment is accompanied by your completed and signed subscription certificate. The payment and properly completed and executed subscription certificate must be received by the subscription agent no later than 5:00 p.m., New York City time, on the expiration date. The subscription agent will deposit all checks received by it for the purchase of common shares into a segregated interest-bearing account of BioTime pending proration and distribution of common shares. The interest earned on the account will belong to BioTime.

To be accepted, a payment pursuant to this method must be made in the following manner:

- \* The payment must be in U.S. dollars;
- \* The payment must be by money order or check drawn on a bank located in the United States;
- \* The payment must be payable to BioTime, Inc.; and
- \* The payment must accompany a properly completed and executed subscription certificate.
- 2. Alternatively, a subscription will be accepted by the subscription agent if the subscription agent has received a notice of guaranteed delivery by facsimile telecopy or otherwise from a bank, a trust company, or a New York Stock Exchange member guaranteeing delivery of (1) payment of the full subscription price for the common shares subscribed for, including any additional common shares subscribed for pursuant to the over-subscription privilege, and (2) a properly completed and executed subscription certificate. The notice of guaranteed delivery must be received by the subscription agent before 5:00 p.m., New York City time, on the expiration date. The subscription agent will not honor a notice of guaranteed delivery unless a properly completed and executed subscription certificate and full payment for the common shares is received by the subscription agent by the close of business on the third business day after the expiration date.

You will not be allowed to rescind your purchase after the subscription agent has received payment either by means of a notice of guaranteed delivery or a check or money order.

Nominees who hold common shares for the account of others, such as brokers, trustees or depositories for securities, should notify the respective beneficial owners of the common shares as soon as possible to ascertain the beneficial owners' intentions and to obtain instructions with respect to the Rights. If the beneficial owner so instructs, the nominee should complete the subscription certificate and submit it to the subscription agent with the proper payment. In addition, beneficial owners of common shares or Rights held through a nominee should contact the nominee and request the nominee to effect transactions in accordance with the beneficial owner's instructions.

## Sale of Rights

The Rights are transferable until the last business day prior to the expiration date and will be listed for trading on the Nasdaq SmallCap Market. Assuming a market for the Rights develops, the Rights may be purchased and sold through usual brokerage channels. Although no assurance can be given that a market for the Rights will develop, trading in the Rights may be conducted until and including the close of trading on the last business day prior to the expiration date.

You may transfer some or all the Rights evidenced by your subscription certificate by following these instructions and the instructions on the back of your subscription certificate. If you wish to transfer all of your Rights, you need only sign your subscription certificate and deliver it to the subscription agent. If you wish to transfer some but not all of your Rights, you must also deliver to

the subscription agent a subscription certificate properly endorsed for transfer with instructions to register the portion of the Rights evidenced by the subscription certificate in the name of the transferee and to issue a new subscription certificate to the transferee evidencing the number of Rights transferred. In that event, a new subscription certificate evidencing the balance of the Rights will be issued to you or, if you so instruct, to an additional transferee.

If you wish to transfer all or a portion of your Rights, you should allow sufficient time prior to the expiration date for (1) the transfer instructions to be received and processed by the subscription agent; (2) a new subscription certificate to be issued and transmitted to the transferee or transferees with respect to transferred Rights, and to you with respect to retained Rights, if any; and (3) the Rights evidenced by the new subscription certificate to be exercised or sold by the recipients. BioTime and the subscription agent shall have no liability to a transferee or transferor of Rights if subscription certificates are not received in time for exercise or sale prior to the expiration date.

BioTime anticipates that the Rights will be eligible for transfer through the facilities of The Depository Trust Company.

Except for the fees charged by the subscription agent (which will be paid by BioTime), all commissions, fees and other expenses, including brokerage commissions and transfer taxes, incurred in connection with the purchase, sale or exercise of Rights will be for the account of the transferor of the Rights, and none of those commissions, fees or expenses will be paid by BioTime or the subscription agent.

Amendment, Extension or Termination of the Rights Offer

BioTime reserves the right, in its sole discretion, to: (a) terminate the Rights offer prior to delivery of the common shares for which Rights holders have subscribed; (b) extend the expiration date to a later date; (c) change the record date prior to distribution of the Rights to shareholders; or (d) amend or modify the terms of the Rights offer. If BioTime amends the terms of the Rights offer, an amended prospectus will be distributed to you if you are a holder of record of Rights or if you previously exercised any of your Rights. If you exercised your Rights prior to the amendment or within four business days after the mailing of the amended prospectus, you will be given the opportunity to confirm the exercise of your Rights by executing and delivering a consent form.

If you exercise Rights before or within four days after mailing of an amended prospectus relating to an amendment of the Rights offer and you fail to deliver, in a proper and timely manner, a properly executed consent form, you will be deemed to have rejected the amended terms of the Rights offer and you will be deemed to have elected to revoke in full the exercise of your Rights and the over-subscription privilege. If your exercise of Rights is so revoked, the full amount of the subscription price you paid will be returned to you.

If your executed subscription certificate is received by the subscription agent more than four days after the mailing of an amended prospectus, you will be deemed to have accepted the amended terms of the Rights offer in connection with the exercise of your Rights and the over-subscription privilege.

If BioTime elects to terminate the Rights offer before delivering the common shares for which you subscribed, the subscription price you paid will be returned to you by mail. Except for the obligation to return the subscription price you paid when you attempted to exercise your Rights, neither BioTime nor the subscription agent will have any obligation or liability to you in the event of an amendment or termination of the Rights offer.

Delivery of Share Certificates

Certificates representing the common shares you purchased by exercising your Rights will be delivered to you as soon as practicable after your Rights have been validly exercised and full payment for the common shares has been received and cleared. Certificates representing common shares you purchase pursuant to the over-subscription privilege will be delivered to you as soon as practicable after the expiration date and after all allocations have been effected. It is expected that the certificates will be available for delivery three business days following the expiration date.

#### Subscription Agent

The subscription agent is American Stock Transfer & Trust Company, which will receive for its administrative, processing, invoicing and other services as subscription agent, a fee estimated to be \$25,000, and reimbursement for all out-of-pocket expenses related to the Rights offer. The subscription agent is also BioTime's transfer agent and registrar. Questions regarding the subscription certificates should be directed to American Stock Transfer & Trust Company, 40 Wall Street, New York, New York, 10005; telephone (718) 921-8200. Shareholders may also consult their brokers or nominees.

Federal Income Tax Consequences

- The U.S. Federal income tax consequences to holders of common shares with respect to the Rights offer will be as follows:
  - 1. The distribution of Rights will not result in taxable income nor will the holder realize taxable income as a result of the exercise of Rights.
  - 2. The basis of a Right will be: (a) to a holder of common shares to whom it is issued, and who exercises or sells the Right (1) zero, if the market value of the Right immediately after issuance is less than 15% of the market value of the common share with regard to which it is issued, unless the holder elects, by filing a statement with his timely filed federal income tax return for the year in which the Rights are received, to allocate the basis of the common share between the Right and the common share based on their respective market values immediately after the Right is issued, and (2) a portion of the basis in the common share based upon the respective values of the common share and the Right immediately after the Right is issued, if the market value of the Right immediately after issuance is 15% or more of the market value of the common share with respect to which it is issued; (b) zero, to a holder of common shares to whom it is issued and who allows the Right to expire; and (c) the cost to acquire the Right, to anyone who purchases a Right in the market.
  - 3. The holding period of a Right received by a holder of a common share includes the holding period of the common share.
  - 4. Any gain or loss on the sale of a Right will be treated as a capital gain or loss if the Right is a capital asset in the hands of the seller. A capital gain or loss will be long-term or short-term, depending on how long the Right has been held, in accordance with paragraph 3 above. A Right issued with regard to a common share will be a capital asset in the hands of the person to whom it is issued if the common share was a capital asset in the hands of that person. If a Right is allowed to expire, there will be no loss realized unless the Right had been acquired by purchase, in which case there will be a loss equal to the basis of the Right.
  - 5. If a Right is exercised by the holder of common shares, the basis of the common share received will include the basis allocated to the Right and the amount paid upon exercise of the Right.
  - 6. If a Right is exercised, the holding period of the common share acquired begins on the date the Right is exercised.
  - 7. Gain recognized by a non-U.S. shareholder on the sale of a Right will be taxed in the same manner as gain recognized on the sale of common shares.

Proceeds from the sale of a Right may be subject to withholding of U.S. taxes at the rate of 31% unless the seller's certified U.S. taxpayer identification number or certificate regarding foreign status is on file with the subscription agent and the seller is not otherwise subject to U.S. backup withholding. The 31% withholding tax is not an additional tax. Any amount withheld may be credited against the seller's U.S. federal income tax liability.

The foregoing is only a summary of the applicable federal income tax law and does not include any state or local tax consequences of this transaction. Shareholders and other Rights holders should consult their tax advisers concerning the tax consequences of the Rights offer.

### Special Considerations

As a result of the terms of the Rights offer, shareholders who do not fully exercise their Rights should expect that they will, at the completion of the Rights offer, own a smaller proportional interest in BioTime than would otherwise be the case.

#### USE OF PROCEEDS

The net proceeds received by BioTime from the sale of the 501,654 common shares in the Rights offer are estimated to be \$ , after deducting the expenses of the Rights offer of approximately \$115,000, but without taking into account any common shares that may be sold to fill excess over-subscriptions. BioTime intends to use the net proceeds of the Rights offer as follows:

Application	Estimated Amount	Percent of Total
Research and Development Working Capital	\$	50% 50
Total	\$ =======	100% ===

Research and Development. Proceeds allocated to research and development will be used to finance clinical testing of Hextend, HetaCool, and PentaLyte, and laboratory testing of other products being developed by BioTime. When laboratory testing of a product has been completed, a portion of the proceeds allocated to research and development may also be used to commence clinical trials of that product.

Working Capital. BioTime intends to apply the balance of the proceeds of the Rights offer to working capital and general corporate purposes. BioTime's management will have broad discretion with respect to the use of proceeds retained as working capital. The proceeds may be used to defray overhead expenses and for future opportunities and contingencies that may arise. BioTime expects that its general and administrative expenses will increase as it achieves progress in developing products and bringing them to market. For example, a portion of the proceeds allocated to working capital may be used to pay the salaries, benefits and fees to employees and consultants who assist in the preparation of applications to the FDA and foreign regulatory agencies and patent applications, and to expand BioTime's research facilities. Proceeds allocated to working capital also may be reallocated to research and development and may be used to pay the costs of clinical trials of Hextend and other products.

We recently entered into an extension of the lease of our present office and research facility that includes some additional space for expansion. A portion of the proceeds may be used to pay rent and to construct improvements to the expansion space.

The foregoing table represents only an estimate of the allocation of the net proceeds of the Rights offer based upon the current state of BioTime's product development program. The development of new medical products and technologies often involves complications, delays and costs that cannot be predicted, and may cause BioTime to make a reallocation of proceeds among the categories shown above or to other uses. BioTime may need to raise additional capital after the Rights offer to pay operating expenses until such time as it is able to generate sufficient revenues from product sales, royalties, and license fees.

Although BioTime is not presently a party to any agreement, arrangement or plan to acquire any assets or technology from a third party, BioTime might determine that it is necessary or advantageous to make such an acquisition, or BioTime might determine to concentrate its efforts and resources on the development and marketing of one or more specific products.

Until used, the net proceeds of the Rights offer 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

BioTime's Articles of Incorporation currently authorize the issuance of up to 40,000,000 common shares, no par value, of which 10,033,079 shares were outstanding at January 5, 1999 and held by 6,918 persons based upon the share position listings for the common shares. 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. BioTime has not paid any cash dividends on its common shares, and it is unlikely that any cash dividends will be declared or paid on any common shares in the foreseeable future. Instead, BioTime plans to retain its cash for use in financing its 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 prorata basis all remaining assets of BioTime available for distribution to the holders of common shares in the event of the liquidation, dissolution, or winding up of BioTime. Holders of common shares do not have any preemptive rights to become subscribers or purchasers of additional shares of any class of BioTime's capital stock.

## Preferred Shares

BioTime's Articles of Incorporation currently authorize the issuance of up to 1,000,000 preferred shares, no par value. Preferred shares may be issued by BioTime 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 the shareholders of BioTime. 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 BioTime has no present plan, arrangement or commitment to issue any preferred shares.

## Transfer Agent and Registrar

The transfer agent and registrar for the common shares is American Stock Transfer and Trust Company, 40 Wall Street, New York, New York 10005.

## LEGAL MATTERS

The validity of the Rights and common shares will be passed upon for BioTime by Lippenberger, Thompson, Welch, Soroko & Gilbert LLP, San Francisco, California. A member of Lippenberger, Thompson, Welch, Soroko & Gilbert LLP owns options to purchase 30,000 common shares.

## **EXPERTS**

The financial statements of BioTime, Inc. as of June 30, 1997 and 1998 and for each of the three fiscal years in the period ended June 30, 1998 incorporated by reference in this prospectus from BioTime's Annual Report on Form 10-K for the year ended June 30, 1998 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report (which expresses an unqualified opinion and includes an explanatory paragraph related to the development stage of BioTime's operations) incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

#### INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

BioTime's Form 10-K for the fiscal year ended June 30, 1998, Form 10-Q for the three months ended September 30, 1998, and all other reports filed by BioTime pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, since the end of the fiscal year covered by such Form 10-K are incorporated into this prospectus by reference. BioTime has announced a change of its fiscal year end from June 30 to December 31. The change took effect on December 31, 1998. BioTime will provide without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request, 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 935 Pardee Street, Berkeley, California 94710; Telephone: (510) 845-9535.

BioTime is subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and in accordance therewith files 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 BioTime files with Securities and Exchange Commission at the Commission's Public Reference Room at 450 Fifth Street, N.W., 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.

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  $\frac{1}{1000} \frac{1}{1000} \frac{1}{$ 

#### ADDITIONAL INFORMATION

BioTime has filed with the Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. a registration statement on Form S-3 under the Securities Act of 1933, as amended, for the registration of the securities 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 BioTime and the securities offered by this prospectus, reference is made to the registration statement, including the exhibits, 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.

SUBSCRIPTION CERTIFICATE FOR COMMON SHARES VOID IF NOT EXERCISED AT OR BEFORE 5:00 P.M. (NEW YORK TIME) ON MARCH \_\_\_\_, 1999, THE EXPIRATION DATE.
THIS SUBSCRIPTION CERTIFICATE IS TRANSFERRABLE

**RIGHTS** 

Expiration Date

AND MAY BE COMBINED OR DIVIDED (BUT ONLY INTO SUBSCRIPTION

SUBSCRIPTION PRICE March\_\_\_, 1999 CERTIFICATES EVIDENCING A WHOLE NUMBER OF RIGHTS) U.S. \$\_

AT THE OFFICE OF THE SUBSCRIPTION AGENT

PER SHARE

CUSIP 09066L 12 1

THIS SUBSCRIPTION CERTIFICATE MAY BE USED TO SUBSCRIBE FOR COMMON SHARES OR MAY BE ASSIGNED OR SOLD. FULL INSTRUCTIONS APPEAR ON THE BACK OF THIS SUBSCRIPTION CERTIFICATE.

REGISTERED OWNER:

The registered owner of this Subscription Certificate, named above, or assignee, is entitled to the number of Rights to subscribe for Common Shares, no par value, of BioTime, Inc. shown above, in the ratio of one Common Share for each 20 Rights held, and upon the terms and conditions and at the price for each Common Share specified in the Prospectus dated February \_\_\_\_\_, 1999.

If you exercise fewer than all the Rights represented by this Subscription Certificate, the subscription agent will issue a new Subscription Certificate representing the balance of the unexercised Rights, provided that the 

IMPOR	ΓANT:	Complete	appropriate	form	on	reverse
DATE:	Febru	uary,	1999			

BIOTIME, INC. **SECRETARY** 

CHIEF EXECUTIVE OFFICER

Countersigned: American Stock Transfer & Trust Company (New York, N.Y.) Subscription Agent

Authorized Signature

APPENDIX A

A - 1

Expiration	Date:	March		1999
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## PLEASE COMPLETE ALL APPLICABLE INFORMATION

By Mail: To: America Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005

NOT OTHERWISE SUBJECT TO U.S. BACKUP WITHHOLDING.

NAME(S) OF REGISTERED OWNER(S):

AGENT PRIOR TO THE DATE HEREOF AND COMPLETE THE FOLLOWING:

By Hand: To: America Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005 By Overnight Courier:
To: American Stock
Transfer & Trust Company
Exchanges and Tenders
40 Wall Street, 46th Floor
New York, New York 10005

SECTION 1: TO SUBSCRIBE: I hereby irrevocably subscribe for the dollar amount of Common Shares indicated as the total of A and B below upon the terms and conditions specified in the Prospectus related hereto, receipt of which is acknowledged.

TO SELL: If I have checked either the box on line C or the box on line D, I authorize the sale of Rights by the subscription agent according to the procedures described in the Prospectus. The check for the proceeds of sale will be mailed to the address of record.

Please	check [X] belo	w:						
[ ] A.	Subscription		divided by 20 =	.000	× \$	=	\$	
	- (	Rights Exercised)		(Shares Requested)	(Subscription	Price)	(Amount I	Required)
[ ] B.	Over-Subscript	ion Privilege		.000	× \$	=	\$	(*)
				(Shares Requested)	(Subscription	Price)	(Amount I	Required)
	Amount of Chec	k Enclosed or Amou	unt in Notice of	Guaranteed Deliver	y (total of A +	B) =	\$	
	Make check pay	able to the order	of "BioTime, Ind	c."				
	(*) The Over-S Prospectus		lege can be exer	cised by certain sh	areholders only,	, as desc	cribed in	the
[ ] C.	Sell any remai	ning unexercised	Rights					
[ ] D.	Sell all of my	Rights.						
Signat	ure of Subscrib	er(s)/Seller(s)	_ Please provide	your telephone num	per Day (	)		
Social	Security Number	r or Tax ID Number	r:					
SECTIO	N II: TO TRANSF	ER RIGHTS: (except	t pursuant to C a	and D above)				
For v	alue received,		of the	e Rights represente	•			_
		ber or Tax ID Nur		(Print F				
	ure(s) of Assi	gnor(s)			ull Address inc			Code)
	ignature(s) mu ular, without a		ith the name(s) a	as written upon the	face of this S	Subscript	cion Cer	tificate, in every
		fer, a signature q ture guarantee pro		e provided by an el	igible financia	l institu	ution whic	ch is a participan
SIGNAT	URE GUARANTEED	BY:						
				THHOLDING OF U.S. REIGN STATUS) IS ON				

[ ] CHECK HERE IF RIGHTS ARE BEING EXERCISED PURSUANT TO A NOTICE OF GUARANTEED DELIVERY DELIVERED TO THE SUBSCRIPTION

WINDOW TICKET NUMBER (IF ANY): DATE OF EXECUTION OF NOTICE OF GUARANTEED DELIVERY: NAME OF INSTITUTION WHICH GUARANTEED DELIVERY:

### APPENDIX B

[Form of Notice of Guaranteed Delivery]

NOTICE OF GUARANTEED DELIVERY OF SUBSCRIPTION RIGHTS AND THE SUBSCRIPTION PRICE FOR COMMON SHARES OF BIOTIME, INC. SUBSCRIBED FOR IN THE RIGHTS OFFER

As set forth in the Prospectus under "The Rights Offer--Payment for Shares," this form or one substantially equivalent may be used as a means of effecting subscription and payment for all Common Shares of BioTime, Inc. subscribed for in the Rights offer. Such form may be delivered by hand or sent by facsimile transmission, overnight courier or mail to the Subscription Agent.

> The Subscription Agent is: American Stock Transfer & Trust Company

Bv Mail: American Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005

By Facsimile: (718) 234-5001 Confirm by Telephone (718) 234-2700

By Hand: American Stock Transfer & Trust Company American Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005

By Overnight Courier: Exchanges and Tenders 40 Wall Street, 46th Floor New York, New York 10005

DELIVERY OF THIS INSTRUMENT TO AN ADDRESS, OR TRANSMISSION OF INSTRUCTIONS VIA A TELECOPY OR FACSIMILE NUMBER, OTHER THAN AS SET FORTH ABOVE, DOES NOT CONSTITUTE A VALID DELIVERY

The New York Stock Exchange member firm or bank or trust company which completes this form must communicate the guarantee and the number of shares subscribed for to the Subscription Agent and must deliver this Notice of Guaranteed Delivery guaranteeing delivery of (i) payment in full for all subscribed shares (including any shares subscribed for through the over-subscription privilege) and (ii) a properly completed and executed Subscription Certificate (which certificate and full payment must then be delivered by the close of business on the third business day after the expiration date, as defined in the Prospectus) to the Subscription Agent prior to 5:00 p.m., New York time, on the expiration date (March \_\_\_\_, 1999, unless extended). Failure to do so will result in a forfeiture of the Rights.

## **GUARANTEE**

The undersigned, a member firm of the New York Stock Exchange or a bank or trust company, guarantees delivery to the Subscription Agent by the close of business (5:00 p.m., New York time) on the third business day after the expiration date (March \_\_\_\_\_, 1999, unless extended) of (A) a properly completed and executed Subscription Certificate and (B) payment of the full subscription price of shares subscribed for in the Rights offer (including the over-subscription privilege, if applicable) as subscription for such Common Shares as indicated herein or in the Subscription Certificate.

Number of Common Shares subscribed for (excluding the over-subscription privilege) for which you are guaranteeing delivery of Rights and payment	Number of Common Shares subscribed for pursuant to the over-subscription privilege for which you are guaranteeing delivery of Rights and payment
Number of Rights to be delivered:	
Total subscription price payment to be delivered:	\$
Method of delivery [circle one]	A. Through DTC B. Direct to Corporation
Please note that if you are guaranteeing are a DTC participant, you must also exec Transfer & Trust Company a Nominee Holder Over-	cute and forward to American Stock
Name of Firm	Authorized Signature
Address	Title
Zip Code	(Type or Print)
Name of Registered Holder (If Applicable)	
Telephone Number	Date

\* IF THE RIGHTS ARE TO BE DELIVERED THROUGH DTC, A REPRESENTATIVE OF THE SUBSCRIPTION AGENT WILL PHONE YOU WITH A PROTECT IDENTIFICATION NUMBER, WHICH NEEDS TO BE COMMUNICATED BY YOU TO DTC.

PLEASE NOTE THAT IF YOU ARE GUARANTEEING FOR OVER-SUBSCRIPTION SHARES AND ARE A DTC PARTICIPANT, YOU MUST ALSO EXECUTE AND FORWARD TO THE SUBSCRIPTION AGENT A NOMINEE HOLDER OVER-SUBSCRIPTION EXERCISE FORM.

## APPENDIX C [Form of Nominee Holder Over-Subscription Exercise Form]

## BIOTIME, INC. RIGHTS OFFER NOMINEE HOLDER OVER-SUBSCRIPTION EXERCISE FORM PLEASE COMPLETE ALL APPLICABLE INFORMATION

By Mail: To: American Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005

Contact Name

Phone Number

By Hand: To: American Stock Transfer & Trust Company 40 Wall Street, 46th Floor New York, New York 10005 By Overnight Courier:
To: American Stock
Transfer & Trust Company
Exchanges and Tenders
40 Wall Street, 46th Floor
New York, New York 10005

State

Citv

Name:

Zip Code

New York, New York 10005 THIS FORM IS TO BE USED ONLY BY NOMINEE HOLDERS TO EXERCISE THE OVER-SUBSCRIPTION PRIVILEGE IN RESPECT OF RIGHTS THAT WERE EXERCISED AND DELIVERED THROUGH THE FACILITIES OF A COMMON DEPOSITORY. ALL OTHER EXERCISES OF OVER-SUBSCRIPTION PRIVILEGES MUST BE EFFECTED BY THE DELIVERY OF THE SUBSCRIPTION CERTIFICATES. THE TERMS AND CONDITIONS OF THE RIGHTS OFFER ARE SET FORTH IN BIOTIME'S PROSPECTUS DATED FEBRUARY 1999 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM BIOTIME. VOID UNLESS RECEIVED BY THE SUBSCRIPTION AGENT WITH PAYMENT IN FULL BY 5:00 P.M., NEW YORK TIME, ON MARCH \_ 1999, UNLESS EXTENDED BY BIOTIME (THE "EXPIRATION DATE"). The undersigned hereby certifies to the Subscription Agent that it is a participant in [Name of Depository] (the "Depository") and that it has either (i) exercised all of the Rights and delivered such exercised Rights to the Subscription Agent by means of transfer to the Depository Account of BioTime, Inc., or (ii) delivered to the Subscription Agent a Notice of Guaranteed Delivery in respect of the exercise of the Rights and will deliver the Rights called for in such Notice of Guaranteed Delivery to the Subscription Agent by means of transfer to such Depository Account of BioTime, Inc. The undersigned hereby exercises the over-subscription privilege to purchase, to the extent available, Shares and certifies to the Subscription Agent that such over-subscription privilege is being exercised for the account or accounts of persons (which may include the undersigned) on whose behalf all Rights have been exercised.(\*) The undersigned understands that payment of the subscription price of \$\_ per share for each Common Share subscribed for pursuant to the over-subscription privilege must be received by the Subscription Agent at or before 5:00 p.m., New York time, on the Expiration Date, and represents that such payment, in the aggregate amount of \_\_\_ either (check appropriate box): [ ] has been or is being delivered to the Subscription Agent pursuant to the Notice of Guaranteed Delivery referred to above or; [ ] is being delivered to the Subscription Agent herewith or; [ ] has been delivered separately to the Subscription Agent; and, in the case of funds not delivered pursuant to a Notice of Guaranteed Delivery, is or was delivered in the manner set forth below (check appropriate box and complete information relating thereto): [ ] uncertified check [ ] certified check [ ] bank draft [ ] money order Depository Subscription Confirmation Number Name of Nominee Holder Depository Participant Number Address

Dated: \_\_\_\_\_, 1999 Title: \_\_\_\_\_

\* PLEASE COMPLETE THE BENEFICIAL OWNER CERTIFICATION ON THE BACK HEREOF CONTAINING THE RECORD DATE POSITION OF RIGHTS OWNED, THE NUMBER OF SHARES SUBSCRIBED FOR (OTHER THAN OVER-SUBSCRIPTIONS) AND THE NUMBER OF OVER-SUBSCRIPTION SHARES, IF APPLICABLE, REQUESTED BY EACH SUCH OWNER.

## BIOTIME, INC. BENEFICIAL OWNER CERTIFICATION

The undersigned, a bank, broker or other nominee holder of Rights ("Rights") to purchase Common Shares, no par value ("Common Shares"), of BioTime, Inc. ("BioTime") pursuant to the Rights offer described and provided for in BioTime's Prospectus dated February \_\_\_\_\_\_, 1999 (the "Prospectus") hereby certifies to BioTime and to American Stock Transfer & Trust Company, as Subscription Agent for such Rights offer, that for each numbered line filled in below the undersigned has exercised, on behalf of the beneficial owner thereof (which may be the undersigned), the number of Rights specified on such line, and such beneficial owner wishes to subscribe for the purchase of additional Common Shares pursuant to the over-subscription privilege (as defined in the Prospectus), in the amount set forth in the third column of such line:

Record Date Shares	Number of Rights Exercised	Number of Shares Requested Pursuant to the Over-Subscription Privilege
1)		
Name of Nominee Holder	Depositor	ry Participant Number
Name: Title:		ry Primary Subscription tion Number(s)
Dated:, 1999		

C-2

\_\_\_\_\_\_\_

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

Prospectus Summary	3
Risk Factors	7
The Company	10
The Rights Offer	13
Use of Proceeds	
Description of Securities	21
Legal Matters	21
Experts	21
Incorporation of Certain Information by	
Reference	22
Additional Information	22
Form of Subscription Certificate Appendix	ΧА
Form of Notice of Guaranteed	
Delivery Appendix	κВ
Form of Nominee Holder	
Over-Subscription Exercise	
Form Appendix	x C
, Q. III	

BIOTIME, INC.

[Graphic Omitted]

501,654 Common Shares Issuable Upon the Exercise of Subscription Rights

PROSPECTUS

February \_\_\_, 1999

## 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 FeeSecurities and Exchange Commission NASDAQ Listing Fee Printing and Engraving Expenses Accounting Fees Legal Fees Subscription Agent	\$ 25,032.58 \$ 10,000.00 \$ 25,000.00 \$ 25,000.00
Miscellaneous Expenses	
Total	

-----

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.

Item 16. Exhibits and Financial Statement Schedules.

Exhibit	
Numbers	Description

- 4.1 Specimen of Common Share Certificate.+
- 4.4 Form of Subscription Certificate.++
- 5 Opinion of Counsel\*
- 23.1 Consent of Deloitte & Touche LLP.++
- 23.2 Consent of Counsel (included in opinion of counsel filed as Exhibit 5)
- + 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.
- ++ Filed herewith.
- \* Previously filed.

## 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 registrant hereby undertakes:

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

The undersigned undertakes that:

- (1) For the purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purposes of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the bona fide offering thereof.

## **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 Berkeley, State of California on February 11, 1999.

BIOTIME, INC.

By:	/s/ Pa	aul Se	gall				
Paul	Segall,	Chief	Execu	tive	0ff	ice	er

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

Signature 	Title 	Date 		
/s/ Paul Segall PAUL SEGALL	Chief Executive Officer and Director (Principal Executive Officer)	February 11, 1999		
/s/ Ronald S. Barkin	President and Director	February 11, 1999		
RONALD S. BARKIN				
/s/ Harold Waitz HAROLD WAITZ	Vice President and Director	February 11, 1999		
	Vice President and Director	February 11, 1999		
HAL STERNBERG				
/s/ Victoria Bellport VICTORIA BELLPORT	Chief Financial Officer and Director (Principal Financial and Accounting Officer)	February 11, 1999		
/s/ Judith Segall	Secretary and Director	February 11, 1999		
JUDITH SEGALL				
	Director	February , 1999		
JEFFREY B. NICKEL				
	Director	February , 1999		
MILTON H. DRESNER				

## EXHIBIT INDEX

Numbers	Description
4.1 4.4 5 23.1 23.2	Specimen of Common Share Certificate.+ Form of Subscription Certificate.++ Opinion of Counsel.* Consent of Deloitte & Touche LLP.++ Consent of Counsel (included in opinion of counsel filed as Exhibit 5)

<sup>+</sup> 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.
++ Filed herewith.
\* Previously filed.

SUBSCRIPTION CERTIFICATE FOR COMMON SHARES VOID IF NOT EXERCISED AT OR BEFORE 5:00 P.M. (NEW YORK TIME) ON MARCH \_\_\_\_, 1999, THE EXPIRATION DATE.
THIS SUBSCRIPTION CERTIFICATE IS TRANSFERRABLE AND MAY BE COMBINED OR DIVIDED

**RIGHTS** 

Expiration Date (BUT ONLY INTO SUBSCRIPTION SUBSCRIPTION PRICE March \_\_\_, 1999 CERTIFICATES EVIDENCING A WHOLE NUMBER OF RIGHTS) U.S. \$\_ AT THE OFFICE OF THE SUBSCRIPTION AGENT PER SHARE

> CUSIP 09066L 12 1

THIS SUBSCRIPTION CERTIFICATE MAY BE USED TO SUBSCRIBE FOR COMMON SHARES OR MAY BE ASSIGNED OR SOLD. FULL INSTRUCTIONS APPEAR ON THE BACK OF THIS SUBSCRIPTION CERTIFICATE.

IMPORTANT: Complete appropriate form on reverse

REGISTERED OWNER:

The registered owner of this Subscription Certificate, named above, or assignee, is entitled to the number of Rights to subscribe for Common Shares, no par value, of BioTime, Inc. shown above, in the ratio of one Common Share for each 20 Rights held, and upon the terms and conditions and at the price for each Common Share specified in the Prospectus dated February \_\_\_\_\_, 1999.

If you exercise fewer than all the Rights represented by this Subscription Certificate, the subscription agent will issue a new Subscription Certificate representing the balance of the unexercised Rights, provided that the subscription agent has received your properly completed and executed Subscription Certificate and payment prior to 5:00 p.m., New York time, on March \_\_\_, 1999. No new Subscription Certificate will be issued after that date.

DATE: February, 1999 BIOTIME, INC.						
SECRETARY						
CHIEF EXECUTIVE OFFICER						
Countersigned: American Stock Transfer & Trust Company (New York, N.Y.) Subscription Agent						
, <b>, ,</b>						
Ву:						
Authorized Signature						

EXHIBIT 4.4

Expiration Date: March \_\_\_, 1999

PLEASE COMPLETE ALL APPLICABLE INFORMATION

By Mail: To: American Stock

By Hand: To: American Stock

By Overnight Courier: To: American Stock

Transfer & Trust Company 40 Wall Street, 46th Floor
New York, New York 10005

New York, New York 10005

Transfer a Trust Company
40 Wall Street, 46th Floor
New York, New York 10005

Transfer & Trust Company

Transfer & Trust Company Exchanges and Tenders 40 Wall Street, 46th Floor New York, New York 10005

SECTION 1: TO SUBSCRIBE: I hereby irrevocably subscribe for the dollar amount of common shares indicated as the total of A and B below upon the terms and conditions specified in the Prospectus related hereto, receipt of which is acknowledged.

> TO SELL: If I have checked either the box on line C or the box on line D, I authorize the sale of Rights by the subscription agent according to the procedures described in the Prospectus. The check for the proceeds of sale will be mailed to the address of record.

Please	check [X] below:				
[ ] A.	Subscription	divided by 20 =	.000 x	\$	= \$
	(Rights Exercised)		(Shares Requested)	(Subscription Price)	(Amount Required)
[]В.	Over-Subscription Privilege		.000 x	\$	= \$ (*)
			(Shares Requested)	(Subscription Price)	(Amount Required)
	Amount of Check Enclosed or Amo	unt in Notice of	Guaranteed Delivery	(total of A + B)	= \$
	Make check payable to the order	of "BioTime, Ind	Ç."		
	(*) The over-subscription privi- Prospectus.	lege can be exerc	cised by certain sha	reholders only, as des	scribed in the
[ ] C.	Sell any remaining unexercised	Rights			
[ ] D.	Sell all of my Rights.				
Signat	ure of Subscriber(s)/Seller(s)	_ Please provide	your telephone numb	er Day () Evening ()	
Social	Security Number or Tax ID Numbe	r:			
SECTIO	N II: TO TRANSFER RIGHTS: (excep	t pursuant to C a	and D above)		
For v	alue received,	of the	e Rights represented	by this Subscription	Certificate are assigned to
Social	Security Number or Tax ID Num	mber of Assignee	(Print Fu	ll Name of Assignee	
	ure(s) of Assignor(s)			 ll Address including բ	oostal Zip Code)
	ignature(s) must correspond wa ular, without alteration.	ith the name(s) a	as written upon the	face of this Subscrip	otion Certificate, in every
	ANT: For transfer, a signature ecognized signature guarantee pr		e provided by an eli	gible financial instit	cution which is a participant
SIGNAT	URE GUARANTEED BY:				
IDENTI	DS FROM THE SALE OF RIGHTS MAY B FICATION NUMBER (OR CERTIFICATION HERWISE SUBJECT TO U.S. BACKUP W	ON REGARDING FOR			
	HECK HERE IF RIGHTS ARE BEING E GENT PRIOR TO THE DATE HEREOF AN			ARANTEED DELIVERY DE	ELIVERED TO THE SUBSCRIPTION
W D	AME(S) OF REGISTERED OWNER(S): INDOW TICKET NUMBER (IF ANY): ATE OF EXECUTION OF NOTICE OF GU. AME OF INSTITUTION WHICH GUARANT		<i>τ</i> :		

## INDEPENDENT AUDITOR'S CONSENT

We consent to the incorporation by reference in this amendment No. 2 to Registration Statement No. 333-69179 of BioTime, Inc. on From S-3 of our report dated August 18, 1998 (which expresses an unqualified opinion and includes an explanatory paragraph related to the development stage of the Company's operations), appearing in Annual Report on Form 10-K of BioTime, Inc. for the year ended June 30, 1998 and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

DELOITTE & TOUCHE LLP

San Francisco, California February 11, 1999