

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 1998

OR

X TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
For the transition period from July 1, 1998 to December 31, 1998

Commission file number 1-12830

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

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

935 Pardee Street, Berkeley, California 94710  
Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (510) 845-9535

Securities registered pursuant to Section  
12(g) of the Act:

Common Shares, no par value  
(Title of Class)

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

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

The approximate aggregate market value of voting stock held by nonaffiliates of the registrant was \$ 124,860,000 as of March 24, 1999. Shares held by each executive officer and director and by each person who beneficially owns more than 5% of the outstanding Common Shares have been excluded in that such persons may under certain circumstances be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

10,804,733  
(Number of Common Shares outstanding as of March 24, 1999)  
Documents Incorporated by Reference  
None

PART I

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

Item 1. Description of Business

Overview

BioTime, Inc. (the "Company" or "BioTime") is a development stage company engaged in the research and development of 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 blood loss in surgical or trauma patients until blood loss becomes so severe that a transfusion of packed red blood cells or other blood products is required. The Company is also developing a specially formulated hypothermic blood substitute solution that would have a similar function and would be used for the replacement of very large volumes of a patient's blood during cardiac surgery, neurosurgery and other surgeries that involve lowering the patient's body temperature to hypothermic levels.

The Company's first three blood volume replacement products, Hextend, (R) PentaLyte, (R) and HetaCool, TM have been formulated to maintain the patient's tissue and organ function by sustaining the patient's fluid volume and physiological balance. Various colloid and crystalloid products 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 constituents that may prevent or reduce the physiological imbalances that can cause those problems. The Company's products do not contain albumin. Albumin produced from human plasma is also currently used as a plasma expander, but it 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.

Based upon the results of its clinical studies and laboratory research, the Company has determined that in many emergency care and surgical applications it is not necessary for a plasma volume expander to include special oxygen carrying molecules to replace red blood cells. Therefore, the Company is developing formulations that do not use costly and potentially toxic oxygen carrying molecules such as synthetic hemoglobin and perfluorocarbons.

The Company has submitted a New Drug Application ("NDA") to the United States Food and Drug Administration ("FDA"), seeking approval to market Hextend in the United States. The FDA has completed its review of the NDA and during November 1998 BioTime received an action letter from them requesting several clarifications. BioTime has responded to the FDA's request and is presently awaiting their approval.

The NDA includes data from the Company's 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. The Company believes 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 the Company's NDA.

BioTime and Abbott Laboratories ("Abbott") have entered into a License Agreement under which BioTime 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. BioTime has retained all rights to manufacture, sell or license Hextend and other products in all other countries.

Under the License Agreement, Abbott has agreed to pay BioTime up to \$40,000,000 in license fees based upon product sales and the achievement of certain milestones. So far, the Company has received \$1,650,000 of license fee milestone payments. In addition to the license fees, Abbott will pay BioTime 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 has 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 the Company that Abbott will supply BioTime with batches of Pentalyte, characterization and stability studies, and other regulatory support needed for BioTime to file for an IND and to conduct clinical studies.

The Company intends to enter global markets through licensing agreements with over-seas pharmaceutical companies. By licensing its products abroad, the Company will avoid the capital costs and delays inherent in acquiring or establishing its 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 the Company's products.

Representatives of the Company and Nihon Pharmaceutical Company, Ltd. ("Nihon") met 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 and the Company previously signed a letter of intent to negotiate a licensing agreement to manufacture and market BioTime products in Japan. Nihon is a subsidiary of Takeda Chemical Industries, Japan's largest pharmaceutical manufacturer. The Company is continuing to meet with representatives of companies in other territories to discuss and negotiate potential agreements.

The Company is also pursuing a global clinical trial strategy, the goal of which is to permit the Company 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, the Company may be able to file applications for foreign regulatory approval of its products based upon the results of the United States clinical trials. Based upon discussions with the Canadian Bureau of Pharmaceutical Assessment, the Company plans to file for Canadian market approval based upon the results of its United States clinical trials. Regulatory approvals for countries that are members of the European Union may be obtained through a mutual recognition procedure. The Company has determined that several member nations would 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 the Company would be permitted to market Hextend in all 16 member nations.

The Company is conducting a pilot study of the use of Hextend to treat hypovolemia in geriatric patients undergoing high blood loss surgery. This new clinical trial will be 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 60 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. The Company believes 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.

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

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

## Products for Surgery, Plasma Replacement and Emergency Care

### The Market for Plasma Volume Expanders

The Company is developing Hextend, Pentalyte, HetaCool and other synthetic plasma expander solutions to treat acute blood loss that occurs during many kinds of surgery. The solutions could also be used by emergency room physicians or by paramedics to treat acute blood loss in trauma victims being transported to the hospital.

Approximately 10,000,000 surgeries take place in the United States each year, and blood transfusions are required in approximately 2,500,000 of those cases. Transfusions are also required to treat patients suffering severe blood loss due to traumatic injury. Many more surgical and trauma cases do not require blood transfusions but do involve significant bleeding that can place the patient at risk of suffering from shock caused by the loss of fluid volume (hypovolemia) and physiological balance. Whole blood, packed red cells, or blood plasma generally cannot be administered to a patient until the patient's blood serum has been typed and sufficient units of compatible blood or red cells can be located. Periodic shortages of supply of donated human blood are not uncommon, and rare blood types are often difficult to locate. The use of human blood products also poses the risk of exposing the patient to blood borne diseases such as AIDS and hepatitis.

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

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

The plasma volume expanders marketed by other companies have certain drawbacks. The use of those products can contribute to patient morbidity, including conditions such as hypovolemia, edema, impaired blood clotting, acidosis, and other biochemical imbalances. 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. In contrast, Hextend, PentaLyte, and HetaCool contain constituents that may prevent or reduce the physiological imbalances that can be the problems associated with the use of other plasma volume expanders, and because the Company's products are synthetic they can be manufactured in large volumes.

## The Market for Products for Hypothermic Surgery

Approximately 400,000 coronary bypass and other open heart surgeries are performed in the United States annually, and approximately 18,000 aneurysm surgeries and 4,000 arterio-venous malformation surgeries were performed in the United States during 1989. Those procedures often require the use of cardio-pulmonary bypass equipment to do the work of the heart and lungs during the surgery. During open heart surgery and surgical procedures for the treatment of certain cardiovascular conditions such as large aneurysms, cardiovascular abnormalities and damaged blood vessels in the brain, surgeons must temporarily interrupt the flow of blood through the body. Interruption of blood flow can be maintained only for short periods of time at normal body temperatures because many critical organs, particularly the brain, are quickly damaged by the resultant loss of oxygen. As a result, certain surgical procedures are performed at low temperatures because lower body temperature helps to minimize the chance of damage to the patient's organs by reducing the patient's metabolic rate, thereby decreasing the patient's needs during surgery for oxygen and nutrients which normally flow through the blood.

Current technology limits the degree to which surgeons can lower a patient's temperature and the amount of time the patient can be maintained at a low body temperature because blood, even when diluted, cannot be circulated through the body at near-freezing temperatures. As a result, surgeons face severe time constraints in performing surgical procedures requiring blood flow interruption, and those time limitations prevent surgeons from correcting certain cardiovascular abnormalities.

Hextend, PentaLyte and HetaCool

The Company's first three blood volume replacement products, 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. Hextend, PentaLyte, and HetaCool, are composed of a hydroxyethyl starch, electrolytes, sugar and a buffer in an aqueous base. Hextend and HetaCool use a high molecular weight hydroxyethyl starch (hetastarch) whereas PentaLyte uses a low molecular weight hydroxyethyl starch (pentastarch). The hetastarch is retained in the blood longer than the pentastarch, which may make Hextend and HetaCool the products of choice when a larger volume of plasma expander or blood replacement solution for low temperature surgery is needed or where the patient's ability to restore his own blood proteins after surgery is compromised. PentaLyte, with pentastarch, would be eliminated from the blood faster than Hextend and HetaCool and might be used when less plasma expander is needed or where the patient is more capable of quickly restoring lost blood proteins. The Company recently began testing Hexalyte, a new plasma volume expander that contains a low molecular weight hydroxyethyl starch and that would be eliminated from the body more rapidly than Hextend and HetaCool, but not as rapidly as PentaLyte. BioTime believes that by testing and bringing these products to the market, it can increase its market share by providing the medical community with solutions to match patients' needs.

Results from certain laboratory tests indicate that Hextend and PentaLyte may prove more effective at maintaining blood calcium levels than the leading domestically available plasma extender when used to replace large volumes of blood. Calcium can be a significant factor in regulating blood clotting and cardiac function. Results from other in vitro tests of Hextend indicate that Hextend does not alter the activity of a number of specific blood clotting factors, other than by simple hemodilution.

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

Experiments by BioTime scientists have demonstrated that laboratory animals are able to survive at normal temperatures and without supplemental oxygen when more than two-thirds of their circulating blood volume is replaced by Hextend and/or PentaLyte. When animals are placed in an oxygen rich environment, they are able to survive at normal temperatures when even more of their circulating blood volume is replaced by Hextend.

Hextend is BioTime's proprietary hetastarch-based synthetic blood plasma volume expander, designed especially to treat hypovolemia in surgery and trauma care where patients experience a large amount of blood loss. The Company has submitted an NDA to the FDA seeking approval to market Hextend in the United States. After reviewing the NDA, the FDA sent BioTime an action letter seeking clarification of certain matters. BioTime has responded to the FDA's action letter and is awaiting approval of the NDA. The NDA includes data from the Company's 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 during surgery or as a result of injury. 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. The Company believes 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 the Company's NDA.

BioTime also plans to test the use of Hextend as cardio-pulmonary bypass circuit priming solution. In order to perform heart surgery, the patient's heart must be stopped and mechanical apparatus is used to oxygenate and circulate the blood. The cardio-pulmonary bypass apparatus requires a blood compatible fluid such as Hextend to commence and maintain the process of diverting the patient's blood from the heart and lungs to the mechanical oxygenator and pump.

BioTime believes that Hextend will maintain blood pressure and physiological balance better than the solutions presently used as bypass priming solutions. Approximately 2 liters of Hextend would be used for each bypass operation. Based upon the number of coronary bypass operations performed, the potential market for Hextend as a bypass circuit priming solution in the United States would be about 800,000 liters annually.

PentaLyte is BioTime's proprietary pentastarch-based synthetic plasma expander, designed especially for use when a faster elimination of the starch component is desired and acceptable. Although Hextend can be used in these cases, some physicians appear to prefer a solution which could be metabolized faster and excreted earlier when the longer term protection provided by Hextend is not required. PentaLyte combines the physiologically balanced Hextend formulation with pentastarch that has a lower molecular weight and degree of substitution than the hetastarch used in Hextend.

HetaCool is a modified formulation of Hextend. HetaCool is specifically designed for use at low temperatures. Surgeons are already using a variety of other solutions to carry out certain limited procedures involving shorter term (up to nearly one hour) arrest of brain and heart function at temperatures between 15o and 25o C. However, BioTime is not aware of any fluid currently used in medical practice or any medically-approved protocol allowing operations which can completely replace all of a patient's blood at temperatures close to the ice point. The Company believes that very low temperature bloodless surgical techniques could be developed for open heart and minimally invasive closed chest cardiovascular surgeries, and removal of tumors from the brain, head, neck, heart, and other areas.

The Company is in the process of preparing an amendment to its Hextend IND application to conduct preliminary clinical trials to use HetaCool as a cardio-pulmonary bypass circuit priming solution in low temperature cardio-vascular surgery, as a step to preparing an amended IND application to conduct clinical trials using HetaCool as a solution to replace all of a patient's circulating blood volume during profound hypothermic (carried out at near-freezing temperatures) surgical procedures. The experimental protocol for the planned blood replacement clinical trial is being tested on animal subjects at Baylor University Medical Center and Mt. Sinai Medical Center. HetaCool would be introduced into the patient's body during the cooling process. Once the patient's body temperature is nearly ice cold, and heart and brain function are temporarily arrested, the surgeon would perform the operation. During the surgery, HetaCool may be circulated throughout the body in place of blood, or the circulation may be arrested for a period of time if an interruption of fluid circulation is required. Upon completion of the surgery, the patient would be slowly warmed and blood would be transfused.



Cardiac surgeons are working to develop innovative procedures to repair damaged coronary arteries and heart valves. If optically guided surgical instruments can be inserted into the heart through blood vessels or small incisions, there may be no need to open the patient's chest cavity. BioTime believes that HetaCool may be useful in these minimally invasive closed chest cardiac procedures because the solution is transparent and if it were used to completely replace blood at low temperatures it would permit surgeons to use their optically guided instruments inside the heart or blood vessels without having their view obstructed by blood. The use of BioTime's solutions may also allow better control over stopping and starting the heart, as well as extending the time period of such surgeries. BioTime intends to conduct a series of laboratory studies using animal subjects to test the utility of HetaCool as a low temperature blood substitute in such procedures.

HetaCool has been used to completely replace the blood volume of hamsters, dogs, pigs, and baboons at temperatures approaching freezing. Many of these animal subjects survived long term after hypothermic blood substitution with HetaCool. In these laboratory tests, the animals' blood was replaced by HetaCool and they were chilled for one to more than four hours with deep body temperatures between 10C and 10oC.

BioTime is developing a new formulation that has allowed the revival of hamsters after as long as 6.5 hours of hypothermic blood substitution during which time the animals' heartbeat and circulation were stopped.

## Organ Transplant Products

### The Market for Organ Preservation Solutions

Organ transplant surgery is a growing field. Approximately 5,000 donors donate organs, and approximately an additional 5,000 donors donate skin, bone and other tissues in the United States each year. As more surgeons have gained the necessary expertise and surgical methods have been refined, the number of transplant procedures has increased, as has the percentage of successful transplants. Organ transplant surgeons and their patients face two major obstacles, namely the shortage of available organs from donors, and the limited amount of time that a transplantable organ can be kept viable between the time it is harvested from the donor and the time it is transplanted into the recipient.

The scarcity of transplantable organs makes them too precious to lose and increases the importance of effective preservation technology and products. Current organ removal and preservation technology generally requires multiple preservation solutions to remove and preserve effectively different groups of organs. The removal of one organ can impair the viability of other organs. Available technology does not permit surgeons to keep the remaining organs viable within the donor's body for a significant time after the first organ is removed. Currently, an organ available for transplant is flushed with an ice cold solution during the removal process to deactivate the organ and preserve its tissues, and then the organ is transported on ice to the donee. The ice cold solutions currently used, together with transportation on ice, keep the organ healthy for only a short period of time. For example, the storage time for hearts is limited to approximately six hours. Because of the short time span available for removal and transplant of an organ, potential organ donees may not receive the needed organs.

BioTime is seeking to address this problem by developing a more effective organ preservation solution that will permit surgeons to harvest all transplantable organs from a single donor. The Company believes that preserving the viability of all transplantable organs and tissues simultaneously, at low temperatures, would extend by several hours the time span in which the organs can be preserved prior to transplant.

Using HetaCool for Multi-Organ Preservation. The Company is seeking to develop HetaCool for use as a single solution that can simultaneously preserve all of a single donor's organs. When used as an organ preservation solution, HetaCool would be perfused into the donor's body while the body is chilled, thereby eliminating an undesirable condition called "warm ischemia," caused when an organ is warm while its blood supply is interrupted. The use of HetaCool in conjunction with the chilling of the body should help to slow down the process of organ deterioration by a number of hours so that a surgeon can remove all organs for donation and transplant. The Company's current estimates are that each such preservation procedure could require at least 50 liters of HetaCool.

The Company believes that the ability to replace an animal's blood with the Company's solution, to maintain the animal at near freezing temperatures for several hours, and then revive the animal, would demonstrate that the solution could be used for multi-organ preservation. Company scientists have revived animals after more than six hours of cold blood-substitution, and have observed heart function in animals maintained cold and blood-substituted for more than eight hours. An objective of the Company's research and development program is to extend the time span in which animal subjects can be maintained in a cold, blood-substituted state before revival or removal of organs for transplant purposes. Organ transplant procedures using animal subjects could then be conducted to test the effectiveness of Hextend as an organ preservative.

#### Long-term Tissue and Organ Banking

The development of marketable products and technologies for the preservation of tissues and vital organs for weeks and months is a long-range goal of the Company's research and development plan. To permit such long-term organ banking the Company is attempting to develop products and technologies that can protect tissues and organs from the damage that occurs when human tissues are subjected to subfreezing temperatures.

HetaFreeze is one of a family of BioTime's freeze-protective solutions which may ultimately allow the extension of time during which organs and tissues can be stored for future transplant or surgical grafting. In laboratory experiments, BioTime's proprietary freeze-protective compounds have already been used to preserve skin when used as a whole animal perfusate. Silver dollar size full thickness shaved skin samples have been removed after saturation with HetaFreeze solution, frozen at liquid nitrogen temperatures and stored for periods ranging from days to weeks. The grafts were then warmed and sewn onto the backs of host animals. Many of these grafts survived.

In other laboratory experiments, BioTime scientists have shown that animals can be revived to consciousness after partial freezing with their blood replaced by HetaFreeze. While this technology has not developed to an extent that allows long term survival of the laboratory subjects, and their organs, a better understanding of the effects of partial freezing could allow for extended preservation times for vital organs, skin and blood vessels.

#### Other Potential Uses of BioTime Solutions

Isolated regional perfusion of anti-cancer drugs has been used to treat melanoma of the limbs, and inoperable tumors of the liver. The Company believes that employing such a procedure while the patient is kept in ice-cold blood-substitution may allow high doses of toxic anti-cancer drugs to be directed at inoperable tumors within vital organs. Keeping the rest of the patient in a cold, blood substituted state may reduce or eliminate the circulation of the toxic drugs to healthy tissues.

BioTime considers such surgical techniques to be a longer range goal of its research and development program for hypothermic surgery products. Use of this complex technology in the practice of oncology can occur only after ice-cold blood-substitution has advanced to an appropriate level of safety and effectiveness.

#### Research and Development Strategy

From inception through December 31, 1998, the Company has spent \$11,681,988 on research and development. The greatest portion of BioTime's research and development efforts have been devoted to the development of Hextend, PentaLyte and HetaCool for conventional surgery, emergency care, low temperature surgery, and multi-organ preservation. A lesser portion of the Company's research and development efforts have been devoted to developing solutions and protocols for storing organs and tissues at subfreezing temperatures. In the future the Company may explore other applications of its products and technologies, including cancer chemotherapy. As the first products achieve market entry, more effort will be expended to bring the next tier of products to maturity.

One major focus of the Company's research and development effort has been on products and technology to extend the time animals can be kept cold and blood-substituted, and then revived without physical impairment. An integral part of that effort has been the development of techniques and procedures or "protocols" for use of the Company's products. A substantial amount of data has been accumulated through animal tests, including the proper surgical techniques, drugs and anesthetics, the temperatures and pressures at which blood and blood replacement solutions should be removed, restored and circulated, solution volume, the temperature range, and times, for maintaining circulatory arrest, and the rate at which the subject should be rewarmed.

Experiments intended to test the efficacy of the Company's low temperature blood replacement solutions and protocols for surgical applications involve replacing the animal's blood with the Company's solution, maintaining the animal in a cold blood-substituted state for a period of time, and then attempting to revive the animal. Experiments for multi-organ preservation involve the maintenance of the animal subjects at cold temperatures for longer periods of time than would be required for many surgical applications, followed by transplant procedures to test the viability of one or more of the subject's vital organs.

The Company is conducting experiments at hospital and medical school research facilities. These collaborative research programs are testing solutions and protocols developed in the Company's laboratories and, in some cases, comparing the efficacy of the Company's products with commercially available FDA approved products manufactured by other companies. The Company intends to continue to foster relations with research hospitals and medical schools for the purpose of conducting collaborative research projects because it believes that such projects will introduce the Company's potential products to members of the medical profession and provide the Company with objective product evaluations from independent research physicians and surgeons.

#### Licensing

On April 23, 1997, the Company and Abbott entered into a License Agreement under which the Company 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 where the patient's body temperature is lower than 12EC ("Hypothermic Use"), or replacement of substantially all of a patient's circulating blood volume ("Total Body Washout"). The Company has retained all rights to manufacture, sell or license Hextend and other products in all other countries.

Under the License Agreement, Abbott has agreed to pay the Company up to \$40,000,000 in license fees, of which \$1,650,000 has been paid to date, and an additional \$850,000 will become payable in installments upon the achievement of specific milestones pertaining to the approval of the Company's NDA for Hextend and the commencement of sales of the product. Up to \$37,500,000 of additional license fees will be payable based upon annual net sales of Hextend, at the rate of 10% of annual net sales if annual net sales exceed \$30,000,000 or 5% if annual net sales are between \$15,000,000 and \$30,000,000. Abbott's obligation to pay licensing fees on sales of Hextend will expire on the earlier of January 1, 2007 or, on a country by country basis, when all patents protecting Hextend in the applicable country expire or any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

In addition to the license fees, Abbott will pay the Company a royalty on total annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. The royalty rate for each year 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 has agreed that the Company may convert Abbott's exclusive license to a non-exclusive license or may terminate the license outright if certain minimum sales and royalty payments are not met. In order to terminate the license outright, the Company would pay a termination fee in an amount ranging from the milestone payments made by Abbott to an amount equal to three times prior year net sales, depending upon when termination occurs. Abbott's exclusive license also may terminate, without the payment of termination fees by the Company, if Abbott fails to market Hextend. Abbott has agreed to manufacture Hextend for sale by the Company in the event that Abbott's exclusive license is terminated in either case.

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

In order to preserve its rights to obtain an exclusive license for Pentalyte under the License Agreement, Abbott notified the Company that Abbott will supply BioTime with batches of Pentalyte, characterization and stability studies, and other regulatory support needed for BioTime to file for an IND and to conduct clinical studies.

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

The Company is also discussing and negotiating prospective licensing arrangements with other pharmaceutical companies, some of which have the capacity to produce and market the Company's products in various countries. In licensing arrangements that include marketing rights, the participating pharmaceutical company would be entitled to retain a large portion of the revenues from sales to end users and would pay the Company a royalty on net sales. There is no assurance that any such additional arrangements can be made.

## Manufacturing

### Facilities Required

The Company has sufficient equipment, space and personnel needed to synthesize the quantities of its products used in its research activity, but the Company does not have facilities to manufacture the solution in commercial quantities, or under "good manufacturing practice" required by the FDA. Any products that are used in clinical trials for FDA approval, or that are approved by the FDA for marketing, will have to be manufactured according to "good manufacturing practices" at a facility that has passed FDA inspection. In addition, any products that are approved by the FDA will have to be manufactured in commercial quantities, and with sufficient stability to withstand the distribution process, and in compliance with such federal and state regulatory requirements as may be applicable. The active ingredients and component parts of the products must be either USP or themselves manufactured according to "good manufacturing practices".

Abbott has provided Hextend manufactured under good manufacturing practices for use in the Company's clinical trials, and Abbott has the facilities to manufacture Hextend and other Company products in commercial quantities. If Abbott chooses not to obtain a license to manufacture and market another BioTime product, or to manufacture it under contract for BioTime, the Company will need to enter into licensing or product manufacturing arrangements with another established pharmaceutical company, or else the Company will have to acquire its own manufacturing facility.

Acquiring a manufacturing facility would involve significant expenditure of time and money for design and construction of the facility, purchasing equipment, hiring and training a production staff, purchasing raw material and attaining an efficient level of production. Although the Company has not determined the cost of constructing production facilities that meet FDA requirements, it expects that the cost would be substantial, and that the Company would need to raise additional capital in the future for that purpose. There can be no assurance that the Company will be able to obtain the capital required for the acquisition of production facilities. To avoid the incurrence of those expenses and delays, the Company is seeking contract and licensing arrangements with established pharmaceutical companies for the production of the Company's products, but there can be no assurance that satisfactory arrangements will be made.

### Raw Materials

Although most ingredients in the products being developed by the Company are readily obtainable from multiple sources, the Company knows of only a few manufacturers of the hydroxyethyl starches that serve as the active ingredient in Hextend, PentaLyte and HetaCool. Abbott presently has a source of supply of the hydroxyethyl starch used in Hextend, PentaLyte and HetaCool, and has agreed to maintain a supply sufficient to meet market demand for Hextend in the United States and Canada. McGaw, Inc., a wholly owned subsidiary of B. Braun Melsungen AG, a private German company selling intravenous solutions and other medical products around the world, has produced Hextend for BioTime's clinical trials and can produce the pentastarch used in PentaLyte.

In order to manufacture its products for overseas markets, or products not presently licensed to Abbott for the United States and Canadian markets, the Company or a licensee would have to secure a supply or production agreement with one or more of the known hydroxyethyl starch manufacturers, but if such an agreement could not be obtained, the Company or a licensee would have to acquire a manufacturing facility and the technology to produce the hydroxyethyl starch according to good manufacturing practices. The possibility of producing hydroxyethyl starches through a co-operative effort with a small, independent starch manufacturer has also been considered. The Company might have to raise additional capital to participate in the development and acquisition of the necessary production technology and facilities.

If arrangements cannot be made for a source of supply of hydroxyethyl starch, the Company would have to reformulate its solutions to use one or more other starches that are more readily available. In order to reformulate its products, the Company would have to perform new laboratory testing to determine whether the alternative starches could be used in a safe and effective synthetic plasma volume expander, low temperature blood substitute or organ preservation solution. If needed, such testing would be costly to conduct and would delay the Company's product development program, and there is no certainty that any such testing would demonstrate that an alternative ingredient, even if chemically similar to the one currently used, would be as safe or effective.

#### Marketing

The Company's proposed products and services are intended for sale to hospitals, medical centers, and physicians engaged in the practice of specific areas of medicine, including transplantation, neurosurgery, cardiovascular surgery, anesthesiology, oncology, emergency room and trauma care and critical care. The Company intends to license its products to pharmaceutical companies that have their own, well established marketing and sales organizations. A license to market Hextend in the United States and Canada has been granted to Abbott, and the Company is discussing product licensing arrangements with a number of companies for over-seas markets. Although such arrangements could permit the Company to receive revenues from the sale of its products expeditiously and with lower costs, the Company would have to share those revenues with the participating pharmaceutical companies. There can be no assurance that any additional pharmaceutical companies will be willing to enter into marketing arrangements on terms acceptable to the Company. If the Company does not enter into licensing or other arrangements for the sale of a product in a particular market, the Company would have to establish its own marketing organization.

Published studies and presentations by physicians who have participated in clinical trials or laboratory studies of Company products may be used as part of the Company's product marketing efforts. The Company also will continue to seek opportunities to conduct research in collaboration with well-known institutions and to demonstrate its work at scientific conventions.

## Government Regulation

The FDA will regulate the Company's proposed products as drugs, biologicals, or medical devices, depending upon such factors as the use to which the product will be put, the chemical composition and the interaction of the product on the human body. Products that are intended to be introduced into the body, such as blood substitute solutions for low temperature surgery and plasma expanders, will be regulated as drugs and will be reviewed by the FDA staff responsible for evaluating biologicals.

The Company's human drug products will be subject to rigorous FDA review and approval procedures. After testing in animals, an Investigational New Drug (IND) application must be filed with the FDA to obtain authorization for human testing. Extensive clinical testing, which is generally done in three phases, must then be undertaken at a hospital or medical center to demonstrate optimal use, safety and efficacy of each product in humans. Each clinical study is conducted under the auspices of an independent Institutional Review Board ("IRB"). The IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution. The time and expense required to perform this clinical testing can far exceed the time and expense of the research and development initially required to create the product. No action can be taken to market any therapeutic product in the United States until an appropriate New Drug Application ("NDA") has been approved by the FDA. Even after initial FDA approval has been obtained, further studies may be required to provide additional data on safety or to gain approval for the use of a product as a treatment for clinical indications other than those initially targeted. In addition, use of these products during testing and after marketing could reveal side effects that could delay, impede or prevent FDA marketing approval, resulting in a FDA-ordered product recall, or in FDA-imposed limitations on permissible uses.

The FDA also regulates the manufacturing process of pharmaceutical products and requires that a portion of the clinical trials for new products be conducted using products produced in compliance with "good manufacturing practices." See "Manufacturing."

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

## Patents and Trade Secrets

The Company holds a number of United States patents having composition and methods of use claims covering BioTime's proprietary solutions, including Hextend and PentaLyte. The most recent U.S. patents were issued during 1998. Patents covering certain of the Company's solutions have also been issued in Australia, Israel, and South Africa. Additional patent applications have been filed in the United States and certain other countries for Hextend, PentaLyte and other solutions.



There is no assurance that any additional patents will be issued, or that any patents now held or later obtained by the Company will not be successfully challenged by third parties and declared invalid or infringing of third party claims. Further, the enforcement of patent rights often requires litigation against third party infringers, and such litigation can be costly to pursue.

While the Company believes that the protection of patents and licenses is important to its business, the Company also will rely on trade secrets, know-how and continuing technological advancement to maintain its competitive position. The Company has entered into intellectual property, invention and non-disclosure agreements with its employees and it is the Company's practice to enter into confidentiality agreements with its consultants. There can be no assurance, however, that these measures will prevent the unauthorized disclosure or use of the Company's trade secrets and know-how or that others may not independently develop similar trade secrets and know-how or obtain access to the Company's trade secrets, know-how or proprietary technology. If, in the future, the techniques for use of the Company's products become widely known through academic instruction or publication, patent protection would become more important as a means of protecting the Company's market share for its products.

#### Competition

If successfully developed, the Company's solutions will compete with products currently used to treat or prevent hypovolemia, including albumin, other colloid solutions, and crystalloid solutions presently manufactured by established pharmaceutical companies, and with human blood products. Some of these products, 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, the Company's products will have to be recognized as providing medically significant advantages. The competing products are being manufactured and marketed by established pharmaceutical companies that have substantially larger research facilities and technical staffs and greater financial and marketing 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 and Baxter International manufacture and sell a generic equivalent of Hespan.

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

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

As a result of the introduction of generic plasma expanders intended to compete with Hespan, competition in the plasma expander market has intensified and wholesale prices have declined. Competition in the areas of business targeted by the Company is likely to intensify further as new products and technologies reach the market. Superior new products are likely to sell for higher prices and generate higher profit margins once acceptance by the medical community is achieved. Those companies that are successful in introducing new products and technologies to the market first may gain significant economic advantages over their competitors in the establishment of a customer base and track record for the performance of their products and technologies. Such companies will also benefit from revenues from sales which could be used to strengthen their research and development, production, and marketing resources. All companies engaged in the medical products industry face the risk of obsolescence of their products and technologies as more advanced or cost effective products and technologies are developed by their competitors. As the industry matures, companies will compete based upon the performance and cost effectiveness of their products.

#### Employees

As of December 31, 1998, the Company employed eleven persons on a full-time basis and three persons on a part-time basis. Three full-time employees and one part-time employee hold Ph.D. or Masters Degrees in one or more fields of science.

## Risk Factors

Some of the factors that could materially affect the Company's operations are and prospects are discussed below. There may be other factors that are not mentioned here or of which BioTime is not presently aware that could also affect BioTime's operations.

### BioTime Products Cannot Be Marketed Without FDA and Other Regulatory Approvals

The products that BioTime develops cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. The regulatory process, which includes preclinical, clinical and post-clinical testing of each product to establish its safety and efficacy, can take several years to complete and require the expenditure of substantial time and funds. Data obtained from preclinical and clinical activities are susceptible to varying interpretations which could delay, limit or prevent regulatory approval. In addition, delays or rejections may be encountered as a result of changes in FDA policy during the period of product development and FDA regulatory review. Similar delays may also be encountered in foreign countries. There can be no assurance that, even after substantial expenditures of time and money, regulatory approval will be obtained for any products developed by the Company. Moreover, even if regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which the product may be marketed. After regulatory approval is obtained, the approved product, the manufacturer and the manufacturing facilities are subject to continual review and periodic inspections, and a later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on such product or manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can, among other things, result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution. Additional government regulation may be established which could prevent or delay regulatory approval of the Company's products.

### Uncertainty of Future Sales; Competition

The Company's ability to generate substantial operating revenue depends upon its success in developing and marketing its products. There can be no assurance that any products that receive FDA or foreign regulatory approval will be successfully marketed or that the Company will receive sufficient revenues from product sales to meet its operating expenses. The acceptance of the Company's products and technologies by the medical profession may take time to develop because 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.

The Company's plasma expander products will compete with products currently used to treat or prevent hypovolemia, 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, the Company's products will have to be recognized as providing medically significant advantages. The competing products are being manufactured and marketed by established pharmaceutical companies with more resources than the Company.

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 and Baxter International manufacture and sell a generic equivalent of Hespan. As a result of the introduction of generic plasma expanders intended to compete with Hespan, competition in the plasma expander market has intensified and wholesale prices have declined. There also is a risk that the Company's competitors may succeed in developing safer or more effective products that could render the Company's products and technologies obsolete or noncompetitive.

#### Development Stage Company

BioTime is in the development stage, and, to date, has been principally engaged in research and development activities. None of the Company's products are on the market yet, and the Company has not generated a significant amount of operating revenue. As a result of the developmental nature of its business, the Company can be expected to sustain additional operating losses. There can be no assurance that the Company will generate sufficient revenues from the sale or licensing of its products and technologies to be profitable.

#### Uncertainty as to the Successful Development of Medical Products

The Company's business involves the attempt to develop new medical products and technologies. Such experimentation is inherently costly, time consuming and uncertain as to its results. If the Company is 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. From the date of the Company's inception through December 31, 1998, the Company spent \$11,681,988 on research and development, and the Company expects to continue to incur substantial research and development expenses.

Although the Company believes that its Phase III clinical trials show that Hextend is safe for use in clinical medicine, there is no assurance that the FDA will reach the same conclusion. The Company's other 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 safe and efficacious in the human medical applications for which they were developed.

#### BioTime May Need to Raise Additional Capital

Although the Company recently raised \$7,329,000 through the sale of common shares in a subscription rights offer, the Company may need to raise capital in the future to meet its operating expenses until such time as it is able to generate sufficient revenues from product sales or royalties. The Company's operating expenses will increase if it succeeds in bringing additional products out of the laboratory testing phase of development and into clinical trials. Additional financing may be required for the continuation or expansion of the Company's research and product development, additional clinical trials of new products, and production and marketing of Hextend and any other Company products that may be approved by FDA or foreign regulatory authorities. There can be no assurance that the Company will be able to raise additional funds on favorable terms or at all, or that such funds, if raised, will be sufficient to permit the Company to develop and market its products. Unless the Company is able to raise additional funds when needed, it is likely that it will be unable to continue its planned activities, notwithstanding the progress of its research and development projects.

#### Absence of Manufacturing and Marketing Capabilities; Reliance Upon Licensing

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

#### Patents May Not Protect BioTime Products from Competition

The Company has obtained patents in the United States and certain other countries, and has additional patent applications pending, for certain products including Hextend and Pentalyte. No assurance can be given that any additional patents will be issued to the Company, or that the Company's patents will provide meaningful protection against the development of competing products. There also is no assurance that competitors will not successfully challenge the validity or enforceability of any patent issued to the Company. The costs required to uphold the validity and prevent infringement of any patent issued to the Company could be substantial, and the Company might not have the resources available to defend its patent rights.

#### Prices and Sales of 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 BioTime products to be sold at prices high enough 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.

#### Dependence Upon Key Personnel

The Company depends to a considerable degree on the continued services of its executive officers. Although the Company 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 the Company. In addition, the success of the Company will depend, among other factors, upon successful recruitment and retention of additional highly skilled and experienced management and technical personnel.

#### Year 2000 Problems Could Impair Sales of BioTime Products

Because BioTime does not have its own pharmaceutical production facilities, it will rely upon Abbott and others to manufacture and distribute BioTime products. If year 2000 problems were to impede the ability of those companies to manufacture and distribute BioTime products or to provide raw materials used in the manufacture of those products, BioTime's product sales could be adversely affected. BioTime does not have a contingency plan to address those problems if they were to arise, and it may not be able to replace Abbott or any other company that may obtain a license to manufacture and distribute BioTime 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.

#### BioTime Does Not Pay Cash Dividends

BioTime does not pay cash dividends on its Common Shares. For the foreseeable future it is anticipated that any earnings generated from the Company's business will be used to finance the growth of the Company and will not be paid out as dividends to BioTime shareholders.

## The Price of BioTime Stock May Rise and Fall Rapidly

BioTime 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 the Company achieves earnings from the sale of products, securities analysts may begin predicting quarterly earnings. The failure of the Company's earnings to meet analysts' expectations could result in a significant rapid decline in the market price of the Company's 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. Such broad market fluctuations, as well as general economic and political conditions, may adversely affect the market price of BioTime Common Shares.

## Requirements for Continued Listing on Nasdaq

BioTime 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 more than \$4,000,000 of net tangible assets and a market capitalization in excess of \$50,000,000 on the date of this report, there is no assurance that future losses from operations will not cause the Company'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 rule that imposes restrictive sales practice requirements on broker-dealers who sell such securities. Consequently, delisting, if it occurred, could affect the ability of shareholders to sell their Common Shares in the secondary market.

## Item 2. Facilities.

The Company occupies its office and laboratory facility in Berkeley, California under a lease that will expire on March 31, 2004. The Company presently occupies approximately 5,200 square feet of space. The amount of space leased by the Company will increase by approximately 3,000 square feet and the monthly rent will increase to \$10,000 per month when the additional space is made available to the Company, which is expected to occur on or around June 30, 1999. The rent will increase annually by the greater of 3% and the increase in the local consumer price index, subject to a maximum annual increase of 7%. The Company also pays all charges for utilities and garbage collection.

The Company has an option to extend the term of the lease for a period of three years, and to terminate the lease early upon six months notice after September 30, 2000.

The Company uses, on a fee per use basis, facilities for surgical research on animals at an unaffiliated privately run research center located in Winters, California. Contracting for the use of research facilities has enabled the Company to initiate its research projects without the substantial capital cost, overhead costs and delay associated with the acquisition and maintenance of a modern animal surgical research facility.

Item 3. Legal Proceedings.

The Company is not presently involved in any material litigation or proceedings, and to the Company's knowledge no such litigation or proceedings are contemplated.

Item 4. Submission of Matters to a Vote of Security Holders.

Not Applicable.



Item 5. Market for Registrant's Common Equity and Related Stockholder Matters.

The Company's Common Shares are traded in the over-the-counter market on the Nasdaq under the symbol BTIM. The Common Shares have been trading on the Nasdaq National Market since April 28, 1998, and traded on the Nasdaq SmallCap Market from March 5, 1992 through April 27, 1998. The closing price of the Company's Common Shares on Nasdaq on March 19, 1999 was \$13.75.

The following table sets forth the range of high and low bid prices for the Common Shares for the fiscal years ended June 30, 1997 and 1998 and the fiscal year ended December 31, 1998 (six months), based on transaction data as reported by Nasdaq. All prices have been adjusted to give effect to the Company's payment of a stock dividend during October 1997 to effect a three-for-one stock split.

Quarter Ended	High	Low
September 30, 1996	\$7.67	\$4.67
December 31, 1996	9.33	4.83
March 31, 1997	13.20	8.08
June 30, 1997	12.33	7.58
September 30, 1997	17.08	8.67
December 31, 1997	27.00	18.50
March 31, 1998	19.75	11.00
June 30, 1998	14.37	5.81
September 30, 1998	9.88	5.50
December 31, 1998	18.13	7.00

As of March 19, 1999, there were 319 shareholders of record of the Common Shares based upon information from the Registrar and Transfer Agent.

The Company has paid no dividends on its Common Shares since its inception and does not plan to pay dividends on its Common Shares in the foreseeable future.

Item 6. Selected Financial Data.

The selected financial data as of December 31, 1998, June 30, 1998, 1997, 1996, 1995 and 1994 and the period from inception (November 30, 1990) to December 31, 1998 presented below have been derived from the financial statements of the Company which have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report appearing elsewhere herein (which expresses an unqualified opinion and includes an explanatory paragraph related to the development stage of the Company's operations). The selected financial data should be read in conjunction with the Company's financial statements and notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere.

Statement of Operations Data:

	December 31, 1998	June 30,					Period from Inception (November 30, 1990) to December 31, 1998
		1998	1997	1996	1995	1994	
REVENUE:							
Licensing Fee	\$ 250,000	\$ 1,150,000	\$ 62,500	\$ --	\$ --	\$ --	\$ 1,462,500
EXPENSES:							
Research and development	(1,723,860)	\$(3,048,775)	\$(2,136,325)	\$(1,142,168)	\$(1,791,698)	\$ (777,668)	(11,681,988)
General and administrative	(710,131)	(1,849,312)	(1,209,546)	(954,049)	(808,432)	(931,439)	(7,789,764)
Total expenses	(2,433,991)	(4,898,087)	(3,345,871)	(2,096,217)	(2,600,130)	(1,709,107)	(19,471,752)
INTEREST AND OTHER INCOME:							
	89,513	294,741	189,161	130,882	222,383	162,154	1,302,747
Net loss	\$ (2,094,478)	\$(3,453,346)	\$(3,094,210)	\$(1,965,335)	\$(2,337,747)	\$ (1,546,953)	\$(16,706,505)
Basic and Diluted Net loss per share	\$ (0.21)	\$ (0.35)	\$ (0.35)	\$ (0.25)	\$ (0.30)	\$ (0.25)	
Common and equivalent shares used in computing per share amounts	10,008,468	9,833,156	8,877,024	7,827,732	7,900,392	6,139,335	

Balance Sheet Data:

	December 31, 1998	June 30,	
		1998	1997
Cash, cash equivalents and short term investments	\$2,429,014	\$4,105,781	\$7,811,634
Working Capital	2,157,578	3,724,663	6,846,575
Total assets	2,809,455	4,641,780	8,297,774
Shareholders' equity	2,384,752	4,014,750	6,536,106

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

Overview

Since its inception in November 1990, the Company has been engaged primarily in research and development activities. The Company has not yet generated significant operating revenues, and as of December 31, 1998 the Company had incurred a cumulative net loss of \$16,706,505. The Company's ability to generate substantial operating revenue depends upon its success in developing and marketing or licensing its plasma volume expanders and organ preservation solutions and technology for medical use.

Most of the Company's research and development efforts have been devoted to the development of the Company's first three blood volume replacement products: Hextend, PentaLyte, and HetaCool. By testing and bringing all three products to the market, BioTime can increase its market share by providing the medical community with solutions to match patients' needs.

The Company has submitted a New Drug Application (NDA) to the FDA, seeking approval to market Hextend in the United States. After reviewing the NDA, the FDA sent the Company an action letter seeking clarification of certain matters. The Company has responded to the FDA's action letter and is awaiting approval of the NDA. The NDA includes data from the Company's Phase III clinical trials, in which the primary endpoints were successfully met. The Company believes 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 the Company's NDA.

BioTime has 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. BioTime has retained all rights to manufacture, sell or license Hextend and other products in all other countries. Abbott also has a right to obtain licenses to manufacture and sell other BioTime products.

Under the License Agreement, Abbott has agreed to pay BioTime up to \$40,000,000 in license fees based upon product sales and the achievement of certain milestones. So far, Company has received \$1,650,000 of license fee milestone payments. In addition to the license fees, Abbott will pay BioTime a royalty on total annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. The royalty rate for each year 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 has also agreed to manufacture Hextend for sale by BioTime in the event that Abbott's exclusive license is terminated prior to expiration.

The Company intends to enter global markets through licensing agreements with overseas pharmaceutical companies. By licensing its products abroad, the Company will avoid the capital costs and delays inherent in acquiring or establishing its 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 the Company's products. The Company is continuing to meet with representatives of interested companies to discuss potential agreements.

The Company is also pursuing a global clinical trial strategy, the goal of which is to permit the Company 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, the Company may be able to file applications for foreign regulatory approval of its products based upon the results of the United States clinical trials. Based upon discussions with the Canadian Bureau of Pharmaceutical Assessment, the Company plans to file for Canadian market approval based the results of its United States clinical trials. Regulatory approvals for countries that are members of the European Union may be obtained through a mutual recognition procedure. The Company has determined that several member nations would 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 the Company would be permitted to market Hextend in all 16 member nations.

In order to commence clinical trials for regulatory approval of new products, such as PentaLyte and HetaCool, or new therapeutic uses of Hextend, it will be necessary for the Company to prepare and file with the FDA an Investigational New Drug Application ("IND") or an amendment to expand the present IND for additional Hextend studies. Filings with foreign regulatory agencies will be required to commence clinical trials over-seas. The cost of preparing those regulatory filings and conducting those clinical trials is not presently determinable, but could be substantial. It will be necessary for the Company to obtain additional funds in order to complete any clinical trials that may begin for its new products or for new uses of Hextend. The Company plans to negotiate product licensing and marketing agreements that require overseas licensees and distributors of Company products to bear regulatory approval and clinical trial costs for their territories.

In addition to developing clinical trial programs, the Company plans to continue to provide funding for its laboratory testing programs at selected universities, medical schools and hospitals for the purpose of developing additional uses of Hextend, PentaLyte, HetaCool, and other new products, but the amount of research that will be conducted at those institutions will depend upon the Company's financial status. Because the Company's research and development expenses, clinical trial expenses, and production and marketing expenses will be charged against earnings for financial reporting purposes, management expects that losses from operations will continue to be incurred for the foreseeable future.

## Year 2000 Considerations

The Company has reviewed its internal computer and software systems and has determined that it is highly unlikely that any of those systems will be adversely affected by problems associated with the year 2000. Accordingly, the Company does not expect to incur any material expense in bringing its computer systems into year 2000 compliance. The so-called "year 2000 problems" may arise if computer programs do not properly recognize years that begins with "20" instead of "19." If not corrected, computer applications that are affected by the year 2000 problem could fail or create erroneous results.

The Company relies upon data analysis provided by independent third parties that conduct tests on Company products and compile and analyze data from Company laboratory studies and clinical trials. The Company is asking its third party contractors to inform the Company's management whether their systems will be adversely affected by the year 2000 problem and what plans they have to remedy any such problems in a timely manner.

Because the Company does not have its own pharmaceutical production facilities, it will rely upon Abbott and others to manufacture and distribute Company products. If year 2000 problems were to impede the ability of those companies to manufacture and distribute Company products or raw materials used in the manufacture of Company products, future sales of Company products could be adversely affected. BioTime does not have a contingency plan to address those problems if they were to arise, and it may not be able to replace Abbott or any other company that may obtain a license to manufacture and distribute BioTime 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.

## Change of Fiscal Year

In November 1998, the Board of Directors approved a change to the Company's operating fiscal year from a fiscal year ending June 30 to a fiscal year ending December 31, beginning January 1, 1999. See Note 1 of Notes to Financial Statements. In connection with this change, the Company is filing this transition report on Form 10-K with the Securities and Exchange Commission covering the transition period from July 1, 1998 to December 31, 1998. Accordingly, the accompanying financial statements are for the six months ended December 31, 1998, the twelve months ended June 30, 1998 ("Fiscal 1998"), the twelve months ended June 30, 1997 ("Fiscal 1997") and the twelve months ended June 30, 1996 ("Fiscal 1996").

## Results of Operations

Six Month Period Ended December 31, 1998, and Years Ended June 30, 1998, June 30, 1997, and June 30, 1996

During Fiscal 1997, the Company received \$1,400,000 for signing the License Agreement and achieving a license fee milestone pertaining to the allowance of certain patent claims pending. During Fiscal 1998, the Company received an additional milestone fee of \$250,000 for filing its NDA for Hextend. The Company deferred recognition of a portion of the license fee payment received for signing of the License Agreement. The Company recognized \$62,500 of license fee revenue during Fiscal 1997, \$1,150,000 during Fiscal 1998, and \$250,000 during the six month period ended December 31, 1998. The remaining \$187,500 of license fee revenue will be recognized by June 30, 1999. (See Note 3 to the accompanying financial statements). For the six month period ended December 31, 1998, the interest and other income was \$89,513. Interest and other income increased to \$294,741 for Fiscal 1998 from \$189,161 for Fiscal 1997 and from \$130,822 for Fiscal 1996. The increase in interest and other income is attributable to the increase in cash and cash equivalents from the Company's sale of Common Shares through a subscription rights offering that was completed during February 1997.

For the six month period ended December 31, 1998, research and development expenses were \$1,723,860, which include laboratory study expenses, salaries, expenses for the preparation of additional clinical trials in Europe and the preparation of European regulatory applications, and consultants' fees. It is expected that research and development expenses will increase as the Company continues clinical testing of Hextend and commences clinical studies of other products. Research and development expenses increased to \$3,048,775 for Fiscal 1998, from \$2,136,325 for Fiscal 1997. The increase in research and development expenses is attributable to the cost of preparing and filing an NDA for Hextend, and preparing for future regulatory filings in Europe and Canada. Research and development expenses increased to \$2,136,325 for Fiscal 1997, from \$1,142,168 for Fiscal 1996. The increase in research and development expenses was attributable to the Company's Phase III human clinical trials of Hextend, initiation of a clinical trial at Middlesex Hospital in London, England, and an accrual for bonuses granted after June 30, 1997.

For the six month period ended December 31, 1998, the general and administrative expenses were \$710,131, which are comprised of salaries, consultants' fees, and general operating expenses of the Company. General and administrative expenses increased to \$1,849,312 for Fiscal 1998, from \$1,209,546 for Fiscal 1997. This increase is attributable to an increase in the general operations of the Company, an increase in personnel, and bonus awards. General and administrative expenses increased to \$1,209,546 for Fiscal 1997, from \$954,049 for Fiscal 1996. This increase was attributable to an amortization expense associated with agreements the Company entered into with certain financial advisors and consultants in exchange for warrants to purchase the Company's stock, an increase in the general operations of the Company, an increase in personnel, and bonus awards.

## Taxes

At December 31, 1998, the Company had a cumulative net operating loss carryforward of approximately \$19,600,000 for federal income tax purposes.

## Liquidity and Capital Resources

Since inception, the Company has primarily financed its operations through the sale of equity securities and licensing fees, and at December 31, 1998 the Company had cash and cash equivalents of \$2,400,000. On March 9, 1999, the Company completed the sale of 751,654 common shares through a subscription rights offer and raised an additional \$7,328,626, before deducting expenses of the offer. The Company expects that its cash on hand will be sufficient to finance its operations beyond the next 12 months. However, additional funds may be required for the successful completion of the Company's product development activities. The Company plans to obtain financing for its future operations through royalties and licensing fees from Abbott, from licensing fees from other pharmaceutical companies, and/or additional sales of equity or debt securities. Sales of additional equity securities could result in the dilution of the interests of present shareholders.

Under its License Agreement with Abbott, the Company has received \$1,650,000 of license fees and milestone payments for signing the agreement and achieving milestones pertaining to the allowance of certain patent claims pending and the submission of the NDA for Hextend. Up to an additional \$850,000 of license payments under the License Agreement will become payable in installments upon the achievement of specific milestones pertaining to the approval of the NDA for Hextend and the commencement of sales of the product. Additional license fees and royalties will become payable based upon product sales.

License fees and royalties will also be sought from Abbott or other pharmaceutical companies for United States and Canadian licenses of new products and uses of Hextend that are not covered by Abbott's license, and for licenses to manufacture and market the Company's products abroad.

The amount of license fees and royalties that may be earned through the licensing and sale of the Company's products, as well as the future availability and terms of equity and debt financings, are uncertain. The unavailability or inadequacy of financing or revenues to meet future capital needs could force the Company to modify, curtail, delay or suspend some or all aspects of its planned operations.

## Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The Company did not hold any market risk sensitive instruments as of December 31, 1998, June 30, 1998 or June 30, 1997.

Item 8. Financial Statements and Supplementary Data

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INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders  
BioTime, Inc.:

We have audited the accompanying balance sheets of BioTime, Inc. (a development stage company) as of December 31, 1998 and June 30, 1998, and the related statements of operations, shareholders' equity and cash flows for six months ended December 31, 1998, each of the three years in the period ended June 30, 1998, and the period from November 30, 1990 (inception) to December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, such financial statements present fairly, in all material respects, the financial position of BioTime, Inc. as of December 31, 1998 and June 30, 1998, and the results of its operations and its cash flows for the six months ended December 31, 1998, each of the three years in the period ended June 30, 1998 and the period from November 30, 1990 (inception) to December 31, 1998, in conformity with generally accepted accounting principles.

The Company is in the development stage as of December 31, 1998. As discussed in Note 1 to the financial statements, successful completion of the Company's product development program and ultimately the attainment of profitable operations is dependent upon future events, including maintaining adequate financing to fulfill its development activities, obtaining regulatory approval for products ultimately developed, and achieving a level of revenues adequate to support the Company's cost structure.

DELOITTE & TOUCHE LLP  
San Francisco, California  
February 5, 1999

(March 9, 1999, as to Note 9)

BIOTIME, INC.  
(A Development Stage Company)

BALANCE SHEETS

ASSETS	December 31, 1998	June 30, 1998
	-----	-----
CURRENT ASSETS		
Cash and cash equivalents	\$ 2,429,014	\$ 4,105,781
Prepaid expenses and other current assets	153,267	245,912
	-----	-----
Total current assets	2,582,281	4,351,693
EQUIPMENT, Net of accumulated depreciation of \$217,107 and \$188,526	166,474	190,665
DEPOSITS AND OTHER ASSETS	60,700	99,422
	-----	-----
TOTAL ASSETS	\$ 2,809,455	\$ 4,641,780
	=====	=====
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 237,203	\$ 189,530
Deferred revenue - current portion	187,500	437,500
	-----	-----
Total current liabilities	424,703	627,030
COMMITMENTS (Note 6)		
SHAREHOLDERS' EQUITY:		
Preferred Shares, no par value, undesignated as to Series, authorized 1,000,000 shares; none outstanding (Note 4)		
Common Shares, no par value, authorized 40,000,000 shares; issued and outstanding 10,033,079 and 9,947,579 shares (Note 4)	19,022,116	18,557,636
Contributed Capital	93,972	93,972
Deficit accumulated during development stage	(16,731,336)	(14,636,858)
	-----	-----
Total shareholders' equity	2,384,752	4,014,750
	-----	-----
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 2,809,455	\$ 4,641,780
	=====	=====

See notes to financial statements.

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF OPERATIONS

	Six Months Ended December 31, 1998	----- 1998	Year Ended June 30, ----- 1997	----- 1996	Period from Inception (November 30, 1990) to December 31, 1998 -----
REVENUE:					
License fee	\$ 250,000	\$ 1,150,000	\$ 62,500	\$ --	\$ 1,462,500
	-----	-----	-----	-----	-----
EXPENSES:					
Research and development	(1,723,860)	(3,048,775)	(2,136,325)	(1,142,168)	(11,681,988)
General and administrative	(710,131)	(1,849,312)	(1,209,546)	(954,049)	(7,789,764)
	-----	-----	-----	-----	-----
Total expenses	(2,433,991)	(4,898,087)	(3,345,871)	(2,096,217)	(19,471,752)
	-----	-----	-----	-----	-----
INTEREST AND OTHER INCOME:	89,513	294,741	189,161	130,882	1,302,747
	-----	-----	-----	-----	-----
NET LOSS	\$(2,094,478)	(3,453,346)	(3,094,210)	(1,965,335)	\$ (16,706,505)
	=====	=====	=====	=====	=====
BASIC AND DILUTED LOSS PER SHARE	\$ (0.21)	\$ (0.35)	\$ (0.35)	\$ (0.25)	
	=====	=====	=====	=====	
COMMON AND EQUIVALENT SHARES USED IN COMPUTING PER SHARE AMOUNTS:					
BASIC AND DILUTED	10,008,468	9,833,156	8,877,024	7,827,732	
	=====	=====	=====	=====	

See notes to financial statements.

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF SHAREHOLDERS' EQUITY

	Series A Convertible Preferred Shares		Common Shares		Contributed Capital	Deficit Accumulated During Development Stage
	Number of Shares	Amount	Number of Shares	Amount		
BALANCE, November 30, 1990 (date of inception)	--	--	--	--	--	--
NOVEMBER 1990			1,312,761	\$ 263		
Common shares issued for cash						
DECEMBER 1990:						
Common shares issued for stock of a separate entity at fair value			1,050,210	137,400		
Contributed equipment at appraised value					\$ 16,425	
Contributed cash					77,547	
MAY 1991:						
Common shares issued for cash less offering costs			101,175	54,463		
Common shares issued for stock of a separate entity at fair value			100,020	60,000		
JULY 1991:						
Common shares issued for services performed			30,000	18,000		
AUGUST-DECEMBER 1991						
Preferred shares issued for cash less offering costs of \$125,700	360,000	\$474,300				
MARCH 1992:						
Common shares issued for cash less offering costs of \$1,015,873			2,173,500	4,780,127		
Preferred shares converted into common shares	(360,000)	(474,300)	360,000	474,300		
Dividends declared and paid on preferred shares						\$ (24,831)
MARCH 1994:						
Common shares issued for cash less offering costs of \$865,826			2,805,600	3,927,074		
JANUARY-JUNE 1995:						
Common shares repurchased with cash			(253,800)	(190,029)		
NET LOSS SINCE INCEPTION						\$(6,099,136)
BALANCE AT JUNE 30, 1995	--	\$	7,679,466	9,261,598	\$ 93,972	\$(6,123,967)
Common shares issued for cash (exercise of options and warrants)			496,521	1,162,370		
Common shares issued for cash (lapse of rescission)			112,176	67,300		
Common shares repurchased with cash			(18,600)	(12,693)		
Common shares warrants and options granted for services				356,000		
NET LOSS						(1,965,335)
BALANCE AT JUNE 30, 1996	--	\$	8,269,563	10,834,575	93,972	(8,089,302)

See notes to financial statements.

(Continued)

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF SHAREHOLDERS' EQUITY

(Continued)

	Series A Convertible Preferred Shares		Common Shares		Contributed Capital	Deficit Accumulated During Development Stage
	Number of Shares	Amount	Number of Shares	Amount		
Common shares issued for cash less offering costs of \$170,597			849,327	5,491,583		
Common shares issued for cash (exercise of options and warrants)			490,689	1,194,488		
Common shares warrants and options granted for service				105,000		
NET LOSS						(3,094,210)
BALANCE AT JUNE 30, 1997	--	\$ --	9,609,579	\$17,625,646	\$ 93,972	\$(11,183,512)
Common shares issued for cash (exercise of options)			337,500	887,690		
Common shares warrants and options granted for service				38,050		
Common shares issued for services			500	6,250		
NET LOSS						(3,453,346)
BALANCE AT JUNE 30, 1998	--	--	9,947,579	\$18,557,636	\$93,972	\$(14,636,858)
Common shares issued for cash (exercise of options and warrants)			84,000	395,730		
Common shares options granted for services				50,000		
Common shares issued for services			1,500	18,750		
NET LOSS						(2,094,478)
BALANCE AT DECEMBER 31, 1998	--	\$ --	10,033,079	\$19,022,116	\$93,972	\$(16,731,336)

See Notes to financial statements.

(Concluded)

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF CASH FLOWS

	Six Months Ended December 31, 1998	Year Ended June 30,			Period from Inception (November 30, 1990) to December 31, 1998
	1998	1998	1997	1996	
<b>OPERATING ACTIVITIES:</b>					
Net loss	\$ (2,094,478)	\$ (3,453,346)	\$ (3,094,210)	\$ (1,965,335)	\$ (16,706,505)
Adjustments to reconcile net loss to net cash used in operating activities:					
Deferred revenue	(250,000)	(500,000)	(62,500)		(812,500)
Depreciation	28,582	49,284	41,023	35,886	217,107
Cost of services - shares, options and warrants	78,750	44,300	240,821	167,932	577,328
Supply reserves		100,000	100,000		200,000
Changes in operating assets and liabilities:					
Research and development supplies on hand				(200,000)	(200,000)
Prepaid expenses and other current assets	87,367	13,197	(180,837)	24,705	(138,545)
Deposits and other assets	34,000	(65,000)	(24,722)		(60,700)
Accounts payable	47,673	(59,638)	119,939	(182,198)	237,203
Accrued compensation		(175,000)	175,000		
Deferred revenue		(400,000)	1,400,000		1,000,000
Net cash used in operating activities	(2,068,106)	(4,446,203)	(1,285,486)	(2,119,010)	(15,686,612)
<b>INVESTING ACTIVITIES:</b>					
Sale of investments					197,400
Purchase of short-term investments					(9,946,203)
Redemption of short-term investments					9,946,203
Purchase of equipment and furniture	(4,391)	(147,340)	(32,072)	(28,442)	(367,156)
Net cash used in investing activities	(4,391)	(147,340)	(32,072)	(28,442)	(169,756)
<b>FINANCING ACTIVITIES:</b>					
Issuance of preferred shares for cash					600,000
Preferred shares placement costs					(125,700)
Issuance of common shares for cash			5,662,180		16,373,106
Common shares placement costs			(170,597)		(2,052,296)
Net proceeds from exercise of common share options and warrants	395,730	887,690	1,194,488	1,162,370	3,640,278
Contributed capital - cash					77,547
Dividends paid on preferred shares					(24,831)
Repurchase of common shares				(12,693)	(202,722)
Net cash provided by financing activities	395,730	887,690	6,686,071	1,149,677	18,285,382
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(1,676,767)	(3,705,853)	5,368,513	(997,775)	2,429,014
<b>CASH AND CASH EQUIVALENTS:</b>					
At beginning of period	4,105,781	7,811,634	2,443,121	3,440,896	--
At end of period	\$ 2,429,014	\$ 4,105,781	\$ 7,811,634	\$ 2,443,121	\$ 2,429,014

See notes to financial statements.

(Continued)

BIOTIME, INC.  
(A Development Stage Company)

STATEMENTS OF CASH FLOWS

	Six Months Ended December 31, 1998	----- 1998	Year Ended June 30, 1997	----- 1996	Period from Inception (November 30, 1990) to December 31, 1998 -----
<b>NONCASH FINANCING AND INVESTING ACTIVITIES:</b>					
Receipt of contributed equipment					\$ 16,425
Issuance of common shares in exchange for shares of common stock of Cryomedical Sciences, Inc. in a stock-for-stock transaction					\$ 197,400
Granting of options and warrants for services	\$ 50,000	\$ 38,050	\$ 105,000	\$ 356,000	\$ 567,050
Issuance of common shares in exchange for services	\$ 18,750	\$ 6,250			\$ 25,000

See notes to financial statements.

(Concluded)

BIOTIME, INC.  
(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

1. GENERAL AND DEVELOPMENT STAGE ENTERPRISE

General - BioTime, Inc. (the Company) was organized November 30, 1990 as a California corporation. The Company is a biomedical organization, currently in the development stage, which is engaged in the research and development of synthetic plasma expanders, blood volume substitute solutions, and organ preservation solutions, for use in surgery, trauma care, organ transplant procedures, and other areas of medicine.

Certain Significant Risks and Uncertainties - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such management estimates include certain accruals. Actual results could differ from those estimates.

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

Development Stage Enterprise - Since inception, the Company has been engaged in research and development activities in connection with the development of synthetic plasma expanders, blood volume substitute solutions and organ preservation products. The Company has limited operating revenues and has incurred operating losses of \$16,706,505 from inception to December 31, 1998. The successful completion of the Company's product development program and, ultimately, achieving profitable operations is dependent upon future events including maintaining adequate capital to finance its future development activities, obtaining regulatory approvals for the products it develops and achieving a level of revenues adequate to support the Company's cost structure.



2. SIGNIFICANT ACCOUNTING POLICIES

Change in fiscal year - On November 12, 1998, the Board of Directors of BioTime determined that it would be in the best interests of the Company and its shareholders to change the Company's fiscal year from one ending on June 30 to one ending on December 31 and, accordingly, the Company adopted a December 31 or calendar year-end beginning on January 1, 1999. Accordingly, the accompanying statements of operations, shareholders' equity and cash flows include the transition fiscal period for the six months from July 1, 1998 to December 31, 1998.

The following are the unaudited results of operations for the six months ended December 31, 1997:

Total Expenses	\$2,432,888
Operating Loss	1,782,888
Net Loss	1,619,798
Net Loss Per Share	0.17

Equipment is stated at cost or, in the case of donated equipment, at fair market value. Equipment is being depreciated using the straight-line method over a period of thirty-six to eighty-four months.

Patent costs associated with obtaining patents on products being developed are expensed as research and development expenses when incurred. These costs totaled \$47,781 for the six month period ended December 31, 1998, \$81,303, \$95,362 and \$95,598 for the years ended June 30, 1998, 1997, and 1996, respectively, and cumulatively, \$501,063 for the period from inception (November 30, 1990) to December 31, 1998.

Revenue recognition - License revenue is recognized ratably over the development period of the Hextend product which was originally determined to be two years. Milestone payments are recognized as revenue when milestones have been achieved.

Research and development costs are expensed when incurred and consist principally of salaries, payroll taxes, research and laboratory fees, hospital and consultant fees related to the clinical trials, and the Company's PentaLyte solution for use in human clinical trials.

Stock-based compensation - The Company accounts for stock-based awards to employees using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees.

Stock split - In October 1997, the Company effected a three-for-one split of its common shares. All share and per share amounts have been restated to reflect the stock split for all periods presented.

Net loss per share - In February 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 128, "Earnings per Share" (SFAS 128). The Company adopted SFAS 128 in the second quarter of fiscal 1998 and restated earnings (loss) per share (EPS) data for prior periods to conform with SFAS 128. SFAS 128 requires a dual presentation of basic and diluted EPS. Basic EPS excludes dilution and is computed by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted EPS reflects the potential dilution from securities and other contracts which are exercisable or convertible into common shares. As a result of operating losses, there is no difference between basic and diluted calculations of EPS.

Comprehensive Income (Loss) - In July 1998, the Company adopted Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income," which requires an enterprise to report, by major components and as a single total, the change in net assets during the period from nonowner sources. Comprehensive income (loss) was the same as net loss for all periods presented.

Segment information - The Company operates in the single segment of producing aqueous based synthetic solutions used in medical applications and is currently in the development stage of this segment.

Recently issued accounting standards - In June 1998, the Financial Accounting Standards Board issued Statement of Accounting Standards No. 133, "Accounting for Derivative Instruments and Hedging Activities," (SFAS 133) which establishes accounting and reporting standards for derivative instruments and for hedging activities. SFAS 133 requires that entities recognize all derivatives as either assets or liabilities and measure those instruments at fair value. Adoption of this statement is not expected to have a material impact on the Company's financial position, results of operations or cash flows. The Company will adopt SFAS 133 in its financial statements in the first quarter of the fiscal year ending December 31, 1999.

### 3. LICENSE AGREEMENT

In April 1997, BioTime and Abbott Laboratories ("Abbott") entered into an Exclusive License Agreement (the "License Agreement") under which BioTime granted to Abbott an exclusive license to manufacture and sell BioTime's proprietary blood plasma volume expander solution Hextend in the United States and Canada for certain therapeutic uses.

Under the License Agreement, Abbott has agreed to pay the Company up to \$40,000,000 in license fees; of which \$1,650,000 was paid as of December 31, 1998, and an additional \$850,000 will become payable upon achievement of specific milestones. Up to \$37,500,000 of additional license fees will be payable based upon annual net sales of Hextend at the rate of 10% of annual net sales if annual net sales exceed \$30,000,000 or 5% if annual net sales are between \$15,000,000 and \$30,000,000. Abbott's obligation to pay license fees on sales of Hextend will expire on the earlier of January 1, 2007 or, on a country by country basis, when all patents protecting Hextend in the applicable country expire or any third party obtains certain regulatory approvals to market a generic equivalent product in that country.

In addition to the license fees, Abbott will pay the Company a royalty on annual net sales of Hextend. The royalty rate will be 5% plus an additional .22% for each increment of \$1,000,000 of annual net sales, up to a maximum royalty rate of 36%. 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 has agreed that the Company may convert Abbott's exclusive license to a non-exclusive license or may terminate the license outright if certain minimum sales and royalty payments are not met. In order to terminate the license outright, BioTime would pay a termination fee in an amount ranging from the milestone payments made by Abbott to an amount equal to three times prior year net sales, depending upon when termination occurs. Abbott's exclusive license also may terminate, without the payment of termination fees by the Company, if Abbott fails to market Hextend. Management believes that the probability of payments of any termination fee by the Company is remote.

The Company has deferred recognition of \$187,500 of the license fee revenue received for signing the License Agreement. The Company will recognize the deferred revenue during the fiscal year ending December 31, 1999. The additional milestone payments that may be earned when the NDA is approved and when sales of Hextend commence will be recognized during the periods in which the milestones are achieved. Additional license fees and royalty payments will be recognized as the related sales are made and reported to the Company by Abbott.

#### 4. SHAREHOLDERS' EQUITY

During June 1994, the Board of Directors authorized management to repurchase up to 200,000 of the Company's common shares at market price at the time of purchase. As of December 31, 1998, 90,800 shares have been repurchased and retired. No shares have been repurchased since August 28, 1995.

During September 1995, the Company entered into an agreement for financial advisory services with Greenbelt Corp., a corporation controlled by Alfred D. Kingsley and Gary K. Duberstein, who are also shareholders of the Company. Under this agreement the Company issued to the financial advisor warrants to purchase 311,276 Common Shares at a price of \$1.93 per share, and the Company agreed to issue additional warrants to purchase up to an additional 622,549 Common Shares at a price equal to the greater of (a) 150% of the average market price of the Common Shares during the three months prior to issuance and (b) \$2 per share. The additional warrants were issued in equal quarterly installments over a two year period, beginning October 15, 1995.

The exercise price and number of Common Shares for which the warrants may be exercised are subject to adjustment to prevent dilution in the event of a stock split, combination, stock dividend, reclassification of shares, sale of assets, merger or similar transaction. The warrants are exercisable at the following prices: 466,912 at \$1.93 per share; 77,818 at \$2.35 per share; 77,818 at \$9.65 per share; 77,818 at \$9.42 per share; 77,818 at \$10.49 per share; 77,818 at \$15.74 per share; and 77,818 at \$13.75 per share. The total value of these warrants at the agreement date, estimated to be \$300,000, was capitalized in fiscal 1996 and was amortized over the two year term of the agreement.

During September 1996, the Company entered into an agreement with an individual to act as an advisor to the Company. In exchange for services, as defined, to be rendered by the advisor through September 1999, the Company issued warrants, with five year terms, to purchase 124,510 common shares at a price of \$6.02 per share. The exercise price and number of Common Shares for which the warrants may be exercised are subject to adjustment to prevent dilution in the event of a stock split, combination, stock dividend, reclassification of shares, sale of assets, merger or similar transaction. Warrants for 77,775 common shares vested and became exercisable and transferable when issued; warrants for the remaining 46,735 common shares vested ratably through September 1997 and became exercisable and transferable as vesting occurred. The estimated value of the services to be performed is \$60,000 and that amount has been capitalized and is being amortized over the three year term of the agreement.

On February 5, 1997, the Company completed a subscription rights offering raising \$5,662,180, through the sale of 849,327 common shares.

During April 1998, the Company entered into a new financial advisory services agreement with Greenbelt Corp. The agreement provides for an initial payment of \$90,000 followed by an advisory fee of \$15,000 per month that will be paid quarterly. The agreement will expire on March 31, 2000, but either party may terminate the agreement earlier upon 30 days prior written notice.

#### 5. STOCK OPTION PLAN

The Board of Directors of the Company adopted the 1992 Stock Option Plan (the "Plan") during September 1992. The Plan was approved by the shareholders at the 1992 Annual Meeting of Shareholders on December 1, 1992. Under the Plan, as amended, the Company has reserved 1,800,000 common shares for issuance under options granted to eligible persons. No options may be granted under the Plan more than ten years after the date the Plan was adopted by the Board of Directors, and no options granted under the Plan may be exercised after the expiration of ten years from the date of grant.

Under the Plan, options to purchase common shares may be granted to employees, directors and certain consultants at prices not less than the fair market value at date of grant for incentive stock options and not less than 85% of fair market value for other stock options. These options expire five to ten years from the date of grant and may be fully exercisable immediately, or may be exercisable according to a schedule or conditions specified by the Board of Directors or the Option Committee.

During the three years ended June 30, 1998, 1997 and 1996, employees, including directors, were granted options to purchase 17,500, 123,000 and 6,000 common shares, respectively, and non-employees were granted options to purchase 14,500, 165,000 and 180,000 common shares respectively. During the six months ended December 31, 1998, no options were granted to employees, and an option to purchase 20,000 shares was granted to a consultant. The options were valued at \$50,000 based on the underlying services provided and were recorded as consulting expense in the quarter ended December 31, 1998. At December 31, 1998, 599,000 shares were available for future grants under the Option Plan.

Option activity under the Plan is as follows:

	Number of Shares	Weighted Average Exercise Price
	-----	-----
Outstanding, July 1, 1995 (552,000 exercisable at a weighted average price of \$2.45)	675,000	\$ 2.21
Granted (weighted average fair value of \$0.74 per share)	186,000	1.07
Exercised	171,000	1.81
Canceled	--	--
	-----	-----
Outstanding, June 30, 1996 (537,000 exercisable at a weighted average price of \$2.26)	690,000	2.01
Granted (weighted average fair value of \$6.83 per share)	288,000	7.37
Exercised	138,000	2.37
Canceled	--	--
	-----	-----
Outstanding, June 30, 1997 (678,000 exercisable at a weighted average price of \$4.22)	840,000	3.78
Granted (weighted average fair value of \$18.25 per share)	32,000	16.56
Exercised	337,500	2.63
Canceled	--	--
	-----	-----
Outstanding, June 30, 1998 (411,500 exercisable at a weighted average price of \$6.52)	534,500	5.28
Granted (weighted average fair value of \$2.50 per share)	20,000	7.25
Exercised	84,000	4.71
Canceled	--	--
	-----	-----
Outstanding, December 31, 1998	470,500	\$ 5.46
	-----	-----

Additional information regarding options outstanding as of December 31, 1998 is as follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Avg. Remaining Contractual Life (yrs)	Weighted Avg. Exercise Price	Number Exercisable	Weighted Avg. Exercise Price
\$0.66-1.00	57,000	1.64	\$0.96	57,000	\$0.96
1.10-1.13	156,000	4.34	1.12	126,000	1.13
3.39	15,000	0.30	3.39	15,000	3.39
6.00-7.25	105,500	4.21	6.40	105,500	6.40
10.33-13.00	115,000	3.34	10.55	115,000	10.55
18.25	22,000	3.90	18.25	22,000	18.25
	-----			-----	
	470,500	3.59	\$5.46	440,500	\$5.76
	-----			-----	

As discussed in Note 1, the Company continues to account for its employee stock-based awards using the intrinsic value method in accordance with Accounting Principles Board No. 25, Accounting for Stock Issued to Employees and its related interpretations. Accordingly, no compensation expense has been recognized in the financial statements for employee stock arrangements. Options to purchase 197,500 shares were outstanding to employees at December 31, 1998. Options granted to non-employees have been recognized in the financial statements at the estimated fair value of the services or benefit provided. Options to purchase 273,000 shares were outstanding to non-employees at December 31, 1998.

Statement of Financial Accounting Standards No. 123, Accounting for Stock-Based Compensation, (SFAS 123) requires the disclosure of pro forma net income and earnings per share had the Company adopted the fair value method as of the beginning of fiscal 1995. Under SFAS 123, the fair value of stock-based awards to employees is calculated through the use of option pricing models, even though such models were developed to estimate the fair value of freely tradable, fully transferable options without vesting restrictions, which significantly differ from the Company's stock option awards.

These models also require subjective assumptions, including future stock price volatility and expected time to exercise, which greatly affect the calculated values. The Company's calculations were made using the Black-Scholes option pricing model with the following weighted average assumptions: expected life, 24 - 60 months following vesting; stock volatility, 83.87%, 95.00%, and 92.00% for the years ended June 30, 1998, 1997 and 1996, respectively; risk free interest rates, 5.64%, 5.96%, and 5.75% for the years ended June 30, 1998, 1997 and 1996, respectively; and no dividends during the expected term. The Company's calculations are based on a multiple option valuation approach and forfeitures are recognized as they occur. If the computed fair values for the years ended June 30, 1998, 1997, 1996 awards had been amortized to expense over the vesting period of the awards, pro forma net loss would have been \$3,665,915 (\$0.37 per share) in 1998, \$3,983,890 (\$0.44 per share) in 1997, and \$1,969,755 (\$0.25 per share) in 1996. No employee options vested or were granted in the six months ended December 31, 1998. Therefore, pro forma net loss is the same as recorded net loss for the six months ended December 31, 1998. The impact of outstanding non-vested stock options granted prior to 1996 has been excluded from the pro forma calculation; accordingly, the six months ending December 31, 1998, and the years ended June 30, 1998, 1997, 1996 pro forma adjustments are not indicative of future period pro forma adjustments, when the calculation will apply to all applicable stock options.

#### 6. COMMITMENTS AND CONTINGENCIES

The Company has employment agreements with six officers who are also shareholders, for five-year terms, five of which expire in June 2001 and one which expires in April 2002. All provide for base salaries with annual increases. The agreements also provide that in the event any of the officer's employment terminates, voluntarily or involuntarily, after a change in control of the Company through an acquisition of voting stock or assets, or a merger or consolidation with another corporation or entity, the executive officers will be entitled to severance payments equal to the greater of (a) 2.99 times the average annual compensation for the preceding five years or (b) the balance of the base salary for the unexpired portion of the term of the employment agreement. These officers/shareholders have signed intellectual property agreements with the Company as a condition of their employment.

The Company occupies its office and laboratory facility in Berkeley, California under a lease that will expire on March 31, 2004. The Company presently occupies approximately 5,200 square feet of space. The amount of space leased by the Company will increase by approximately 3,000 square feet and the monthly rent will increase to \$10,000 per month when the additional space is made available to the Company, which is expected to occur on or around June 30, 1999. The rent will increase annually by the greater of 3% and the increase in the local consumer price index, subject to a maximum annual increase of 7%. Rent expense totaled \$32,694 for the six month period ending December 31, 1998, \$62,990, \$59,376, and \$58,188, for each of the three years ended June 30, 1998, 1997 and 1996, respectively; and cumulatively, \$322,386 for the period from inception to December 31, 1998.

7. INCOME TAXES

The primary components of the net deferred tax asset are:

	Six Months Ended December 31, 1998	Year Ended June 30, 1998
Deferred Tax Asset:		
NOL Carryforwards	\$7,256,851	\$5,125,447
Research & Development Credits	622,516	444,398
Other, net	320,790	327,492
Total	8,200,157	5,897,337
Valuation allowance	(8,200,157)	(5,897,337)
Net deferred tax asset	\$ -0-	\$ -0-

No tax benefit has been recorded through December 31, 1998 because of the net operating losses incurred and a full valuation allowance provided. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax asset will not be realized. The Company established a 100% valuation allowance at December 31, 1998 and June 30, 1998 and 1997 due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets.

As of December 31, 1998, the Company has net operating loss carryforwards of approximately \$19,600,000 for federal and \$9,800,000 for state tax purposes, which begin to expire during fiscal years 2006 and 1999, respectively.

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



8. RELATED PARTY TRANSACTIONS

During the six months ended December 31, 1998 and the years ended June 30, 1998, 1997, and 1996, \$6,119, \$15,649, \$33,500, and \$36,000, respectively, of fees for consulting services were paid to a member of the Board of Directors.

9. SUBSEQUENT EVENT

On March 9, 1999, the Company completed a subscription rights offering raising \$7,328,626, through the sale of 751,654 common shares.

10. QUARTERLY RESULTS (UNAUDITED)

Summarized unaudited results of operations for each quarter of the six months ended December 31, 1998 and the fiscal years ended June 30, 1998, 1997, 1996 are as follows:

	First Quarter -----	Second Quarter -----	Third Quarter -----	Fourth Quarter -----	Total Year -----
Six Months Ended December 31, 1998 -----					
Revenue	\$ 125,000	\$125,000			\$250,000
Net loss	\$1,137,742	\$956,736			\$2,094,478
Net loss per share	\$ 0.11	\$ 0.10			\$0.21
Fiscal Year Ended June 30, 1998 -----					
Revenue	\$125,000	\$525,000	\$125,000	\$375,000	\$1,150,000
Net loss	\$982,621	\$637,177	\$1,071,538	\$762,010	\$3,453,346
Net loss per share	\$ 0.10	\$ 0.06	\$ 0.11	\$ 0.08	\$ 0.35
Fiscal Year Ended June 30, 1997 -----					
Revenue	-	-		\$65,500	\$62,500
Net loss	\$718,356	\$754,487	\$520,282	\$1,101,085	\$3,094,210
Net loss per share	\$ 0.26	\$ 0.27	\$ 0.17	\$ 0.37	\$ 1.05
Fiscal Year Ended June 30, 1996 -----					
Revenue	-	-	-	-	-
Net loss	\$377,407	\$463,395	\$413,230	\$711,303	\$1,965,335
Net loss per share	\$ 0.13	\$ 0.18	\$ 0.18	\$ 0.27	\$0.75

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

Not applicable.

PART III

Item 10. Directors and Executive Officers of the Registrant.

Directors and Executive Officers

The names and ages of the directors and executive officers of the Company are as follows:

Paul Segall, Ph.D., 56, is the Chairman and Chief Executive Officer and has served as a director of the Company since 1990. He was a research scientist for Cryomedical Sciences, Inc. ("CMSI") and a member of its Board of Directors from 1987 to December 1990, serving as Director of Research and Vice President of Research for CMSI, from April 1988 until 1989. Dr. Segall received a Ph.D. in Physiology from the University of California at Berkeley in 1977.

Ronald S. Barkin, 53, became President of BioTime during October, 1997, after serving as Executive Vice President since April 1997. Mr. Barkin has been a director of the Company since 1990. Before becoming an executive officer of the Company, Mr. Barkin practiced civil and corporate law for more than 25 years after getting a J.D. from Boalt Hall, University of California at Berkeley.

Victoria Bellport, 33, is the Chief Financial Officer and Vice President and has been a director of the Company since 1990. Ms. Bellport received a B.A. in Biochemistry from the University of California at Berkeley in 1988.

Hal Sternberg, Ph.D., 45, is the Vice President of Research and has been a director of the Company since 1990. He was a research scientist for CMSI from 1987 to December 1990, serving as Vice President of Biochemistry for CMSI from November 1987 to 1989. Dr. Sternberg was a visiting scientist and research Associate at the University of California at Berkeley from 1985-1988, where he supervised a team of researchers studying Alzheimer's Disease. Dr. Sternberg received his Ph.D. from the University of Maryland in Biochemistry in 1982.

Harold Waitz, Ph.D., 56, is the Vice President of Engineering and Regulatory Affairs and has been a director of the Company since 1990. He was a research scientist for CMSI from 1987 to December 1990, serving as Vice President of Technology for CMSI from November 1987 to 1989. From 1986-1988, Dr. Waitz served as Vice President of Research at the Winters Institute, a non-profit biomedical research institution, at which Dr. Waitz studied arteriosclerosis in primates. He received his Ph.D. in Biophysics and Medical Physics from the University of California at Berkeley in 1983.

Judith Segall, 45, is the Vice President of Technology and Secretary, and has been a director of the Company from 1990 through 1994, and from 1995 through the present date. She performed services on a contract basis as a biochemist for CMSI during 1989, until the formation of BioTime. Ms. Segall received a B.S. in Nutrition and Clinical Dietetics from the University of California at Berkeley in 1989.

Jeffrey B. Nickel, Ph.D., 54, joined the Board of Directors of the Company during March 1997. Dr. Nickel is the President of Nickel Consulting through which he has served as a consultant to companies in the pharmaceutical and biotechnology industries since 1990. Prior to starting his consulting business, Dr. Nickel served in a number of management positions for Syntex Corporation and Merck & Company. Dr. Nickel received his Ph.D. in Organic Chemistry from Rutgers University in 1970.

Milton H. Dresner, 72, joined the Board of Directors of the Company during February 1998. Mr. Dresner is Co-Chairman of the Highland Companies, a diversified organization engaged in the development and ownership of residential and industrial real estate. Mr. Dresner serves as a director of Avatar Holdings, Inc., a real estate development company, Hudson General Corporation, an aviation services company, and Childtime Learning Centers, Inc. a child care and pre-school education services company.

#### Executive Officers

Paul Segall, Ronald S. Barkin, Victoria Bellport, Hal Sternberg, Harold Waitz and Judith Segall are the only executive officers of BioTime.

There are no family relationships among the directors or officers of the Company, except that Paul Segall and Judith Segall are husband and wife.

#### Directors' Meetings, Compensation and Committees of the Board

The Board of Directors has an Audit Committee, the members of which are Jeffrey Nickel and Milton Dresner. The purpose of the Audit Committee is to recommend the engagement of the corporation's independent auditors and to review their performance, the plan, scope and results of the audit, and the fees paid to the corporation's independent auditors. The Audit Committee also will review the Company's accounting and financial reporting procedures and controls and all transactions between the Company and its officers, directors, and shareholders who beneficially own 5% or more of the Common Shares.

The Company does not have a standing Nominating Committee. Nominees to the Board of Directors are selected by the entire Board.

The Board of Directors has a Stock Option Committee that administers the Company's 1992 Stock Option Plan and makes grants of options to key employees, consultants, scientific advisory board members and independent contractors of the Company, but not to officers or directors of the Company. The members of the Stock Option Committee are Paul Segall, Ronald S. Barkin, and Victoria Bellport. The Stock Option Committee was formed during September 1992.

During the fiscal year (six months) ended December 31, 1998, the Board of Directors met three times. No director attended fewer than 75% of the meetings of the Board or any committee on which they served.

Directors of the Company who are not employees receive an annual fee of \$20,000, which may be paid in cash or in Common Shares, at the election of the director. Directors of the Company and members of committees of the Board of Directors who are employees of the Company are not compensated for serving as directors or attending meetings of the Board or committees of the Board. Directors are entitled to reimbursements for their out-of-pocket expenses incurred in attending meetings of the Board or committees of the Board. Directors who are employees of the Company are also entitled to receive compensation in such capacity.

#### Executive Compensation

The Company has entered into five-year employment agreements (the "Employment Agreements") with Paul Segall, the Chairman and Chief Executive Officer; Victoria Bellport, the Chief Financial Officer; Judith Segall, Vice President of Technology and Corporate Secretary; Hal Sternberg, Vice President of Research; and Harold Waitz, Vice President of Engineering and Regulatory Affairs. The Employment Agreements will expire on December 31, 2000 but may terminate prior to the end of the term if the employee (1) dies, (2) leaves the Company, (3) becomes disabled for a period of 90 days in any 150 day period, or (4) is discharged by the Board of Directors for failure to carry out the reasonable policies of the Board, persistent absenteeism, or a material breach of a covenant. Under the Employment Agreement, the executive officers are presently receiving an annual salary of \$99,000, and will receive a one-time cash bonus of \$25,000 if the Company receives at least \$1,000,000 of equity financing from a pharmaceutical company. Each executive officer will be entitled to seek a modification of his or her Employment Agreement before the expiration of the five year term if the market value of the Company's outstanding capital stock exceeds \$75,000,000.

In the event of the executive officer's death during the term of his or her Employment Agreement, the Company will pay his or her estate his or her salary for a period of six month or until December 31, 2000, whichever first occurs. In the event that the executive officer's employment terminates, voluntarily or involuntarily, after a change in control of the Company through an acquisition of voting stock, an acquisition of the Company's assets, or a merger or consolidation of the Company with another corporation or entity, the executive officers will be entitled to severance compensation equal to the greater of (a) 2.99 times his or her average annual compensation for the preceding five years and (b) the balance of his or her base salary for the unexpired portion of the term of his Employment Agreement.

The Company also entered into a similar employment agreement with Ronald S. Barkin, which commenced on April 1, 1997 and expires on March 31, 2002

Each executive officer has also executed an Intellectual Property Agreement which provides that the Company is the owner of all inventions developed by the executive officer during the course of his or her employment.

The following table summarizes certain information concerning the compensation paid to the Company's five most highly compensated executive officers during the last three fiscal years.

SUMMARY COMPENSATION TABLE

Name and Principal Position	Annual Compensation		Long-Term Compensation	
	Year Ended	Salary(\$)	Bonus	Stock Options (Shares)
Paul Segall Chairman and Chief Executive Officer	December 31, 1998	\$49,500		
	June 30, 1998	\$95,500	\$50,000	—
	June 30, 1997	\$90,583	—	—
	June 30, 1996	\$76,041	—	—
Hal Sternberg Vice President of Research	December 31, 1998	\$49,500		
	June 30, 1998	\$95,500	\$25,000	—
	June 30, 1997	\$90,583	\$25,000	—
	June 30, 1996	\$76,041	—	—
Harold Waitz Vice President of Engineering and Regulatory Affairs	December 31, 1998	\$49,500		
	June 30, 1998	\$95,500	—	—
	June 30, 1997	\$90,583	\$50,000	—
	June 30, 1996	\$76,041	—	—
Victoria Bellport Vice President and Chief Financial Officer	December 31, 1998	\$49,500		
	June 30, 1998	\$95,500	\$25,000	—
	June 30, 1997	\$90,583	\$25,000	—
	June 30, 1996	\$76,041	—	—
Judith Segall Vice President and Corporate Secretary	December 31, 1998	\$49,500		
	June 30, 1998	\$95,500	\$25,000	—
	June 30, 1997	\$90,583	\$25,000	—
	June 30, 1996	\$76,041	—	—

Insider Participation in Compensation Decisions

The Board of Directors does not have a standing Compensation Committee. Instead, the Board of Directors as a whole approves all executive compensation. All of the executive officers of the Company serve on the Board of Directors but do not vote on matters pertaining to their own personal compensation. Paul Segall and Judith Segall do not vote on matters pertaining to each other's compensation.

## Stock Options

The following table provides information with respect to the Company's five most highly compensated executive officers, concerning the exercise of options during the fiscal year ended December 31, 1998 and unexercised options held as of December 31, 1998

### Aggregated Options Exercised in Last Fiscal Year, and Fiscal Year-End Option Values

Name	Number of Shares Acquired on Exercise	Value Realized (\$)	Number of Unexercised Options at December 31, 1998		Value of Unexercised In-the-Money Options at December 31, 1998	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Paul Segall	0	0	0	0	0	0
Hal Sternberg	0	0	0	0	0	0
Harold Waitz	0	0	0	0	0	0
Victoria Bellport	0	--	0	0	0	0
Judith Segall	0	--	0	0	0	0

## Certain Relationships and Related Transactions

During the six months ended December 31, 1998, \$6,119 in fees for consulting services was paid to Jeffrey B. Nickel, a member of the Board of Directors.

During September 1995, the Company entered into an agreement for financial advisory services with Greenbelt Corp., a corporation controlled by Alfred D. Kingsley and Gary K. Duberstein, who are also shareholders of the Company. Under this agreement the Company issued to the financial advisor warrants to purchase 311,276 Common Shares at a price of \$1.93 per share, and the Company agreed to issue additional warrants to purchase up to an additional 622,549 Common Shares at a price equal to the greater of (a) 150% of the average market price of the Common Shares during the three months prior to issuance and (b) \$2 per share. The additional warrants were issued in equal quarterly installments over a two year period, beginning October 15, 1995. The exercise price and number of Common Shares for which the warrants may be exercised are subject to adjustment to prevent dilution in the event of a stock split, combination, stock dividend, reclassification of shares, sale of assets, merger or similar transaction. The number of shares and exercise prices shown have been adjusted for the Company's subscription rights distributions during January 1997 and February 1999 and the payment of a stock dividend during October 1997. The warrants are exercisable at the following prices: 466,912 at \$1.93 per share; 77,818 at \$2.35 per share; 77,818 at \$9.65 per share; 77,818 at \$9.42 per share; 77,818 at \$10.49 per share; 77,818 at \$15.74 per share; and 77,818 at \$13.75 per share.

Under the agreement, upon the request of Greenbelt Corp., the Company will file a registration statement to register the warrants and underlying Common Shares for sale under the Securities Act of 1933, as amended (the "Act") and applicable state securities or "Blue Sky" laws. The Company will bear the expenses of registration, other than any underwriting discounts that may be incurred by Greenbelt Corp. in connection with a sale of the warrants or common shares.

The Company shall not be obligated to file more than two such registration statements, other than registration statements on Form S-3. Greenbelt Corp. also is entitled to include warrants and common shares in any registration statement filed by the Company to register other securities for sale under the Act.

During April 1998, the Company entered into a new financial advisory services agreement with Greenbelt Corp. The new agreement provides for an initial payment of \$90,000 followed by an advisory fee of \$15,000 per month that will be paid quarterly. The agreement will expire on March 31, 2000, but either party may terminate the agreement earlier upon 30 days prior written notice.

The Company has agreed to reimburse Greenbelt Corp. for all reasonable out-of-pocket expenses incurred in connection with its engagement as financial advisor, and to indemnify Greenbelt Corp. and the officers, affiliates, employees, agents, assignees, and controlling person of Greenbelt Corp. from any liabilities arising out of or in connection with actions taken on behalf of the Company under the agreement.



Item 12. Security Ownership of Certain Beneficial Owners and Management.

The following table sets forth information as of March 24, 1999 concerning beneficial ownership of Common Shares by each shareholder known by the Company to be the beneficial owner of 5% or more of the Company's Common Shares, and the Company's executive officers and directors. Information concerning certain beneficial owners of more than 5% of the Common Shares is based upon information disclosed by such owners in their reports on Schedule 13D or Schedule 13G.

	Number of Shares	Percent of Total
	-----	-----
Alfred D. Kingsley (1) Gary K. Duberstein Greenbelt Corp. Greenway Partners, L.P. Greenhouse Partners, L.P. 277 Park Avenue, 27th Floor New York, New York 10017	1,365,642	11.6
Paul and Judith Segall (2)	745,408	6.9
Harold D. Waitz (3)	524,166	4.8
Hal Sternberg	502,043	4.6
Victoria Bellport	205,978	1.9
Ronald S. Barkin (4)	192,761	1.7
Jeffrey B. Nickel (5)	15,000	*
Milton H. Dresner	13,271	*
All officers and directors as a group (8 persons)(4)(5) -----	2,198,627	20.0%

\* Less than 1%

- (1) Includes 933,825 Common Shares issuable upon the exercise of certain warrants owned beneficially by Greenbelt Corp and 59,730 Common Shares owned by Greenbelt Corp. Mr. Kingsley and Mr. Duberstein may be deemed to beneficially own the warrant shares that Greenbelt Corp. beneficially owns. Includes 90,750 Common Shares owned by Greenway Partners, L.P. Greenhouse Partners, L.P. is the general partner of Greenway Partners, L.P. and Mr. Kingsley and Mr. Duberstein are the general partners of Greenhouse Partners, L.P. Greenhouse Partners, L.P., Mr. Kingsley and Mr. Duberstein may be deemed to beneficially own the Common Shares that Greenway Partners, L.P. beneficially owns. Includes 270,442 Common Shares owned solely by Mr. Kingsley, as to which Mr. Duberstein disclaims beneficial ownership. Includes 10,895 Common Shares owned solely by Mr. Duberstein, as to which Mr. Kingsley disclaims beneficial ownership.
- (2) Includes 543,245 shares held of record by Paul Segall and 202,163 shares held of record by Judith Segall.
- (3) Includes 2,100 shares held for the benefit of Dr. Waitz's minor children.
- (4) Includes 135,000 Common Shares issuable upon the exercise of certain options.
- (5) Includes 15,000 Common Shares issuable upon the exercise of certain options.

COMPLIANCE WITH SECTION 16(a) OF THE SECURITIES EXCHANGE ACT OF 1934

Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), requires the Company's directors and executive officers and persons who own more than ten percent (10%) of a registered class of the Company's equity securities to file with the Securities and Exchange Commission (the "SEC") initial reports of ownership and reports of changes in ownership of Common Shares and other equity securities of the Company. Officers, directors and greater than ten percent beneficial owners are required by SEC regulation to furnish the Company with copies of all reports they file under Section 16(a).

To the Company's knowledge, based solely on its review of the copies of such reports furnished to the Company and written representations that no other reports were required, all Section 16(a) filing requirements applicable to its officers, directors and greater than ten percent beneficial owners were complied with during the fiscal year ended December 31, 1998.

PART IV

Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K

(a-1) Financial Statements.

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

	Page
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Independent Auditors' Report	33
Balance Sheets As of December 31, 1998 and June 30, 1998	34
Statements of Operations For the Six Months Ended December 31, 1998, the Three Years in the Period Ended June 30, 1998 and the Period From Inception (November 30, 1990) to December 31, 1998	35
Statements of Shareholders' Equity For the Six Months Ended December 31, 1998, the Three Years in the Period Ended June 30, 1998 and the Period From Inception (November 30, 1990) to December 31, 1998	36-37
Statements of Cash Flows For the Six Months Ended December 31, 1998, the Three Years in the Period Ended June 30, 1998 and the Period From Inception (November 30, 1990) to December 31, 1998	38-39
Notes to Financial Statements	40-49

(a-3) Exhibits.

Exhibit Numbers	Description
3.1	Articles of Incorporation, as Amended.+
3.3	By-Laws, As Amended.#
4.1	Specimen of Common Share Certificate.+
10.1	Lease Agreement dated July 1, 1994 between the Registrant and Robert and Norah Brower, relating to principal executive offices of the Registrant.*
10.2	Employment Agreement dated June 1, 1996 between the Company and Paul Segall.++
10.3	Employment Agreement dated June 1, 1996 between the Company and Hal Sternberg.++
10.4	Employment Agreement dated June 1, 1996 between the Company and Harold Waitz.++
10.5	Employment Agreement dated June 1, 1996 between the Company and Judith Segall.++
10.6	Employment Agreement dated June 1, 1996 between the Company and Victoria Bellport.++
10.7	Intellectual Property Agreement between the Company and Paul Segall.+
10.8	Intellectual Property Agreement between the Company and Hal Sternberg.+
10.9	Intellectual Property Agreement between the Company and Harold Waitz.+
10.10	Intellectual Property Agreement between the Company and Judith Segall.+
10.11	Intellectual Property Agreement between the Company and Victoria Bellport.+
10.12	Agreement between CMSI and BioTime Officers Releasing Employment Agreements, Selling Shares, and Transferring Non-Exclusive License.+
10.13	Agreement for Trans Time, Inc. to Exchange CMSI Common Stock for BioTime, Inc. Common Shares.+
10.14	1992 Stock Option Plan, as amended.##
10.15	Employment Agreement dated April 1, 1997 between the Company and Ronald S. Barkin.^

- 10.16 Intellectual Property Agreement between the Company and Ronald S. Barkin.^
- 10.17 Addenda to Lease Agreement between the Company and Donn Logan.\*\*
- 23.1 Consent of Deloitte & Touche LLP\*\*
- 27 Financial Data Schedule\*\*

+Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1998.

+ 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.

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

\* Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1994.

++ Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1996.

^ Incorporated by reference to the Company's Form 10-Q for the quarter ended March 31, 1997.

## Incorporated by reference to Registration Statement on Form S-8, File Number 333-30603 filed with the Securities and Exchange Commission on July 2, 1997.

\*\* Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on the 30th day of March 1999.

BIOTIME, INC.

By: /s/ Paul E. Segall  
 -----  
 Paul E. Segall, Ph.D.  
 Chairman and Chief Executive  
 Officer (Principal executive Officer)

Signature -----	Title -----	Date -----
/s/ Paul E. Segall ----- Paul E. Segall, Ph.D.	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	March 30, 1999
/s/ Ronald S. Barkin ----- Ronald S. Barkin	President and Director	March 30, 1999
/s/ Harold D. Waitz ----- Harold D. Waitz, Ph.D.	Vice President and Director	March 30, 1999
/s/ Hal Sternberg ----- Hal Sternberg, Ph.D.	Vice President and Director	March 30, 1999
/s/ Victoria Bellport ----- Victoria Bellport	Chief Financial Officer and Director (Principal Financial and Accounting Officer)	March 30, 1999
/s/ Judith Segall ----- Judith Segall	Vice President, Corporate Secretary and Director	March 30, 1999
----- Jeffrey B. Nickel	Director	March 30, 1999
----- Milton H. Dresner	Director	March 30, 1999

Exhibit Index

Exhibit Numbers	Description
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23.1	Consent of Deloitte & Touche LLP**
27	Financial Data Schedule**

+Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1998.

+ 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.

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

\* Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1994.

++ Incorporated by reference to the Company's Form 10-K for the fiscal year ended June 30, 1996.

^ Incorporated by reference to the Company's Form 10-Q for the quarter ended March 31, 1997.

## Incorporated by reference to Registration Statement on Form S-8, File Number 333-30603 filed with the Securities and Exchange Commission on July 2, 1997.

\*\* Filed herewith.



ADDENDUM NO. 3 TO LEASE

This is an Addendum to the Lease dated June 1, 1993 in which BioTime, Inc., a California corporation, is referred to as "Lessee." The following changes are hereby incorporated. In the event of a conflict of terms, those of this Addendum shall prevail.

1. The Premises are hereby expanded to include the entire building at 935 Pardee Street, Berkeley, California being approximately 8890 square feet on two levels, and its adjacent parking area. The additional space, comprising approximately 3,000 square feet, is referred to as the "Expansion Space."

2. Regarding Paragraph 1: The term shall be Five (5) years commencing April 1, 1999.

3. Regarding Paragraph 2: Rent shall be Five Thousand Five Hundred Dollars (\$5,500.00) per month prior to Lessor's delivery of the Expansion Space to Lessee. Upon Lessee's possession of the Expansion Space, rent shall increase to Ten Thousand Dollars (\$10,000.00) per month for the entire premises. If the Expansion Space is delivered to Lessee on a day other than the first day of a calendar month, the rent shall be prorated at the rate of Thirty-Seven Cents (\$0.037) per square foot per day.

4. Regarding Paragraph 14: Lessee shall pay for all utilities and refuse collection.

5. Regarding Paragraph 29: Rental for any holding over shall be Eleven Thousand Dollars (\$11,000.00) per month as stated in said paragraph.

6. Regarding Paragraph 33: On each anniversary of the lease, rent shall be increased according to the increase in the Consumer Price Index during the previous year, except that no single increase shall be less than three percent (3%) nor greater than seven percent (7%). The Consumer Price Index shall be the consumer price index (All Urban Consumers, base year 1982-84=100) for San Francisco Oakland - San Jose CMSA published by the United States Department of Labor, Bureau of Labor Statistics.

7. Regarding Paragraph 34: Lessee shall have one (1) option to extend the lease for an additional three (3) years on the same terms and conditions stated in said paragraph.

8. Possession: Lessor shall deliver possession of the Expansion Space to Lessee June 30, 1999 or on such earlier date on which the Expansion Space becomes vacant and meets the conditions of Paragraph 9C of this Addendum.

9. Condition of Premises at Commencement: As-is excepting the following which shall be the Lessor's obligation:

1

A. Lessor shall inspect wood floors on the second floor and repair and strengthen as required.

B. Lessor shall modify shed to provide for its use as a parking space.

C. The Expansion Space shall be in good condition and repair, broom swept clean and free of all personal property, equipment, furniture and trade fixtures of the prior tenant.

10. Early Termination: At any time after the expiration of the eighteen (18) month of the new lease term, Lessee may terminate the lease by so notifying Lessor in writing no less than six (6) months prior to the intended termination date.

/s/ Ronald S. Barkin  
-----  
for BioTime, Inc., Lessee

2/8/99  
-----  
Date

/s/ Donn Logan  
-----  
Lessor

2/8/99  
-----  
Date

EXHIBIT 23.1

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statement Nos. 33-56766, 33-88968 and 333-30603 of BioTime, Inc. on Form S-8 of our report dated February 5, 1999 (which expresses an unqualified opinion and includes an explanatory paragraph related to the development stage of the Company's operations), appearing in the Annual Report on Form 10-K of BioTime, Inc. for the year ended December 31, 1998.

We also consent to the reference to us under the heading "Selected Financial Data" in such Form 10-K.

DELOITTE & TOUCHE  
March 29, 1999  
San Francisco, CA

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JUL-01-1998  
DEC-31-1998

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