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 October 31, 2001

or

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

For the transition period from to .

Commission File Number 001-15167

BIOPURE CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware	**04-2836871**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
11 Hurley Street, Cambridge, MA	**02141**
(Address of principal executive offices)	*(Zip Code)*

Registrant's telephone number, including area code:
(617) 234-6500

Securities registered pursuant to Section 12(b) of the Act:
NONE

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $0.01 par value per share
Preferred Stock Purchase Rights
(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 ☑ 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. ☑

Based on the closing price on January 16, 2002, and assumptions relating to the privately held non-voting Class B Common Stock, the aggregate market value of the voting and non-voting common equity held by nonaffiliates of the registrant was $346,122,600.

The number of shares outstanding of the registrant's Class A Common Stock was 25,711,346 on January 16, 2002; the number of shares of the Class B Common Stock was 117.7.

Documents Incorporated By Reference

Location in Form 10-K	Incorporated Document
Part I	Specifically identified portions of the registrant's definitive proxy statement to be filed in connection with the registrant's Annual Meeting to be held on April 3, 2002.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This report contains forward-looking statements concerning, among other things, possible applications for marketing approval and other regulatory matters, clinical trials, plans for the development of Hemopure and business strategies. These forward-looking statements are identified by the use of such terms as "intends," "expects," "plans," "estimates," "anticipates," "should" and "believes."

These forward-looking statements involve risks and uncertainties. Actual results may differ materially from those predicted by the forward-looking statements because of various factors and possible events. Company risks include lack of FDA or any other regulatory approval for our human product in a major market, the difficulty and uncertainty in obtaining regulatory approvals, uncertainty about future physician and market acceptance of our product, our limited manufacturing capacity and capital resources and our lack of commercial experience as a pharmaceutical company. In addition, we are subject to industry risks such as: our industry is highly regulated, keenly competitive and subject to uncertainty of pricing because of controls on health care spending and uncertainty of third-party reimbursement.

PART I

Item 1. *Business*

Biopure develops, manufactures and markets oxygen therapeutics. Its products are Hemopure, for human use, and Oxyglobin, for veterinary use. Biopure is developing Hemopure as an alternative to red blood cell transfusions as well as for use in the treatment of other critical care conditions.

In 2001, Biopure received approval to sell Hemopure for human use in South Africa and launched Oxyglobin in Europe. Also in 2001, Biopure announced that the primary safety and efficacy endpoints of its U.S. Phase III clinical trial of Hemopure were met. Biopure has selected a site, completed engineering work sufficient to support the start of construction and committed $10 million of equity financing for a manufacturing plant. The plant, to be located in South Carolina, will have a capacity of 500,000 Hemopure units and is estimated to cost $110-120 million.

Scientific Overview

Oxygen is indispensable to the life of all human tissues. Hemoglobin, a protein normally contained within red blood cells, is the molecule responsible for carrying and releasing oxygen to the body's tissues. Hemoglobin's protein structure is similar in many different animal species, including humans. Under normal conditions, hemoglobin contained within red blood cells carries approximately 98% of the body's oxygen and the remaining two percent is dissolved in the plasma, or fluid part of the blood.

As the heart pumps blood, hemoglobin within the red blood cells takes up oxygen in the lungs and carries it to various parts of the body. Blood travels through progressively smaller blood vessels to the capillaries, some of which are so narrow that red blood cells can only pass through them in single file. Most of the oxygen release occurs in the capillaries. Blood then returns to the lungs to reload the red blood cells with oxygen. Adequate blood pressure and red blood cell counts are crucial to this process. Oxygen deprivation, even for several minutes, can result in cell damage, organ dysfunction and, if prolonged, death.

The causes of inadequate tissue oxygenation generally can be classified into three categories:

- *anemia* — insufficient hemoglobin. Blood loss from injury or surgery or disorders that affect red blood cell production or maintenance, such as bone marrow disease, can cause anemia;
- *ischemia* — inadequate red blood cell flow for tissue oxygenation. Obstructed or constricted blood vessels can result in ischemia. Ischemia can lead to stroke, heart attack or other organ or tissue dysfunction; and

- *cardiopulmonary failure* — impaired function of the heart or lungs. The heart's inability to pump sufficient quantities of blood to meet the needs of the tissues or the failure of the lungs to oxygenate blood adequately can cause tissue damage.

A red blood cell transfusion is the standard therapy for anemia resulting from blood loss. Sources of red blood cells for transfusions include stored supplies of donated blood or of the recipient's own pre-donated blood. Health care professionals also may use medications that stimulate red blood cell production if anemia is anticipated, for example, as a result of planned surgery.

Red blood cell transfusions have certain risks and limitations. As HIV, hepatitis and other diseases have infected the world's blood supply, the need for a sterile blood product has become increasingly apparent. There is currently no 100% effective method for detecting blood-borne diseases or for sterilizing donated blood. As a result, the risk of disease transmission from donated blood is an ongoing concern to physicians and patients, although less so than in the past. Handling errors in typing and cross-matching blood, as well as the inadvertent introduction of pathogens, can also result in significant medical problems. Blood typing and handling requirements, particularly refrigeration, limit the feasibility of red blood cell transfusions in pre-hospital emergency treatment situations. Shortages of certain types of blood can occur due to seasonal factors or disasters. Donated red blood cells are available for use in transfusions for only 42 days after collection and this limitation affects the ability to stockpile red blood cell supplies. Although freezing can extend the life of red blood cells, the freezing and thawing processes require chemical treatment of the red blood cells and reduce the efficacy of those red blood cells. Finally, the longer red blood cells are stored, the longer it takes them to reach their maximum oxygen-releasing capacity and the more they break down, limiting their effectiveness in delivering oxygen. Red blood cells lose approximately 75% of their immediate oxygen-releasing ability after eight days of storage. Blood banks generally release the oldest stored blood first to prevent outdating after 42 days.

Red blood cell transfusions generally are not effective for ischemic conditions caused by blockage. In such situations, an obstructed or constricted blood vessel that is too narrow to permit the normal passage of red blood cells can prevent oxygen from reaching the body's tissues.

Similarly, red blood cell transfusions are generally not effective in overcoming poor oxygenation due to impaired heart or lung function.

Existing alternatives to red blood cell transfusions are limited. In trauma situations, victims may experience massive bleeding resulting in rapid loss of blood volume and oxygen-carrying capacity. In an effort to stabilize trauma patients, emergency caregivers typically administer commonly used intravenous fluids, such as Ringer's lactate or saline. Ringer's lactate consists of water and electrolytes and is generally administered to patients who have lost substantial amounts of bodily fluids as a result of bleeding, vomiting or diarrhea. Both Ringer's lactate and saline restore blood volume, but do not carry oxygen.

For anemia in non-acute situations, there are currently two biological products on the market. Both of these products are formulations of a protein called erythropoietin. Erythropoietin stimulates the body's ability to produce its own red blood cells. This stimulation is called an erythropoietic effect. In a surgical setting, these products are administered in anticipation of blood loss during surgery, thereby potentially reducing the need for red blood cell transfusions. However, erythropoietin does not deliver oxygen to the body's tissues and does not act as a blood volume expander. As a result, these products are not effective in treating acute blood loss and are generally not used in cases of unplanned surgeries or emergency need. In addition, the labels on these products caution against their use in cardiac surgery patients.

Biopure's Oxygenation Technology

Biopure has two proprietary oxygen therapeutic products that are identical except for their molecular size distributions. Biopure defines its products as therapeutics because they remediate oxygen deprived tissues. One administers these products intravenously. Biopure's products consist of hemoglobin that has been extracted from bovine red blood cells, purified, chemically modified and cross-linked for stability. The

resulting hemoglobin solutions do not contain red blood cells and are formulated in a balanced salt solution similar to Ringer's lactate.

The average Hemopure molecule is less than $^{1}/_{1000}$th the size of a red blood cell. Once infused into a patient, the Hemopure molecules disperse throughout the entire plasma space, including the area between and around red blood cells, and are in continuous contact with the blood vessel wall where oxygen transport to tissues takes place.

Hemopure, by filling plasma with hemoglobin molecules, immediately turns the plasma into an oxygen-delivering substance. Plasma containing Hemopure flows everywhere that blood ordinarily flows and can also bypass partial blockages or pass through constricted vessels that impede the normal passage of red blood cells.

Furthermore, introducing Hemopure into the bloodstream enables red blood cells to release more oxygen to the tissues than they otherwise would. In addition to delivering oxygen to tissues, Hemopure also acts as a blood volume expander and may support the body's ability to produce red blood cells.

Hemopure molecules hold the same amount of oxygen as the hemoglobin molecules in red blood cells on a gram-for-gram basis. Hemopure molecules, however, are chemically modified to have less affinity for oxygen than red blood cells, enabling Hemopure to release oxygen to tissues more efficiently than red blood cells. Human hemoglobin, unlike bovine hemoglobin, depends on the action of 2,3 diphosphoglycerate, or 2,3 DPG, a substance found in high concentrations only within the red blood cell, for optimal offloading, or release, of oxygen to tissues. The 2,3 DPG breaks down rapidly in stored blood causing red blood cells to lose approximately 75% of their ability to immediately release oxygen after eight days of storage. The 2,3 DPG breakdown reduces the oxygen offloading efficiency of transfused red blood cells until its levels are restored. Transfused red blood cells can require hours to regain their oxygen offloading capability. Biopure's bovine hemoglobin permits the efficient offloading of oxygen in the absence of 2,3 DPG, thereby allowing Hemopure to be at its optimal oxygen offloading effectiveness immediately upon infusion.

Hemoglobin molecules in different species have demonstrated low antigenicity, which means that they do not readily elicit an immune or allergic response. Biopure has confirmed Hemopure's low antigenicity, as indicated by the absence of certain effects, through *in vitro* and *in vivo* studies.

The following chart lists Hemopure's characteristics in comparison to transfused red blood cells:

Characteristic	Hemopure	Transfused Red Blood Cells
Onset of action	Immediate — not 2,3 DPG-dependent	Initially limited — 2,3 DPG-dependent
Oxygen affinity	More efficient oxygen release to tissues	Less efficient oxygen release to tissues
Oxygen transport	Red blood cells and plasma	Red blood cells only
Risk of disease transmission	Product purity maintained through a reproducible and controllable manufacturing process; no leukocyte, or white blood cell, exposure	Risk minimized by testing, donor selection and administration protocols and ongoing surveillance for emerging pathogens; leukocyte exposure
Storage	Room temperature; no loss of efficacy	Refrigeration required; loss of efficacy
Shelf life	36 months	42 days
Compatibility	Universal	Type-specific
Preparation	Ready-to-use	Requires typing and cross-matching
Viscosity	Low	High
Raw material source	Controlled	Not controlled
Duration of action	Maximum of 3 days	Estimated 60 to 90 days

In addition to Hemopure's use as an alternative to red blood cell transfusions in surgery, human clinical testing and preclinical studies suggest that Hemopure also could be a readily available therapeutic with a broad range of potential applications. These applications include the treatment of trauma, ischemic conditions, including stroke and heart attack, and malignant hypoxic tumors.

Hemopure has a 36-month shelf life at room temperature, is universally compatible and can be stocked well in advance of anticipated use. Consequently, when blood is not available, Hemopure could be used to maintain a patient until the needed type and quantity of red blood cells arrive, until the patient can be transported to a hospital or until a patient's body produces its own red blood cells. Hemopure thus could be an effective Oxygen Bridge™ to a red blood cell transfusion or to the body's ability to regenerate its own fresh red blood cells. Hemopure may be particularly well suited for this Oxygen Bridge function because the duration of action of a single infusion is about two to three days with 50% of the Hemopure molecules retained in the circulatory system for 24 to 36 hours following administration. In clinical trial data, Biopure has observed that the redosing of Hemopure over several days can prolong Hemopure's "Oxygen Bridge" effect.

Transfused red blood cells, however, have some advantages when compared to Hemopure. Transfused red blood cells have a longer duration of action and can persist in the body for an estimated 60 to 90 days. Hemopure, on the other hand, depending on the amount infused, can last between one and three days and may require repeat administration. Biopure has also observed slight increases in blood pressure and abdominal discomfort in Hemopure-infused patients. An evaluation of all available clinical safety data is in progress. Fluctuations in a patient's blood pressure can affect the manner in which health care professionals, who are accustomed to transfusing red blood cells, manage a patient's care. Furthermore, Hemopure may elicit an immune response in some individuals, as do some other proteins. In addition, it is anticipated that the cost of Hemopure will be significantly greater to the patient than the cost of transfused red blood cells.

Strategy

Biopure intends to expand its leadership position in the development, manufacture and marketing of oxygen therapeutics through the following strategy:

- *Develop and Commercialize Hemopure as an Alternative to Red Blood Cell Transfusions.* Biopure's advanced clinical trials have demonstrated Hemopure's efficacy as an alternative to red blood cell transfusions in elective surgery. While Biopure does not anticipate that Hemopure will replace all red blood cell transfusions, Biopure expects that Hemopure's use in surgery will demonstrate Hemopure to be a safe and effective oxygen therapeutic in a wide range of patients.
- *Pursue Marketing Approvals.* Biopure will seek to register its oxygen therapeutics internationally.
- *Pursue Approvals of Hemopure for Additional Therapeutic Applications.* Because of Hemopure's special oxygen therapeutic characteristics, Biopure intends to develop Hemopure as a therapy for indications such as trauma, ischemic conditions, including stroke and heart attack, and as an adjunct to therapy for malignant hypoxic tumors.
- *Increase Market Awareness for Hemopure.* Biopure intends to increase market awareness for Hemopure by identifying the issues and patient management benefits necessary for widespread acceptance of oxygen therapeutics by the medical community.

Biopure's Products

Biopure's two products are oxygen therapeutics. Hemopure is its product for human use. Biopure expects to file a marketing application with the FDA in fiscal 2002 for the use of Hemopure as an alternative to red blood cell transfusions before, during or after elective surgery. The FDA and the European Medicines Evaluation Agency have approved the use of Oxyglobin, Biopure's veterinary product, for the treatment of anemia in dogs, regardless of cause. Oxyglobin is marketed and sold to veterinary hospitals and to small animal veterinary practices in the United States and Europe. Biopure has tested Hemopure in clinical trials involving more than 1250 humans and has tested Hemopure and Oxyglobin in 150 completed preclinical studies involving animals from 10 species. On a "compassionate use" basis, Hemopure has been administered as an Oxygen Bridge to more than 30 patients with life threatening anemia when compatible red blood cells were unavailable or unacceptable. Commercial sales of Oxyglobin have resulted in thousands of administrations in animals.

Hemopure

Biopure believes Hemopure can be developed for several indications. As described below, the first indication Biopure is seeking approval for is use as an alternative to red blood cell transfusions. Preclinical studies and observations from completed trials show that trauma, ischemic conditions, including stroke and heart attack, and malignant hypoxic tumors might be possible additional indications for clinical development.

Red Blood Cell Transfusion Alternative

Hemopure would serve as an alternative to a red blood cell transfusion or as an Oxygen Bridge pending the acquisition or production by the body of suitable red blood cells. Biopure does not expect Hemopure to replace all red blood cell transfusions. However, Hemopure's oxygen-carrying properties, storage and infusion advantages address many of the limitations associated with red blood cell transfusions.

Biopure's clinical trials have demonstrated Hemopure's efficacy as an alternative to red blood cell transfusions in elective surgery patients as measured by the avoidance of red blood cell transfusions. In all of Biopure's advanced clinical trials, Biopure evaluated Hemopure's efficacy as an oxygen therapeutic by determining, within the context of a written set of guidelines known as a protocol, the percentage of patients given Hemopure who did not require a subsequent transfusion of red blood cells. In these trials, Hemopure was administered only to patients who needed a red blood cell transfusion. Trial design limited the amount of Hemopure that could be infused and the number of post-operative days during which it could be infused. Despite these trial limitations, Hemopure's clinical trials that have been completed and analyzed demonstrate clinically significant elimination of red blood cell transfusions. Elimination was deemed to occur if the patient did not require a subsequent red blood cell transfusion. Elimination was deemed not to occur if the patient was administered the maximum number of Hemopure units permitted by the particular trial design and subsequently needed a red blood cell transfusion.

The following chart summarizes the advanced clinical trials that Biopure has completed for Hemopure as an alternative to red blood cell transfusions. The column labeled "Results" lists efficacy, or elimination of red blood cell transfusion, results. Another endpoint of our pivotal Phase III trial is a safety profile in the Hemopure group that is no worse than the control group. We believe that we have met these endpoints. In our trials previous to the U.S. pivotal trial we met these endpoints, and we are in the process of submitting our final study report on the U.S. pivotal trial.

Type of Surgery	Development Status	Dosing: Grams Hemoglobin (Units Hemopure)	No. of Total Patients/No. of Patients Treated with Hemopure	Results
Elective orthopedic surgery	U.S. pivotal Phase III trial	Up to 300 grams (10 units) over 6 days	688/350	59% elimination of red blood cell transfusions in the intent-to-treat population
Non-cardiac elective surgery (1998)	Phase III trial completed in Europe and South Africa, the basis for filing in South Africa in July 1999	Up to 210 grams (7 units) over 6 days	160/83	43% elimination of red blood cell transfusions in the intent-to-treat population

Type of Surgery	Development Status	Dosing: Grams Hemoglobin (Units Hemopure)	No. of Total Patients/No. of Patients Treated with Hemopure	Results
Post cardio-pulmonary bypass surgery (1996)	Phase II trial completed in the U.S.; supportive trial for the South African July 1999 filing	Up to 120 grams (4 units) over 3 days, first dose administered post-surgery	98/50	34% elimination of red blood cell transfusions
Aortic aneurysm reconstruction surgery (1996)	Intraoperative Phase II trial completed in the U.S. and Europe; supportive trial for the South African July 1999 filing	Up to 150 grams (5 units) over 4 days; first dose administered during surgery, if required	72/48	27% elimination of red blood cell transfusions

U.S. Pivotal Phase III Orthopedic Surgery Trial. Biopure began a pivotal Phase III trial in the United States in March 1999 in elective orthopedic surgery. Elective orthopedic surgery includes non-emergency surgery involving bones and joints, including repair of orthopedic fractures in stabilized patients. The primary efficacy objective of this trial was the avoidance of red blood cell transfusions for six weeks after orthopedic surgery. Biopure designed this randomized, red blood cell controlled, multi-center study to enroll a total of 640 patients in the United States, Europe, Canada and South Africa, of whom approximately one-half would be in the Hemopure treatment group and the other half would receive red blood cells. Final enrollment was 688 patients. Up to 300 grams of hemoglobin, or ten units of Hemopure, could be infused before, during or after surgery for a total of up to six treatment days. The efficacy endpoint of this trial was the elimination of red blood cell transfusions in at least 35% of the patients who received Hemopure. Another endpoint is a safety profile that is no worse than the control group.

Non-U.S. Phase III Non-cardiac Surgery Trial. Biopure completed a Phase III trial in Europe and South Africa in 1998 in non-cardiac surgery. Non-cardiac surgery refers to surgery that does not involve the heart and can include surgery of the digestive or urinary tract as well as orthopedic surgery. The primary objective of this trial was the avoidance of red blood cell transfusions for 28 days after non-cardiac surgery. This randomized, red blood cell controlled, multi-center study enrolled 160 patients, 83 of whom were infused with Hemopure. Up to 210 grams of hemoglobin, or seven units of Hemopure, were permitted during a six-day treatment period. The trial resulted in the clinically significant elimination of red blood cell transfusions in 43% of the patients who received Hemopure in the intent-to-treat population.

U.S. Phase II Post Cardiopulmonary Bypass Surgery Trial. Human testing was completed in 1997 in a double-blind, randomized, red blood cell controlled, multi-center study in post cardiopulmonary bypass surgery patients. During cardiopulmonary bypass surgery, patients are connected to a heart and lung machine that replaces functions of the heart and lungs during surgery. The primary objective of this trial was the avoidance of red blood cell transfusions for 28 days after surgery. The study treated 98 patients, 50 of whom were infused with Hemopure. Up to 120 grams of hemoglobin, or four units of Hemopure, were administered over a three-day treatment period following surgery. The trial resulted in the clinically significant elimination of red blood cell transfusions in 34% of the patients that received Hemopure. In this study, 100% of the patients who received Hemopure did not require any red blood cells during the day of surgery.

Additionally, Biopure observed that the hematocrit, or packed red blood cell volume as a percentage of total blood volume, of the patients treated with Hemopure recovered to a degree that was indistinguishable from the red blood cell treated patients at both six and 28 days post-surgery. This observation supports the potential use of Hemopure as an erythropoietic support.

U.S. Phase II Aortic Aneurysm Reconstruction Surgery Trial. In 1998, Biopure completed a randomized, red blood cell controlled, multi-center trial in abdominal aortic aneurysm reconstruction surgery. Aortic aneurysm reconstruction surgery involves repairing a damaged segment of the aorta, the body's principal artery. This study treated 72 patients, 48 of whom were infused with Hemopure. The maximum dosage was 150 grams of hemoglobin, 30 grams more than the post cardiopulmonary bypass trial. Usually aortic aneurysm

reconstruction surgery involves much more blood loss than post cardiopulmonary bypass surgery. In this trial, Hemopure was used during the surgery in contrast to the post cardiopulmonary bypass trial, where use began after surgery. The trial resulted in the clinically significant elimination of red blood cell transfusions in 27% of the patients that received Hemopure. The trial was reported in the *Journal of Vascular Surgery*, February 2000 issue.

Trauma; Stabilized Trauma Trial

Biopure has observed a 100% elimination of red blood cell transfusions on the day of surgery in cardiac patients infused with Hemopure. As a result, Biopure believes that Hemopure could be infused at the site of an accident, potentially extending the time that a trauma patient could be supported awaiting definitive hospital care. Hemopure also acts as an expander of blood volume, a common therapy used to stabilize trauma patients. As part of our approach to trauma, Biopure is conducting a Phase II trial in non-cardiac surgery patients that allows enrollment of consenting, stable trauma patients. This 60-patient trial is being conducted at Brooke Army Medical Center and Wilford Hall Air Force Hospital. In this controlled and randomized study, investigators dose with Hemopure (or Ringer's lactate, the control treatment) based on the estimated amount of blood the patient has lost. Endpoints include blood utilization and safety. There have been no deaths in either group in this study. In this trial, physicians are administering Hemopure to a maximum dose of 10 units or 300 grams of hemoglobin. Biopure expects this trial to provide information useful in designing a clinical development plan for trauma. Hemopure has been used on a "compassionate use" basis in trauma patients. The design of pivotal trauma trials will be complicated by heterogeneous patient populations and logistical issues. Biopure has convened a panel of experts to advise in the design of a trauma program.

In addition, preclinical animal model studies performed in academic and military research laboratories have shown the benefit of using Hemopure in situations involving severe trauma, hemorrhagic shock, hemorrhagic shock with tissue injury and resuscitation from cardiac arrest resulting from severe hemorrhage.

Ischemia

The ability of Hemopure molecules to circumvent partial occlusions could potentially benefit patients suffering from ischemic conditions by supplying oxygen to tissues that are receiving inadequate numbers of red blood cells. Inadequate tissue oxygenation due to partial vessel blockage or constriction can cause heart attack, angina and transient ischemic attack, which is a precursor to stroke. In these situations, treatment with red blood cell transfusions would not be effective because red blood cells are too large to navigate around blockages. Biopure has completed preclinical studies with results supporting these potential indications. One preclinical study demonstrated that infusing Hemopure before there is a blockage in a coronary artery leading to a heart attack can limit potential damage to the heart. Although Hemopure would not attack the root cause of the ischemia, such as a clot or plaque in the arteries, it could help to maintain oxygenation and thereby sustain tissue pending a correction of the blockage or could lessen the damage from ischemia if infused in time. In 1996, the American Heart Association reported that approximately 900,000 people in the United States each year experience heart attacks, of which approximately one quarter are fatal. In its 1999 Heart and Stroke Statistical Update, the American Heart Association reported that approximately 600,000 people suffer a new or recurrent stroke each year.

An abstract published in the *The Journal of Trauma* in January 2000 and presented at the 30th Annual Scientific Meeting of the Western Trauma Association on March 1, 2000 described a preclinical study using a pre-hospital hemorrhagic shock model designed to model what happens to humans after an accident. The study demonstrates that small-volume resuscitation with Hemopure can restore and sustain brain oxygenation, blood pressure and cardiac output following severe hemorrhagic shock.

Cancer Therapy Adjunct

Radiation therapy and many types of chemotherapy depend on the adequate oxygenation of tumors to kill cancer cells. Malignant cancer tumors, such as breast, prostate and other solid tumors, are dense tumors which often outgrow their blood supply, leaving much of the tumor without oxygen. Consequently, they resist

chemotherapy and radiation treatment. Biopure, in collaboration with the Dana-Farber Cancer Institute in Boston, has developed a patented method for oxygenating hypoxic, or oxygen deficient, tumor cells that could potentially increase the tumor-killing effects of radiation and chemotherapy. Preclinical studies have shown the feasibility of this application. In 1999, Biopure initiated clinical development of this indication, specifically the treatment of glioblastoma. Enrollment in a Phase I clinical trial of patients diagnosed with glioblastoma began in 2000.

Plasma-Expanding Agent

After blood loss, health care professionals typically administer human serum albumin, or HSA, or other volume expanding fluids to restore blood volume. Adequate blood volume is necessary to maintain effective blood pressure and heart rate. HSA is a naturally occurring protein that is part of the plasma. Hemopure molecules are also proteins. Hemopure maintains the volume of blood in a manner similar to HSA. In many patients suffering from severe blood loss, Biopure believes that Hemopure would be preferable to currently available plasma expanding agents, which do not carry or offload oxygen.

Hemodilution Agent

Acute normovolemic hemodilution, or ANH, is a technique that reduces the need for donated blood. ANH refers to a practice where the patient donates one to three units of blood immediately before surgery and is infused with a non-oxygen carrying plasma expander such as Ringer's lactate. The patient is then transfused with his or her own blood during or after surgery. Biopure has administered Hemopure in three clinical safety trials involving humans undergoing ANH. As an oxygen carrier and a plasma-expanding agent, Hemopure could potentially temporarily replace the oxygen-carrying support and volume lost from donating blood. At present, ANH is not widely used in the United States but is more commonly used in Europe.

Erythropoietic Support

In Biopure's Phase II post-cardiopulmonary bypass clinical trial, which compared the post-operative use of Hemopure to donated red blood cells in cardiac surgery, the hematocrit, or packed red blood cell volume as a percentage of total blood volume, was similar for both the Hemopure-infused and the control patients on the sixth day following surgery. Both groups maintained this similarity when measured again at a follow-up visit 28 days after surgery, suggesting that Hemopure may support the regeneration of red blood cells. In addition, in one "compassionate use" case, a patient with a critically low hematocrit, who received Hemopure but not red blood cells, was stabilized for several days and then was able to restore her hematocrit. As such, Hemopure could potentially be used in conjunction with, or as an alternative to, erythropoietin, a hormone that enhances the production of red blood cells. A preclinical study supports the use of Hemopure as an erythropoietic agent. This study involved eight conscious sheep, all of which underwent an exchange transfusion involving the replacement of at least 95% of their blood with an early formulation of Hemopure. Even with critically low hematocrits, these animals achieved stable hemodynamics, demonstrated no clinical signs of distress and survived long term with a rapid resynthesis of their red blood cells.

Oxyglobin

Oxyglobin is identical to Hemopure except for its molecular size distribution. The FDA Center for Veterinary Medicine approved Oxyglobin in 1998 and the European Medicines Evaluation Agency approved Oxyglobin in 1999, in both cases for the treatment of canine anemia, regardless of cause. Anemia in dogs often results from surgery, trauma, hemolysis, gastrointestinal blood loss, urinary blood loss, iron deficiency and rodenticide toxicity. Oxyglobin sales were $3.5 million in fiscal 2001, $3.1 million in fiscal 2000 and $2.7 million in fiscal 1999. From the date of U.S. approval through December 31, 2001, Biopure sold approximately 94,000 units of Oxyglobin.

Biopure intends to limit sales until capacity increases. At that time, we believe it will be possible to increase the market for Oxyglobin by:

- further educating veterinarians;
- adding Japanese and other foreign approvals;
- adding repeat dosing;
- adding other applications;
- offering a smaller package size; and
- adding other species.

Manufacturing

Biopure uses proprietary and patented purification and polymerization processes in the manufacture of its oxygen therapeutic products. Biopure's processes comply with current good manufacturing practices established by the FDA and comparable standards required in the European Union for veterinary products. Biopure's scientific and engineering team has designed and built much of its large-scale critical equipment. A proprietary computer software system operates and monitors most aspects of this process. Biopure has produced both Hemopure and Oxyglobin since 1991.

Raw Material Source

Biopure's products consist of bovine hemoglobin that has been purified, chemically modified and cross-linked for stability. Controlled herds of U.S. cattle raised for meat provide the raw material used in Biopure's products. Biopure monitors the source, health, location, feed consumption and quality of the cattle to be used as a raw material source, a safety standard that is not and cannot be established for donated human blood. Suppliers to Biopure contract to maintain traceable records on animal origin, health, feed and care to assure the use of known, healthy animals.

Raw Material Collection

At a high volume abattoir, Biopure collects bovine whole blood into individual presanitized containers and transports them to a separation facility. Following blood collection, the animals pass U.S. Department of Agriculture, or USDA, inspection for use as beef for human consumption. If an animal's meat is not approved for human consumption, Biopure also rejects the corresponding container of whole blood. The USDA considers the United States to be free of pathogens associated with "mad cow disease."

Safety

Biopure's processes remove bacterial and viral pathogens, such as those leading to hepatitis and AIDS. Biopure also believes that both its source material and manufacturing processes safeguard humans from potential risks of transmissible spongiform encephalopathies (TSE), one of a category of diseases that includes "mad cow disease." Health and regulatory authorities have given guidance directed at three factors to control these diseases: source of animals, nature of tissue used and manufacturing process. Biopure complies with, and believes it exceeds, all current guidelines regarding such risks for human pharmaceutical products. Blood as a tissue generally has been found to have little or no potential for transmitting transmissible spongiform encephalopathies. Bovine red blood cells do not contain prions, the proteins necessary for transmissible spongiform encephalopathies. Furthermore, Biopure's patented purification and manufacturing process has been tested to demonstrate that the potential risk of infectious disease transmission is insignificant. In fiscal 2001 the European Directorate for the Quality of Medicines (EDQM) granted a "Certification of Suitability of Monographs of the European Pharmacopoeia" for Oxyglobin. This certification is required for all medicinal products that are manufactured from ruminant materials and marketed in the European Union, and it represents the Council of Europe's official acknowledgment of the acceptability of Oxyglobin with regard to transmissible spongiform encephalopathy agents.

Manufacturing Processes

A washing and a filtration process remove plasma proteins in the bovine blood. Washed cells are next placed in a centrifuge that separates the red blood cells from the rest of the blood. The hemoglobin is extracted from the red blood cells and is then diafiltered to remove red blood cell wall debris and other contaminants. The resulting material is a cell-free hemoglobin intermediate. A semi-continuous purification process involving a high performance liquid chromatography process purifies the hemoglobin intermediate. Next, the purified hemoglobin is polymerized, or linked, by the addition of a cross-linking agent. Polymerized and stabilized material is then fractionated and concentrated. The final product is filtered into sterilized batch holding tanks until sterile fill into bags.

Marketing

Hemopure

Biopure expects to market Hemopure to physician practices and hospitals initially for the reduction or elimination of red blood cell transfusions in patients undergoing elective surgery. Biopure recognizes that it is crucial to establish a core belief among opinion leaders that Hemopure fills an important medical need and that systematic development of opinion leader advocacy is necessary for capturing and maintaining a leadership position. Biopure expects to reach anesthesiologists, surgeons, oncologists, critical care and other physician-specialists through publications and educational forums, such as seminars and presentations at meetings of specialists. Biopure has engaged a distributor for sales in South Africa and has embarked on pre-launch activities, primarily educational forums.

Biopure will explore various means of selling Hemopure elsewhere. Among other options, Biopure may seek to enter into licensing or co-marketing agreements for parts or all of the world in order to avail itself of the marketing expertise of one or more seasoned pharmaceutical companies. Alternatively, it could engage "contract" sales organizations from vendors, contract pharmaceutical companies that supply sales services or recruit and train its own marketing and sales force.

Oxyglobin

Biopure estimates that there are at least 15,000 small animal veterinary practices in the United States and another 4,000 mixed animal practices treating small and large animals. Biopure believes that the average veterinary practice treats only a small percentage of canine anemia cases with a red blood cell transfusion. The remainder receive either cage rest or a minimally effective treatment such as fluid administration, iron supplements, nutritional supplements or inspired oxygen.

Biopure sells Oxyglobin directly to veterinarians in the United States through veterinary product distributors — one national and seven regional. Orders are drop shipped by Biopure directly. In Europe, it sells to three brokers who buy product for resale to veterinarians.

Marketing programs in both the United States and Europe have included advertising, direct mail, educational seminars, conference calls and attendance at trade shows. Biopure has established a core group of veterinary practices in the United States that use the product regularly. These veterinarians are effective advocates of the product when interacting with other veterinarians. Biopure sponsors evening seminars featuring these veterinarians. Most veterinarians who buy the product reserve its use for the most severe clinical situations.

Competition

Hemopure will compete with traditional therapies and with other oxygen delivery pharmaceuticals. Comparisons with traditional therapies, including red blood cell transfusions, are described under "— Scientific Overview," "— Biopure's Oxygenating Technology" and "— Biopure's Products." In addition, cost may be a competitive factor in traditional therapies.

Oxygen therapeutics under development fall into two categories:

- *hemoglobin-based oxygen carriers*, including Hemopure and Oxyglobin, consist of natural hemoglobin from an animal or genetically engineered source that has been modified to improve stability, efficacy and safety; and
- *perfluorocarbon emulsions* are chemicals administered intravenously. Perfluorocarbon emulsions are effective principally under conditions of high oxygen partial pressure to assist in oxygen delivery by forcing dissolved oxygen into the plasma space.

Biopure believes that the competitive factors for its oxygen therapeutics will be efficacy, safety, ease of use and cost. Biopure believes that it has significant advantages as compared to its competitors' pharmaceuticals including:

- patents covering its processes, its products and their uses;
- large molecule size resulting in longer duration of action than most other oxygen therapeutics under development;
- long-term room temperature stability;
- completed and operational large-scale manufacturing facility;
- safe, ample, controlled inexpensive source of raw material; and
- FDA and EMEA approvals of Oxyglobin and usage by veterinarians.

Many of Biopure's competitors and potential competitors have significantly greater financial and other resources to develop, manufacture and market their products. Existing competitors in the development of hemoglobin-based investigational products use outdated human red blood cells as their raw material. Biopure is aware of two human hemoglobin-based products currently in advanced clinical trials or with applications for approval pending. It is not aware of any competitor that has completed advanced clinical trials of an investigational product as a direct comparator to red blood cell transfusions in surgery. Biopure believes that its use of bovine red blood cells is an advantage over products made from outdated donated human red blood cells because of the availability, abundance, ability to control source, cost and relative safety of bovine red blood cells. However, the use of bovine derived blood products may encounter resistance from physicians and patients. Among other things, public perceptions about the risk of "mad cow disease" may affect market acceptance of Hemopure. Biopure also believes that competitors may find it difficult to make or offer a hemoglobin-based oxygen carrier product having the product characteristics of Hemopure without infringing on one or more Biopure patents. In addition, the relatively low viscosity of Hemopure is a potential advantage, particularly in large doses, in permitting perfusion at low blood pressure.

Biopure is aware of one perfluorocarbon oxygen carrier in advanced clinical trials. This product is a chemical fluid infused into the body. This chemical attracts oxygen and takes it into the plasma. The patient needs an oxygen mask for this process because perfluorocarbons require high oxygen environments in order to be effective. The perfluorocarbon solution does not persist in the body, so repeat dosing is necessary. These limitations may reduce the number of potential applications for the product. As far as Biopure is aware, applications pursued for this product do not include any of the applications Biopure might pursue other than acute normovolemic hemodilution.

Biopure knows of no companies developing oxygen products intended to compete with Oxyglobin in the veterinary market.

Intellectual Property

Patents, trademarks, trade secrets, technological know-how and other proprietary rights are important to Biopure's business. Biopure actively seeks patent protection both in the United States and abroad. Biopure filed its initial patent in 1986 in the United States. Four U.S. patents have been issued from this filing. These patents describe and claim ultra-pure semi-synthetic blood substitutes and methods for their preparation.

In total, Biopure has 20 U.S. patents granted and eight applications pending relating to its oxygen therapeutics. Biopure's granted U.S. patents include:

- two patents covering an ultra-purification process for hemoglobin solutions, regardless of the source of hemoglobin, which expire in 2006 and 2014; two patents covering the ultra-pure oxygen therapeutic solutions produced by this process expiring in 2009; and one patent covering the chromatography purification of the hemoglobin solution, expiring in 2015.
- three patents regarding compositions having improved stability, of which two expire in 2015 and the third expires in 2016, and one patent covering processes for producing these compositions which expires in 2016;
- three patents, two of which expire in 2015 and one of which expires in 2016, covering improvements in preservation of such hemoglobin solutions;
- two patents, which expire in 2015 and 2016, covering improved methods for separating polymerized from unpolymerized hemoglobin;
- one patent, which expires in 2015, covering methods of oxygenating tissue affected by inadequate red blood cell flow;
- one patent, which expires in 2016, covering the removal of pathogens, if present, from Biopure's source material; and
- three patents, which expire in 2011, 2014 and 2015, covering methods for treating tumors; and
- one patent, which expires in 2010, covering a sample valve for sterile processing.

Biopure also filed its original patent in Europe. Although granted, third parties subsequently opposed Biopure's original European patent. As a result of the opposition proceeding, the patent was revoked. However, Biopure filed an appeal that reinstated the patent during the appeal and is awaiting a decision on the appeal. In the opposition process, Biopure narrowed its claims. Despite the narrowing, Biopure believes that these claims provide protection for Biopure's existing process and products. Biopure further believes that a narrowed European patent should be sustained. During the opposition proceeding, some pre-existing patents and articles not presented to the United States Patent Office during the prosecution of patents already issued in the United States were presented to the European Patent Office by the opponents. These preexisting patents and articles are not expected to affect claims of Biopure patents in the rest of the world. Biopure also has other foreign patents and patent applications.

Biopure believes that it is not economically practicable to determine in advance whether its products, product components, manufacturing processes or the uses infringe the patent rights of others. It is likely that, from time to time, Biopure will receive notices from others of claims or potential claims of intellectual property infringement or Biopure may be called upon to defend a customer, vendee or licensee against such third-party claims. Responding to these kinds of claims, regardless of merit, could consume valuable time, result in costly litigation or cause delays, all of which could harm Biopure's business. Responding to these claims could also require Biopure to enter into royalty or licensing agreements with the third parties claiming infringement. Such royalty or licensing agreements, if available, may not be available on terms acceptable to Biopure.

Employees

As of January 10, 2002, Biopure employed 211 persons. Of its total work force, 122 employees are engaged in manufacturing and related manufacturing support services, 36 are engaged in research and development activities, 11 are engaged in sales and marketing, primarily veterinary, and 42 are engaged in support and administrative activities. None of Biopure's employees are covered by a collective bargaining agreement. Biopure believes its relations with its employees are good.

Government Regulation

New Drug or Biologic Approval for Human Use

Governmental authorities in the United States and other countries extensively regulate the testing, manufacturing, labeling, advertising, promotion, export and marketing, among other things, of Biopure's oxygen therapeutic products. Any oxygen therapeutic product administered to human patients is regulated as a drug or a biologic drug and requires regulatory approval before it may be commercialized.

In the United States, Hemopure is regulated as a human biologic. The FDA will require Biopure to file and obtain approval of a biologic license application covering both Hemopure and the facility in which it is manufactured.

The steps required before approval of a biologic for marketing in the United States generally include:

- preclinical laboratory tests and animal tests;
- the submission to the FDA of an Investigational New Drug, or IND, application for human clinical testing, which must become effective before human clinical trials may lawfully commence;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the product;
- the submission to the FDA of a biologic license application;
- FDA review of the biologic license application; and
- satisfactory completion of an FDA inspection of the manufacturing facilities at which the product is made to assess compliance with current good manufacturing practices, which includes elaborate testing, control, documentation and other quality assurance procedures.

The testing and approval process requires substantial time, effort and financial resources. After approval is obtained, a supplemental approval is generally required for each proposed new indication, often accompanied by data similar to that submitted with the original biologic license application.

Preclinical studies include laboratory evaluation of the product and animal studies to assess the safety and potential efficacy of the product. The results of the preclinical studies, together with manufacturing information and analytical data, are submitted to the FDA as part of the IND. The IND automatically becomes effective in 30 days unless the FDA, before that time, raises concerns or questions and imposes a "clinical hold." In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the trial can proceed. Once trials have commenced, the FDA may stop the trials, or particular types of trials, by imposing a clinical hold because of concerns about, for example, the safety of the product being tested or the adequacy of the trial design.

Clinical trials involve the administration of investigational products to healthy volunteers or patients under the supervision of a qualified principal investigator consistent with an informed consent. An independent institutional review board, or IRB, or ethics committee must review and approve each clinical trial at each institution at which the study will be conducted. The IRB or ethics committee will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap. In Phase I, the initial introduction of the drug into human subjects, the drug is usually tested for safety or adverse effects, dosage tolerance, absorption, metabolism, distribution, excretion and pharmacodynamics. Phase II clinical trials usually involve studies in a limited patient population to evaluate the efficacy of the drug for specific, targeted indications, determine dosage tolerance and optimal dosage and identify possible adverse effects and safety risks. Phase III clinical trials generally further evaluate clinical efficacy and test further for safety within an expanded patient population and at multiple clinical sites. Phase IV clinical trials are conducted after approval to gain additional experience from the treatment of patients in the intended therapeutic indication. If the FDA approves a product, additional clinical trials may be necessary. A company may be able to use the data from these clinical trials to meet all or part of any Phase IV clinical trial requirement. These clinical trials are often referred to as Phase III/IV post-approval clinical trials.

Biopure believes that its completed U.S. pivotal Phase III clinical trial is consistent with the FDA's most recent guidance on the design and efficacy and safety endpoints required for approval of products such as Hemopure. However, the FDA could change its view or require additional data or even further clinical trials prior to approval of Hemopure.

The results of the preclinical studies and clinical trials, together with detailed information on the manufacture and composition of the product, are submitted to the FDA in the application requesting approval to market the product. Before approving a biologic license application, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facility is in compliance with current good manufacturing practices. The FDA may delay or deny approval of a biologic license application if applicable regulatory criteria are not satisfied or may require additional testing or information, and/or require postmarketing testing and surveillance to monitor safety, purity or potency of a product. It may also limit the indicated uses for which an approval is given.

New Drug Approval for Veterinary Use

New drugs for companion animals must receive New Animal Drug Application, or NADA, approval prior to marketing in the U.S. The requirements for approval are similar to those for new human drugs. Obtaining NADA approval often requires clinical field trials and the submission of an Investigational New Animal Drug Application, which for non-food animals becomes effective upon acceptance for filing.

Pervasive and Continuing Regulation

Any product approvals that are granted remain subject to continual FDA review, and newly discovered or developed safety or efficacy data may result in withdrawal of products from marketing. Moreover, if and when such approval is obtained, the manufacture and marketing of Biopure's products remain subject to extensive regulatory requirements administered by the FDA and other regulatory bodies, including continuing compliance with current good manufacturing practices, adverse event reporting requirements and the FDA's general prohibitions against promoting products for unapproved or "off-label" uses. Biopure is subject to inspection and market surveillance by the FDA for compliance with these requirements. Failure to comply with the requirements can, among other things, result in warning letters, product seizures, recalls, fines, injunctions, suspensions or withdrawals of regulatory approvals, operating restrictions and criminal prosecutions. Any such enforcement action could have a material adverse effect on Biopure. Unanticipated changes in existing regulations or the adoption of new requirements could also have a material adverse effect on Biopure.

Biopure also is subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control and hazardous substance disposal.

Foreign Regulation

Biopure will be subject to a variety of regulations governing clinical trials and sales of its products outside the United States and is currently subject to requirements of law in South Africa. Biopure must obtain approval of its products by the comparable non-U.S. regulatory authorities prior to the commencement of product marketing in the country whether or not Biopure has obtained FDA approval. The approval process varies from country to country and the time needed to secure approval may be longer or shorter than that required for FDA approval. These applications require the completion of extensive preclinical and clinical studies and manufacturing and controls information.

Reimbursement

Biopure's ability to successfully commercialize its human product will depend in significant part on the extent to which reimbursement of the cost of such product and related treatment will be available from government health administration authorities, private health insurers and other organizations. Third-party payors are increasingly challenging the price of medical products and services. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and there can be no assurance that

adequate third-party coverage will be available to enable Biopure to maintain price levels sufficient for realization of an appropriate return on its investment in product development. The public and the federal government have recently focused significant attention on reforming the health care system in the United States. A number of health care reform measures have been suggested, including price controls on therapeutics. Public discussion of such measures is likely to continue, and concerns about the potential effects of different possible proposals have been reflected in the volatility of the stock prices of companies in the health care and related industries.

Item 2. ***Properties***

Biopure has manufacturing facilities in Pennsylvania for the collection and separation of blood and in Cambridge, Massachusetts, where processing is completed. In connection with Biopure's application for marketing approval for Oxyglobin, the FDA inspected these facilities for compliance with good manufacturing practices. The Medicines Control Agency, on behalf of the European Medicines Evaluation Agency, also inspected Biopure's facilities prior to granting marketing approval for Oxyglobin.

Biopure manufactures separation materials in a 10,000 square foot plant in New Hampshire. The current annual lease payment for this facility is $56,000. The lease expires on March 31, 2005. Biopure has an option to extend this lease for an additional five years.

Biopure leases two facilities for office and research space in Massachusetts. One lease covers 24,000 square feet, and its current annual lease payment is $239,000. This lease expires on December 31, 2007. Biopure has an option to extend this lease for ten five-year periods, or an additional 50 years. The other lease, of office space, covers 14,000 square feet. This lease expires on February 29, 2008, and annual lease payments are $329,000.

Biopure leases 33,000 square feet of manufacturing space under four leases in Massachusetts. The current annual lease payments for these facilities is $283,000. The leases expire on November 30, 2005. Biopure has an option to extend these leases for four five-year periods, or an additional 20 years, with an exclusive right to negotiate for an additional 25 years. Biopure owns 18,000 square feet of manufacturing space in Pennsylvania. It also leases warehouse space in New Hampshire.

Biopure's current process is designed to be scalable, such that additional capacity can be obtained by adding duplicate equipment and additional raw material including power and water. Biopure is in the process of constructing a 1,700 square foot building abutting the existing research and manufacturing building. This will facilitate the addition of utilities to maximize production in Cambridge. The Cambridge facilities currently have the capacity to produce 40,000 units of Hemopure or 140,000 units of Oxyglobin per year, operating continuously. Through the installation of additional water supply and the completion of its automated filling line, Biopure can attain capacity to produce 100,000 units of Hemopure or 350,000 units of Oxyglobin per year in its current facilities operating continuously. Work on the capacity increase to produce approximately 75,000 units of Hemopure is underway. Further validation will be conducted after the biologic license application filing to achieve the 100,000-unit capacity. This capacity can be used for any combination of Oxyglobin and Hemopure units.

Biopure has selected a site and completed engineering work sufficient to support the start of construction of a new plant with a capacity of 500,000 units of Hemopure. Construction is expected to begin in spring 2002. The plant is designated to be capable of scale-up to meet future product demand. Biopure believes that the engineering from this plant will be applicable to any future new plants.

Item 3. ***Legal Proceedings***

Proceedings in Europe are ongoing with regard to Biopure's European patent. Biopure was granted a patent on April 1, 1992 by the European Patent Office. Within the nine-month period from the grant date for the filing of oppositions, six parties filed oppositions requesting that all of the claims of this patent be revoked. Of these, two opposing parties remain: Baxter International and Northfield Laboratories, Inc. Following oral proceedings conducted by the Opposition Division at the European Patent Office in November 1995, the

Opposition Division revoked the patent. Biopure has appealed this decision of the Opposition Division and is currently awaiting a decision on its appeal. The appeal has the technical result of reinstating the patent during the appeal process. Prior to filing its appeal papers, Biopure narrowed its claims further to increase the probability of winning at the appeal level. Biopure further believes that a narrowed patent should be sustained. Future claims against Biopure may arise and, if they do, there can be no assurance that they will be successfully defended.

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

No matters were submitted to a vote of security holders during the fourth quarter of the fiscal year covered by this report.

Executive Officers of the Company

The executive officers of Biopure are as follows:

Name	Age	Title
Carl W. Rausch	53	Chairman and Chief Executive Officer
Paul A. Looney	62	President and Chief Operating Officer
Maria S. Gawryl, Ph.D.	48	Senior Vice President, Research and Development
Jane Kober	58	Senior Vice President, General Counsel and Secretary
Francis H. Murphy	63	Chief Financial Officer
William A. Eudailey	57	Vice President, Marketing
Geoffrey J. Filbey	58	Vice President, Engineering
Carolyn R. Fuchs	49	Vice President, Human Resources
Alain Massot	53	Vice President, International Marketing
Howard P. Richman D.P.M.	50	Vice President, Regulatory Affairs and Compliance
Andrew W. Wright	42	Vice President, Veterinary Products

Carl W. Rausch is a co-founder and has served as Chairman and Chief Executive Officer of Biopure since 1984. From 1984 until July 1, 1999, Mr. Rausch was also President of Biopure. Prior to Biopure's founding, Mr. Rausch was Vice President, Preparative and Process, at Millipore Corporation. He holds an M.S. degree in chemical engineering from Tufts University, an M.S. degree in chemical engineering from the Massachusetts Institute of Technology and a B.S. degree in chemical engineering from Tufts University.

Paul A. Looney has been President of Biopure since 1999. From 1995 to 1999, Mr. Looney was a consultant to various biotechnology companies. Between September 1993 and May 1995, Mr. Looney was the Chief Executive Officer, Chief Operating Officer and President of Corning Costar Inc. Between 1987 and September 1993, Mr. Looney was President of Costar Inc. Mr. Looney is a director of Biosphere Medical, Inc.

Maria S. Gawryl, Ph.D. has been Senior Vice President, Research and Development of Biopure since April 1999. From September 1990 to April 1999, she was Vice President, Research and Development. Dr. Gawryl holds a Ph.D. in immunology from the University of Connecticut. She did post-doctoral work at the University of Connecticut Health Center and Rush Presbyterian, St. Luke's Medical Center. She holds a B.S. degree in math and chemistry from Antioch College.

Jane Kober has been Senior Vice President, General Counsel and Secretary of Biopure since May 1998. From June 1989 to April 1998, she was a partner in LeBoeuf, Lamb, Greene & MacRae, L.L.P. Ms. Kober holds a J.D. degree from Case Western Reserve University, an M.A. degree from the University of Chicago and a B.A. in English from the Pennsylvania State University. She serves as a director of HTV Industries, Inc.

Francis H. Murphy has been Chief Financial Officer of Biopure since 1999. Most recently, Mr. Murphy had been International Vice President and business manager for Japan, Latin America and Asia Pacific for the Corning Science Product Division of Corning Incorporated. He holds an M.B.A. degree from Boston University and a B.S. degree in industrial engineering and a B.A. degree from Rutgers University.

William A. Eudailey became Vice President, Marketing, in February 2000. From 1996 through 1999, Mr. Eudailey was Vice President of Separations Business of Corning Incorporated, and from 1995 to 1996 he was Vice President Worldwide Marketing for the Science Products Division of Corning Incorporated. He holds a Doctor of Pharmacy degree and a B.S. in pharmacy from the University of Tennessee College of Pharmacy.

Geoffrey J. Filbey joined Biopure in 1985 and has served as Vice President, Engineering since 1995. Mr. Filbey holds a B.Sc. degree in engineering from the City University in London, England.

Carolyn R. Fuchs has served as Vice President, Human Resources since June 1998. From October 1996 to June 1998, she was an independent consultant. From May 1991 to October 1996, she worked at National Medical Care. Ms. Fuchs holds an M.Ed. degree in counseling and a B.S. degree in psychology from the University of Massachusetts at Amherst.

Alain Massot joined Biopure as Vice President, International Marketing in August 2000. From 1995 to 2000, Mr. Massot was a consultant in international market development to biotechnology and high technology companies. From 1993 to 1996, Mr. Massot was Senior Vice President, International PerSeptive Biosystems, Inc. Mr. Massot holds an M.S. in chemical engineering from the Sorbonne University and holds degrees in computer programming.

Howard P. Richman joined Biopure as Vice President, Regulatory Affairs and Compliance in November 2001. From 1998 to 2001, Dr. Richman worked for MacroChem, where he was Senior Director of Regulatory Affairs, Quality Assurance, and Chemistry Manufacturing and Controls. From January 1998 to June 1998, Dr. Richman was Senior Director of Clinical and Regulatory Affairs at Synsorb Biotech. From 1993 to 1998, he was Director of Regulatory Affairs, Regulatory Compliance, and Business Development at Covance Clinical and Periapproval Services, Inc. From 1991 to 1993, Dr. Richman served as a pharmaceutical consultant to the FDA.

Andrew W. Wright has been Vice President, Veterinary Products of Biopure since August 1996. From March 1992 to August 1996, Mr. Wright worked with IDEXX Laboratories, Inc. where he held several management positions, including Director of Corporate Development, Director of Marketing and Senior Product Manager. He holds an M.B.A. degree from the University of Chicago and a B.A. degree in economics from Carleton College.

PART II

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

(a) The Company's Class A Common Stock is traded in the over-the-counter market and is quoted on The NASDAQ Stock Market under the trading symbol "BPUR." There is no established public trading market for the Class B Common Stock.

The following table sets forth the high and low sale prices for the Class A Common Stock for each of the quarters in the two years ended October 31, 2001, as reported by The NASDAQ Stock Market. The

quotations shown represent inter-dealer prices without adjustments for retail markups, markdowns or commissions, and may not necessarily reflect actual transactions.

	High	Low
Year Ended October 31, 2000		
First Quarter	$54.50	$ 9.00
Second Quarter	52.00	19.88
Third Quarter	29.88	15.56
Fourth Quarter	25.50	14.63
Year Ended October 31, 2001		
First Quarter	28.25	17.25
Second Quarter	27.48	10.63
Third Quarter	32.70	19.46
Fourth Quarter	26.50	16.25

As of December 31, 2001 there were 553 holders of record of the Class A Common Stock. The Company did not pay dividends on its Class A Common Stock during the two fiscal years ended October 31, 2001 and does not plan to pay dividends on its Class A Common Stock in the foreseeable future.

Warrants to purchase 20,976 shares of Class A Common Stock were exercised in the fourth quarter of fiscal 2001 for aggregate proceeds to the Corporation of $9,600. The Corporation relied on Section 4(2) of the Securities Act of 1933 and Regulation D under the Securities Act of 1933 in issuing shares upon the exercise of the warrants.

Item 6. ***Selected Financial Data***

Set forth below is selected financial data for the five years ended October 31, 2001.

In thousands, except per share data	Fiscal Year Ended October 31, 2001	2000	1999	1998	1997
Statements of Operations Data:					
Total revenues	$ 3,489	$ 3,063	$ 2,866	$ 1,131	$ —
Cost of revenues	3,665	4,778	6,814	1,543	—
Gross profit (loss)	(176)	(1,715)	(3,948)	(412)	—
Operating expenses:					
Research and development	34,609	26,378	24,166	22,950	23,494
Sales and marketing	2,807	2,463	2,922	2,444	694
General and administrative	15,365	9,878	5,266	4,660	2,920
Total operating expenses	52,781	38,719	32,354	30,054	27,108
Loss from operations	(52,957)	(40,434)	(36,302)	(30,466)	(27,108)
Total other income, net	3,538	4,356	772	419	(310)
Net loss	(49,419)	(36,078)	(35,530)	(30,047)	(27,418)
Stock dividends on preferred stock	—	—	(17,915)	—	—
Net loss applicable to common stockholders	$(49,419)	$(36,078)	$(53,445)	$(30,047)	$(27,418)
Basic net loss per common share	$ (1.97)	$ (1.51)	$ (3.61)	$ (2.41)	$ (2.23)
Weighted-average common shares outstanding	25,066	23,947	14,813	12,460	12,300
Pro forma basic net loss per common share			$ (2.62)	$ (1.65)	
Pro forma weighted-average common shares outstanding			20,369	18,237	

In thousands	At October 31, 2001	2000	1999	1998	1997
Balance Sheet Data:					
Cash and cash equivalents	$36,089	$ 88,828	$30,778	$ 6,063	$13,527
Total current assets	42,249	95,920	38,277	13,175	15,221
Working capital	35,952	84,928	27,872	1,986	5,368
Net property and equipment	30,162	25,061	27,447	29,606	27,408
Total assets	84,187	121,287	66,230	44,848	44,054
Long-term debt (including current portion)	5,205	—	—	6,000	8,000
Common stock to be repurchased	—	—	—	6,300	6,300
Total stockholders' equity	70,893	108,510	54,037	21,449	20,222

The following is a summary of quarterly (unaudited) financial results:

In thousands, except per share data	4Q '01	3Q '01	2Q '01	1Q '01	4Q '00	3Q '00	2Q '00	1Q '00
Statements of Operations Data:								
Total revenues	$ 970	$ 946	$ 838	$ 735	$ 920	$ 836	$ 710	$ 598
Gross profit (loss)	(108)	43	(76)	(35)	(352)	(379)	(392)	(591)
Operating expenses:								
Research and development	7,123	10,297	9,002	8,187	3,747	6,229	8,143	8,259
Sales and marketing	737	784	664	622	698	617	569	579
General and administration	2,001	1,538	8,753	3,073	3,501	1,529	1,736	3,112
Total operating expenses	9,861	12,619	18,419	11,882	7,946	8,375	10,448	11,950
Loss from operations	(9,969)	(12,576)	(18,495)	(11,917)	(8,298)	(8,754)	(10,840)	(12,541)
Other income, net	578	654	990	1,316	1,502	1,563	933	358
Net loss	$(9,391)	$(11,922)	$(17,505)	$(10,601)	$(6,796)	$(7,191)	$ (9,907)	$(12,183)
Per share data:								
Basic net loss per common share	$ (0.37)	$ (0.47)	$ (0.70)	$ (0.42)	$ (0.27)	$ (0.29)	$ (0.42)	$ (0.55)
Weighted-average shares used in computing basic net loss per common share	25,208	25,134	24,958	24,960	24,937	24,933	23,580	22,282

In the third quarter of fiscal 2001, research and development expenses include a one-time expense of $1,604,000, of which $1,511,000 is non-cash, for intellectual property and pre-clinical studies related to the acquisition of Reperfusion Systems, Inc., an inactive company 26% owned by Biopure prior to the acquisition.

General and administrative expenses include non-cash compensation expense for stock options and warrants granted to certain consultants and directors. This non-cash compensation must be accounted for at fair value, per SFAS 123 and EITF 96-18, and be amortized over the vesting period and revalued each quarter based on the closing stock price. The quarterly expenses/(credits) to operations for fiscal 2001 were ($80,000), ($793,000), $6,370,000 and $1,347,000 for the fourth, third, second and first quarters, respectively. The quarterly expenses/(credits) to operations for fiscal 2000 were $1,895,000, ($34,000), $131,000 and $1,688,000 for the fourth, third, second and first quarters, respectively.

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

The following discussion of our financial condition and results of operations should be read in conjunction with the Consolidated Financial Statements and the related Notes included elsewhere in this report. Except for historical information contained herein, matters discussed in this report constitute forward-looking statements. When used herein, the words "expects," "estimates," "intends," "plans," "should" and similar expressions are intended to identify such forward-looking statements. Actual results could differ materially from those set forth in the forward-looking statements. In light of the substantial risks and uncertainties inherent in all future projections, the inclusion of forward-looking statements in this report should not be regarded as representations by the Company that the objectives or plans of the Company will be achieved. Many factors could cause the Company's actual results, performance or achievements to differ materially from those in the forward-looking statements. Reference is made in particular to the risk factors set forth in Exhibit 99.1 to this report and the discussions set forth below in this report under "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Overview

We are a leading developer, manufacturer and supplier of a new class of pharmaceuticals, called oxygen therapeutics. Our oxygen therapeutics are pharmaceuticals that one administers intravenously into the circulatory system to increase oxygen delivery to the body's tissues. We have developed and manufacture, using a proprietary process and patented technology, two hemoglobin-based oxygen carriers. A pivotal Phase III clinical trial has been completed for Hemopure and is expected to be the basis for our application to the FDA for marketing approval in the United States. In 2001, Hemopure was approved in South Africa for use in adult patients undergoing elective surgery to treat acute anemia and eliminate, reduce or delay red blood cell transfusion. Oxyglobin, for veterinary use, is the only hemoglobin-based oxygen carrier approved by the FDA and the European Medicines Evaluation Agency.

Since inception, we have devoted substantially all of our resources to our research and development programs and manufacturing. We have been dependent upon funding from debt and equity financings, strategic corporate alliances, licensing agreements and interest income. We have not been profitable since inception and had an accumulated deficit of $335.8 million as of October 31, 2001. We expect to incur additional operating losses over the next several years in connection with clinical trials, preparation of a marketing application for Hemopure and pre-marketing expenditures for Hemopure. We began generating revenue from the sale of Oxyglobin in fiscal 1998.

We believe our cash and cash equivalents, as of January 22, 2002, are sufficient to fund our current plan into the first quarter of fiscal 2003. Under this plan our operations for the balance of fiscal 2002 will be in support of our application to the FDA for marketing approval of Hemopure, the capacity upgrade of our Cambridge manufacturing facility, sales to South Africa and sales of Oxyglobin. Efforts for development of additional indications for Hemopure and for preparation to market Hemopure in the United States will be deferred until additional funds are available.

SFAS 121 (and SFAS 144, when applicable) requires that long-lived assets be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Our investments in property and equipment, including construction in progress and the new facility construction; license agreements related to the source of supply of a major raw material; and the deposit related to the initial new facility project costs are the principal long-lived assets that could be subject to such a review. The events or changes in circumstances, among others, that may result in an impairment of these assets are a significant delay in expected regulatory approvals for our products; a change in the source of supply of the major raw material; or a significant reduction in the demand for our products.

Results of Operations

Fiscal Years Ended October 31, 2001 and 2000

Total revenues, almost entirely from Oxyglobin sales, increased 13.9% to $3.5 million in fiscal 2001. Revenues in fiscal 2001 included the launch of Oxyglobin in Europe resulting in $173,000 in sales to our European distributors. Domestic sales increased 8.2% resulting from a 1.5% increase in unit sales and an increase in the average selling price per unit of 6.6%. We expect Oxyglobin revenue growth to remain limited until we are operating at our new manufacturing plant to be constructed in South Carolina and planned for completion in late 2004. We anticipate revenues from Hemopure to begin with sales to South Africa in the third quarter of fiscal 2002 and to be material to the Company in fiscal 2003.

Cost of revenues totaled $3.7 million in fiscal 2001, a decrease of 23.3% from fiscal 2000. The decrease is due to increased manufacturing activity associated with the development of Hemopure and the resulting decrease in manufacturing expenses allocated to Oxyglobin. Cost of revenues in fiscal 2001 and 2000 reflects the direct costs associated with the production of Oxyglobin plus an allocation of a portion of the unabsorbed fixed costs of manufacturing. An allocation of these unabsorbed costs was also made to Hemopure units in finished goods inventory. The remainder of these fixed costs and the direct costs of production of clinical trial materials were allocated to research and development. The above allocations are based on current and expected production levels and annual production capacities and require management judgment. Our Cambridge manufacturing facility was shut down in November 2001 for a capacity upgrade. During the six-month shutdown, and a three-month production ramp-up period, we expect to have negative gross margins for

Oxyglobin sales because of the allocation of unabsorbed manufacturing costs to costs of revenues. During the fourth quarter of fiscal 2002, when a higher level of production is reached, gross margins are expected to be positive.

Research and development expenses include product and process development and engineering, pre-clinical studies, clinical trials, clinical trial materials and an allocation of unabsorbed fixed costs of manufacturing. Our research and development efforts have been focused on developing and gaining regulatory approval of Hemopure, our product for use in humans. These efforts are now in the data analysis stage and in the preparation of our biologic license application to be filed with the FDA. The development and approval of Oxyglobin, our veterinary product, was a result of the development of Hemopure. Hemopure is approved for use in South Africa. Failure to gain one or more additional regulatory approvals during the next several years would make it difficult for the Company to continue its development efforts.

Research and development expenses increased 31.2% to $34.6 million in fiscal 2001. The increase was due to activities associated with data organization and analyses for the pivotal Phase III clinical trial of Hemopure, preparation for the filing of an electronic U.S. marketing application, ongoing research and development and an increase in the allocation of fixed costs of unused production capacity. Expenses in 2001 also included a one-time non-cash expense of $1.5 million for research and pre-clinical studies related to the acquisition in May of Reperfusion Systems, Inc., an inactive company 26% owned by Biopure, for approximately 67,000 shares of Biopure common stock and $55,000 in cash.

Sales and marketing expenses, consisting of Oxyglobin expenses, increased to $2.8 million, or 14.0% in fiscal 2001. This increase was primarily due to selling, marketing and distribution expenses associated with the launch of Oxyglobin in Europe during 2001. We expect sales and marketing expenses relating to Oxyglobin for fiscal 2002 to remain at 2001 levels. Marketing expenses for Hemopure, currently classified as general and administrative expenses because there are no Hemopure revenues, are expected to be included as sales and marketing expenses in the third quarter of fiscal 2002 when sales to South Africa begin. These expenses are anticipated to be lower than such expenses for Oxyglobin for the same period.

General and administrative expenses increased 55.6% to $15.4 million in fiscal 2001. This increase is primarily due to a $3.1 million increase in non-cash compensation expense for stock options and warrants granted to our South African distributor, consultants and two directors. This non-cash compensation was accounted for at fair value, per SFAS 123 and EITF 96-18. Prelaunch expenses for Hemopure, increased premiums for insurance and increased spending on corporate communications also contributed to the increase in 2001. Non-cash compensation expense is expected to be significantly lower in fiscal 2002 as compared to 2001, as the fair value of stock options granted to two directors were fully amortized in fiscal 2001 and fewer warrants are expected to be granted in fiscal 2002.

Total other income consists primarily of interest income and other non-product related income partially offset by interest expense. Total other income was $3.5 million in fiscal 2001 compared to $4.4 million in fiscal 2000. This decrease was attributable to the Company's decreased cash balance and lower interest rates. We anticipate a decrease in other income in fiscal 2002 due to further decreases in average cash balances and cannot predict interest rates in fiscal 2002.

Basic net loss per common share for fiscal 2001 increased to $1.97 from $1.51 per share in 2000. Shares used to calculate these losses were the actual weighted-average number of common shares outstanding during 2001 of 25,066,132 and 23,947,251 for 2000. Diluted net losses per share are not presented because the Company had losses from all periods.

Fiscal Years Ended October 31, 2000 and 1999

Total revenues were $3.1 million in fiscal 2000, as compared to $2.9 million in fiscal 1999, an increase of approximately 6.9%. Revenues in fiscal 2000 included $3.1 million of Oxyglobin sales as compared to $2.8 million in fiscal 1999, an increase of approximately 11.2%. Total revenues also reflect $5,000 and $117,000 in fiscal 2000 and 1999 respectively, from license and development activities, grants and product sales unrelated to our oxygen therapeutic products.

Cost of revenues totaled $4.8 million in fiscal 2000, a decrease of $2.0 million or 29.9% as compared to fiscal 1999. The decrease is due to improved yields and lower production volumes for Oxyglobin than in fiscal 1999. Cost of revenues in fiscal 2000 and 1999 reflects the direct costs associated with the production of Oxyglobin and allocation of a portion of the fixed costs of the unused production capacity. The remainder of these fixed costs and the direct costs of production of clinical trial materials were allocated to research and development.

Research and development expenses increased 9.2% to $26.4 million in fiscal 2000 from $24.2 million in fiscal 1999. The increase was due to the expenses associated with the pivotal Phase III clinical trial activities for Hemopure and an increase in the allocation of fixed costs of unused production capacity. The increases were offset in part by decreases in the costs of clinical trial samples and decreases in other research and development activities. We expect that in the near-term, research and development expenses will remain stable as we prepare our marketing application for Hemopure and continue our development efforts with respect to potential uses for Hemopure.

Sales and marketing expenses decreased 15.7% to $2.5 million in fiscal 2000 from $2.9 million in fiscal 1999. This decrease was primarily due to decreased selling, advertising, marketing and distribution expenses compared to these expenses related to the national product launch of Oxyglobin in 1999.

General and administrative expenses increased 87.6% to $9.9 million in fiscal 2000 from $5.3 million in fiscal 1999. This increase is primarily due to non-cash compensation expense for stock options and warrants granted to certain consultants and directors. This non-cash compensation, which amounted to $3.7 million in fiscal 2000, must be accounted for at fair value, per SFAS 123 and EITF 96-18, and be amortized over the vesting period and revalued each quarter based on the closing stock price. There was no such expense in fiscal 1999. Expenses for the pre-marketing of Hemopure, directors and officers insurance and public and investor relations activities also contributed to the increase.

Total other income consists primarily of interest income and other non-product related income partially offset by interest expense and other non-operating expenses. Total other income was $4.4 million in fiscal 2000 compared to $772,000 in fiscal 1999. This increase of $3.6 million was primarily attributable to interest income resulting from the increased cash balance of the Company.

Basic net loss per common share for fiscal 2000 was $1.51, compared to a basic net loss per common share of $3.61 and a pro forma basic net loss per common share of $2.62 for the same period in 1999. The 1999 historical and pro forma basic net loss per common share include a one-time charge of $1.21 and $0.88, respectively, associated with $17,915,000 in common stock dividends issued to preferred stockholders. Shares outstanding used to calculate historic basic amounts were 23,947,251 for 2000 and 14,813,045 for 1999; pro forma shares for 1999 were 20,368,860. Basic net loss per share is computed based on the weighted-average number of common shares outstanding during the period. Pro forma basic net loss per share is computed using the weighted-average number of outstanding shares assuming conversion of all convertible preferred shares into common shares at date of original issuance.

Liquidity and Capital Resources

At October 31, 2001, we had $36.1 million in cash and cash equivalents and from November 1, 2001 through January 22, 2002, we have raised $7.2 million through the sale of equity as discussed below. Based on our fiscal 2002 operating plan we require cash of $35.6 million in fiscal 2002 to support the filing, in fiscal 2002, of our biologic license application with the FDA, to support our Oxyglobin business, to support our launch in South Africa and to complete the capacity upgrade of our Cambridge manufacturing facility. We believe our cash and cash equivalents, at January 22, 2002, should be sufficient to fund our current plan into the first quarter of fiscal 2003. Cash requirements are expected to be higher during the first half of fiscal 2002 during the manufacturing shutdown and prior to the start of sales to South Africa. The cash and cash equivalents do not include the $10.0 million placed in escrow for the South Carolina facility as discussed below. Biopure's cash reserves plus the Société Générale financing, if we are able to fully draw and do so, could fund operations through fiscal 2003 under the Company's current operating plan. Expenditures, including the costs of additional personnel, for research and clinical development of additional indications for

Hemopure and expenditures in preparation for marketing and sales of Hemopure in the U.S. will be deferred until sufficient funds, in addition to those on hand, are available. Should management's plans not develop as anticipated, the Company will restrict certain of its planned activities and operations, as necessary, to sustain operations and conserve cash resources. Our cash requirements and our forecast of the period of time through which our financial resources would be adequate to support our operations may vary significantly from current projections and actual results may vary.

During 2001, we paid $10.0 million into an escrow account to be used to fund certain initial expenditures related to the construction of a new 500,000 unit Hemopure manufacturing facility. Under the proposed agreement for the construction and financing of the new plant, the $10.0 million in project cost funded by Biopure will be refunded upon receipt of FDA approval for Hemopure. The $10.0 million has been accounted for as a deposit in long-term assets. If FDA approval is not received, the $10.0 million deposit will not be returned to the Company and will be treated as a capital expenditure, subject to immediate impairment review pursuant to SFAS No. 121 (and SFAS 144, when applicable). As of October 31, 2001, $5.2 million has been included in construction in progress and long term debt reflecting expenses to date for the engineering of the facility paid from the escrow.

In fiscal 2001, based on the approval of Hemopure in South Africa, Biopure began including Hemopure units in inventory, as these units are saleable. The unit value in inventory is less than the expected unit selling price.

On June 21, 2001, Biopure entered into a $75.0 million equity line stock purchase agreement with Société Générale. Under this agreement, Biopure has the option of drawing up to a balance (as of January 22, 2002) of $67.8 million until June 2003, subject to certain limitations, in exchange for the issuance of Biopure common stock. The primary limitation is a minimum trading price for our common stock of $13 per share, unless waived. The maximum size of each drawdown may be up to $3.0 million in a five-day drawdown period or up to $4.5 million if the average daily dollar trading volume of the Company's common stock increases to $7.5 million. The Company is under no obligation to draw down funds, and as of January 22, 2002, has drawn $7.2 million under this agreement. We intend, if able to do so, to continue to draw from this facility in fiscal 2002.

We plan to continue financing our operations, until we are profitable, through sales of equity and debt securities, bank borrowings and leasing arrangements. We will also explore licensing and partnering arrangements where appropriate. We have not been profitable since inception and had an accumulated deficit of $335.8 million as of October 31, 2001. We will continue to generate losses for the next several years.

We plan to spend approximately $11.0 million in fiscal 2002 and fiscal 2003 on capital projects for our existing facilities.

As of October 31, 2001, we had net operating loss carryforwards of approximately $195.1 million to offset future federal and state taxable income through 2021. Due to the degree of uncertainty related to the ultimate realization of such prior losses, no benefit has been recognized in our financial statements as of October 31, 2001. Utilization of such losses in future years may be limited under the change of stock ownership rules of the Internal Revenue Service.

Recently Issued Accounting Standards

In November 2000, the Company adopted Financial Accounting Standards Board Statement (FASB) SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities.* This statement provides a comprehensive and consistent standard for the recognition and measurement of derivatives and hedging activities. Adoption of this standard had no material effect on the Company's financial position or results of operations.

In July 2001, the FASB issued SFAS No. 141, *Business Combinations*, and SFAS No. 142, *Goodwill and Other Intangible Assets.* SFAS No. 141 applies to all business combinations completed after June 30, 2001 which, among other things, requires the use of the purchase method of accounting. SFAS No. 141 also establishes new criteria for determining whether intangible assets should be recognized separately from

goodwill. SFAS No. 142 provides that goodwill and intangible assets with indefinite lives will not be amortized, but rather will be reviewed for impairment at least annually. SFAS No. 142 is effective for fiscal years beginning after December 31, 2001. The Company will apply SFAS No. 142 beginning in the first quarter of fiscal 2002. Management does not expect that the application of SFAS No. 141 or No. 142 will have a significant impact on the results of operations or financial position of the Company.

In August 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which superseded SFAS No. 121, *Accounting for Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*. The Company is required to adopt SFAS No. 144 in the first quarter of fiscal 2003. The adoption of SFAS No. 144 is not expected to have a material effect on the Company's financial position or results of operations.

Item 7A. ***Quantitative and Qualitative Disclosure About Market Risk***

The Company currently does not have any foreign currency exchange risks, with the exception of negligible exchange fluctuations associated with expenses for clinical trial and regulatory activities outside of the United States. Biopure sells Oxyglobin to its European distributors and plans to sell Hemopure to its South African distributor in 2002 in U.S. dollars. The customers bear the risk of foreign currency exchange fluctuation. Dramatic fluctuations in exchange rates could result in either increases or decreases in unit sales as the effective unit price to the customer varies. The Company invests its cash and cash equivalents in high-grade commercial paper and money market funds. These investments are subject to interest rate risk. However, due to the nature of the Company's short-term investments, it believes that the financial market risk exposure is not material.

Item 8. ***Financial Statements and Supplementary Data***

The response to this item is submitted as a separate section of this report commencing on Page F-1.

Schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

Item 9. ***Changes In and Disagreements With Accountants on Accounting and Financial Disclosure***

Not applicable.

PART III

The information required by Item 10 — Directors and Executive Officers of the Registrant; Item 11 — Executive Compensation; Item 12 — Security Ownership of Certain Beneficial Owners and Management; and Item 13 — Certain Relationships and Related Transactions is incorporated into Part III of this Annual Report on Form 10-K by reference to the Company's Proxy Statement for the Annual Meeting of Stockholders scheduled to be held on April 3, 2002.

PART IV

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

(a)(1) and (2). The response to this portion of Item 14 is submitted as a separate section of this report commencing on page F-1.

(b). On August 28, 2001 the Company filed a report dated August 27, 2001 on Form 8-K. The subject of the report was certain results of the Company's U.S. Phase III clinical trial.

(c) and (a)(3). Exhibits are set forth on the following exhibit index.

(d). Not applicable.

EXHIBIT INDEX

Exhibit No.	Description	Location
3(i)	Restated Certificate of Incorporation of Biopure	***
3(ii)	By-laws of Biopure, as amended	*
10.1	Purchase Agreement between Biopure and INPACO Corporation, dated August 28, 1997	*
10.2	Agreement between Biopure and Moyer Packing Company dated October 21, 1994	*
10.3	Agency Agreement between Biopure and The Butler Company dated March 29, 1999	*
10.4	Promissory Note dated July 31, 1995, from Carl Rausch in favor of Biopure in the amount of $1,009,772.01	*
10.5	Promissory Note dated July 31, 1995, from Maria Gawryl in favor of Biopure in the amount of $12,601.93	*
10.6	Amended and Restated Stock Purchase Agreement between Biopure and Geoffrey J. Filbey dated as of May 1, 1999	******###
10.7	Promissory Note dated July 31, 1995, from Geoff Filbey in favor of Biopure in the amount of $47,707.30	*
10.8	Lease Agreement dated October 12, 1990, between Biopure and Tarvis Realty Trust	*
10.9	Sublease between Cendant Operations, Inc. and Biopure Corporation dated June 20, 2001	**##
10.10	License Agreement for Waste Disposal System between Moyer Packing Company and Biopure Corporation dated June 12, 2001	**##
10.11	Lease Agreement dated August 29, 1994, between Biopure and Eleven Hurley Street Associates	*
10.12	Lease Agreement dated May 10, 1994, between Biopure and Tarvis Realty Trust	*
10.13	Lease Agreement dated August 23, 1994, between Biopure and Tarvis Realty Trust	*
10.14	Registration Rights Agreement dated as of June 21, 2001, by and between Biopure and Société Generale	###
10.15	Deferred Compensation Agreement with Carl Rausch dated August 8, 1990, as amended December 12, 1995	*
10.16	1993 Incentive Compensation Plan	*
10.17	1998 Stock Option Plan	*
10.18	1999 Omnibus Securities and Incentive Plan	*
10.19	Amended and Restated Equity Line Financing Agreement dated October 23, 2001, by and between Biopure Corporation and Société Generale	*#
10.20	Employment Agreement between Biopure Corporation and Paul A. Looney dated as of June 9, 1999	*
10.21	Employment Agreement Concerning Protection of Company Property and the Arbitration of Legal Disputes	*
10.22	Rights Agreement between Biopure and American Stock Transfer & Trust Company dated September 21, 1999	**
10.23	Amended and Restated 1999 Omnibus Securities and Incentive Plan dated as of February 14, 2000	***
10.24	License Agreement for Spur Facility between Moyer Packing Company and Biopure Corporation dated June 12, 2001	**##
10.25	Assignment and Assumption of Deed of Easement between Moyer Packing Company and Biopure Corporation dated June 12, 2001	**##
10.26	Underwriting Agreement between Biopure and Underwriters dated March 13, 2000	##

Exhibit No.	Description	Location
23	Consent of Independent Auditors	#
99	Factors to Consider in Connection with Forward-Looking Statements	#

\# Filed herewith.

\## Previously filed as an exhibit to the Company's report on Form 10-Q for the quarter ended April 29, 2000 and incorporated herein by reference thereto.

\### Previously filed as an exhibit to the Company's report on Form 8-K dated June 21, 2001 and incorporated herein by reference thereto.

* Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (File No. 333-78829) and incorporated herein by reference thereto.

** Previously filed as an exhibit to the Company's Report on Form 8-A dated November 4, 1999 and incorporated herein by reference thereto.

*** Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (File No. 333-30382) and incorporated herein by reference thereto.

*# Previously filed as an exhibit to the Company's Registration Statement on Form S-3 (File No. 333-66464) and incorporated herein by reference thereto.

**## Previously filed as an exhibit to the Company's report on Form 10-Q for the quarter ended July 31, 2001.

***### Previously filed as an exhibit to the Company's report on Form 10-K for the year ended October 31, 2000 and incorporated herein by reference thereto.

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 to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: January 29, 2002

BIOPURE CORPORATION

By: /s/ FRANCIS H. MURPHY
Francis H. Murphy
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CARL W. RAUSCH Carl W. Rausch	Chairman and Chief Executive Officer	January 29, 2002
/s/ DAVID N. JUDELSON David N. Judelson	Director, Vice Chairman	January 29, 2002
/s/ PAUL A. LOONEY Paul A. Looney	Director, President	January 29, 2002
/s/ DANIEL P. HARRINGTON Daniel P. Harrington	Director	January 29, 2002
/s/ C. EVERETT KOOP, M.D. C. Everett Koop, M.D.	Director	January 29, 2002
/s/ CHARLES A. SANDERS, M.D. Charles A. Sanders, M.D.	Director	January 29, 2002
/s/ J. RICHARD CROUT, M.D. J. Richard Crout, M.D.	Director	January 29, 2002
/s/ FRANCIS H. MURPHY Francis H. Murphy	Chief Financial Officer	January 29, 2002

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

Board of Directors and Stockholders
Biopure Corporation

We have audited the accompanying consolidated balance sheets of Biopure Corporation (the Company) as of October 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended October 31, 2001. 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 auditing standards generally accepted in the United States. 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, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Biopure Corporation at October 31, 2001 and 2000, and the consolidated results of its operations and its cash flows for each of the three years in the period ended October 31, 2001, in conformity with accounting principles generally accepted in the United States.

ERNST & YOUNG LLP

Boston, Massachusetts
December 10, 2001, except for
Note 14, as to which the date
is January 22, 2002

BIOPURE CORPORATION
CONSOLIDATED BALANCE SHEETS

	October 31, 2001	October 31, 2000
In thousands, except share and per share data		
ASSETS		
Current assets:		
Cash and cash equivalents	$ 36,089	$ 88,828
Accounts receivable, less allowance of $40 at October 31, 2001 and 2000	724	478
Inventories, net	4,665	2,726
Current portion of restricted cash	—	3,508
Other current assets	771	380
Total current assets	42,249	95,920
Property and equipment:		
Land	262	—
Equipment	30,252	25,175
Leasehold improvements	14,207	13,681
Furniture and fixtures	973	1,140
Construction in progress	2,976	5,931
New facility construction	5,205	—
	53,875	45,927
Accumulated depreciation and amortization	(23,713)	(20,866)
Net property and equipment	30,162	25,061
Investment in affiliate	32	66
Escrow for new facility	10,000	—
Other assets	1,744	240
Total assets	$ 84,187	$ 121,287
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,348	$ 1,764
Accrued expenses	4,949	9,228
Total current liabilities	6,297	10,992
Long-term liabilities:		
Long-term debt	5,205	—
Deferred compensation	1,792	1,785
Total long-term liabilities	6,997	1,785
Commitments and contingencies	—	—
Stockholders' equity:		
Preferred stock, $0.01 par value, 30,000,000 shares authorized		
Common stock:		
Class A, $0.01 par value, 100,000,000 shares authorized, 25,225,083 and 24,937,995 shares issued and outstanding at October 31, 2001 and 2000, respectively	252	249
Class B, $1.00 par value, 179 shares authorized, 117.7 shares issued and outstanding	—	—
Capital in excess of par value	383,570	372,149
Contributed capital	24,574	24,574
Notes receivable	(1,655)	(2,033)
Accumulated deficit	(335,848)	(286,429)
Total stockholders' equity	70,893	108,510
Total liabilities and stockholders' equity	$ 84,187	$ 121,287

See accompanying notes.

BIOPURE CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended October 31,		
	2001	**2000**	**1999**
In thousands, except share and per share data			
Revenues:			
Oxyglobin	$ 3,482	$ 3,058	$ 2,749
Other	7	5	117
Total revenues	3,489	3,063	2,866
Cost of revenues	3,665	4,778	6,814
Gross profit (loss)	(176)	(1,715)	(3,948)
Operating expenses:			
Research and development	34,609	26,378	24,166
Sales and marketing	2,807	2,463	2,922
General and administration	15,365	9,878	5,266
Total operating expenses	52,781	38,719	32,354
Loss from operations	(52,957)	(40,434)	(36,302)
Other income (expense):			
Interest income	3,609	4,424	1,041
Interest expense	(71)	(68)	(469)
Other	—	—	200
Total other income, net	3,538	4,356	772
Net loss	(49,419)	(36,078)	(35,530)
Stock dividends on preferred stock	—	—	(17,915)
Net loss applicable to common stockholders	$ (49,419)	$ (36,078)	$ (53,445)
Per share data:			
Basic net loss per common share	$ (1.97)	$ (1.51)	$ (3.61)
Weighted-average shares used in computing basic net loss per common share	25,066,132	23,947,251	14,813,045
Pro forma (unaudited):			
Pro forma basic net loss per common share			$ (2.62)
Weighted-average shares used in computing pro forma basic net loss per common share			20,368,860

See accompanying notes.

BIOPURE CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

In thousands, except share and per share data	Preferred Stock		Common Stock Class A		Common Stock Class B		Capital in Excess of Par Value	Contributed Capital	Notes Receivable	Treasury Stock	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount						
Balance at October 31, 1998	5,304,102	$ 53	10,742,503	$107	117.7	$—	$197,495	$24,574	$(2,291)	$(1,583)	$(196,906)	$ 21,449
Exercise of stock options			17,117				88					88
Sale of preferred stock	2,610,264	26					30,099					30,125
Sale of common stock			3,500,000	35			37,667					37,702
Conversion of preferred stock to common stock	(7,914,366)	(79)	8,224,525	82			17,912					17,915
Stock repurchase adjustment							300					300
Retirement of treasury stock			(203,278)	(1)			(1,582)			1,583		—
Equity compensation							75					75
Accrued interest									(172)			(172)
Net loss											(53,445)	(53,445)
Balance at October 31, 1999	—	—	22,280,867	223	117.7	—	282,054	24,574	(2,463)	—	(250,351)	54,037
Exercise of stock options and Warrants			92,128				577					577
Sale of common stock			2,565,000	26			83,725					83,751
Equity compensation							3,681					3,681
Payment of discount plus interest on "non-lapse" restricted shares							2,112					2,112
Payment of notes receivable from Shareholders									556			556
Accrued interest									(126)			(126)
Net loss											(36,078)	(36,078)
Balance at October 31, 2000	—	—	24,937,995	249	117.7	—	372,149	24,574	(2,033)	—	(286,429)	108,510
Exercise of stock options and warrants			226,550	2			1,929					1,931
Stock issued for interest in Reperfusion			67,270				1,511					1,511
Land and license rights acquired upon exercise of stock option			80,000	1			1,004					1,005
Retirement of treasury stock that resulted from payment of "non-lapse" restricted shares			(86,732)	—			—					—
Equity compensation							6,844					6,844
Payment of discount plus interest on "non-lapse" restricted shares							133					133
Payment of notes receivable from shareholders									468			468
Accrued interest									(90)			(90)
Net loss											(49,419)	(49,419)
Balance at October 31, 2001	—	$ —	25,225,083	$252	117.7	$—	$383,570	$24,574	$(1,655)	$ —	$(335,848)	$ 70,893

See accompanying notes.

BIOPURE CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands	Year Ended October 31, 2001	2000	1999
Operating activities:			
Net loss	$(49,419)	$(36,078)	$(35,530)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	3,643	4,107	3,931
Disposition of obsolete fixed assets	—	331	—
Equity compensation	6,844	3,681	75
Deferred compensation	7	(3)	(122)
Accrued interest on stockholders' notes receivable	(90)	(126)	(172)
Stock issued for interest in Reperfusion	1,511	—	—
Equity in affiliate's operations	34	35	30
Changes in assets and liabilities:			
Accounts receivable	(246)	(157)	25
Inventories	(1,939)	456	(110)
Other current assets	(391)	108	302
Accounts payable	(416)	1,023	(782)
Accrued expenses	(771)	(436)	1,394
Net cash used in operating activities	(41,233)	(27,059)	(30,959)
Investing activities:			
Purchases of property and equipment	(3,265)	(2,052)	(1,772)
Escrow for new facility	(10,000)	—	—
Other assets	(98)	165	1,531
Net cash used in investing activities	(13,363)	(1,887)	(241)
Financing activities:			
Net proceeds from sale of common stock	—	83,751	37,702
Expenses related to equity line	(675)	—	—
Net proceeds from sale of preferred stock	—	—	30,125
Payment of long-term debt	—	—	(6,000)
Repurchase of common stock	—	—	(6,000)
Proceeds from exercise of stock options, warrants and restricted stock	2,064	2,689	88
Payment of notes receivable from shareholders	468	556	—
Net cash provided by financing activities	1,857	86,996	55,915
Increase (decrease) in cash and cash equivalents	(52,739)	58,050	24,715
Cash and cash equivalents at beginning of the year	88,828	30,778	6,063
Cash and cash equivalents at end of the year	$ 36,089	$ 88,828	$ 30,778
Interest paid	$ —	$ —	$ 435
Non-cash investing transactions:			
Land and license rights acquired upon exercise of stock option	$ 1,005	$ —	$ —
New facility construction financed through capital lease (classified as long-term debt)	$ 5,205	$ —	$ —

See accompanying notes.

BIOPURE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Business and Organization

Biopure Corporation (Biopure, or the Company) is a leading developer, manufacturer and supplier of a new class of pharmaceuticals, called oxygen therapeutics, which are intravenously administered to deliver oxygen to the body's tissues. Its products are Oxyglobin, for veterinary use, and Hemopure, for human use.

During 1998, the Company began selling Oxyglobin in the United States for the treatment of anemia in dogs. Initially, sales were made on a limited basis directly to emergency and specialty veterinary practices. In October 1998, the Company began selling Oxyglobin nationwide through several veterinary distributors, who purchase product for immediate and direct resale to veterinary practices. In April 2001, the Company began selling Oxyblobin to a distributor in the United Kingdom. Oxyglobin is now available to veterinarians in selected European countries through established local veterinary distributors in Germany, France and the United Kingdom. In fiscal 2001, Hemopure was approved in South Africa for use in adult surgery patients to treat acute anemia and eliminate, reduce or delay red blood cell transfusion. Commercial sales in South Africa are expected to begin in fiscal 2002.

During fiscal 2001, the Company continued activities associated with data organization and analyses for the pivotal Phase III clinical trial of Hemopure. These clinical trials are significant factors relating to the Company's operating losses. Although there cannot be any assurance that Hemopure will be approved for sale in additional countries, the trials to date have produced satisfactory results, which have allowed the Company to continue clinical progress. The Company is preparing to file a marketing application for Hemopure in the United States in fiscal 2002, followed by an application in Europe, for perioperative use of the product in patients undergoing elective surgery. The product is also being developed for use in trauma, cancer and ischemic events such as heart attack and stroke.

The Company expects that its cash and cash equivalents, including certain funds raised in fiscal 2002 (see Note 14), will be sufficient to fund its current plan into the first quarter of fiscal 2003. Under this plan, its operations in fiscal 2002 will be in support of its application to the FDA for marketing approval of Hemopure, the capacity upgrade of its Cambridge manufacturing facility, sales to South Africa and sales of Oxyglobin. Efforts for development of additional indications for Hemopure and for preparation to market Hemopure in the U.S. will be deferred until additional funds are available. Should management's plans not develop as anticipated, the Company will restrict certain of its planned activities and operations, as necessary, to sustain operations and conserve cash resources.

2. Significant Accounting Policies

Basis of Presentation

The consolidated financial statements reflect the accounts of the Company and its wholly-owned and majority-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

On June 24, 1999, the Board of Directors approved a two for three reverse stock split of common shares, which was effected in the form of a reverse stock dividend on July 21, 1999. All common share and per common share amounts included in the accompanying consolidated financial statements and notes thereto have been retroactively restated to give effect to this reverse stock split.

Risks and Uncertainties

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

We obtain some key materials, including membranes and chemicals, from sole source suppliers. If such materials were no longer available at a reasonable cost from our existing suppliers, we would need to obtain

supply contracts with new suppliers for substitute materials. If we need to locate a new supplier, the substitute or replacement materials will most likely be tested for equivalency. Such evaluations could delay development of a product, limit commercial sales of an FDA-approved product and cause us to incur additional expense. In addition, the time expended for such tests could delay the marketing of an FDA-approved product.

Cash Equivalents

The Company considers all liquid securities with original maturities of three months or less, when purchased, to be cash equivalents.

Inventories

Inventories are stated at the lower of cost (determined using the first-in, first-out method) or market. Inventories are reviewed periodically for slow-moving or obsolete status based on sales activity, both projected and historical. Inventories are also reviewed periodically for materials or product under quality compliance investigations. Appropriate reserves are established for inventory that falls into these categories.

Property and Equipment

Property and equipment are recorded at cost and depreciated over the estimated useful lives of the assets using the straight-line method. The estimated useful lives are as follows:

Leasehold improvements	Shorter of useful life or life of the lease
Major equipment	12 years
Equipment	5-7 years
Furniture and fixtures	5 years
Computer equipment	3 years

Other Assets

Acquired licenses are included in other assets and are stated at amortized cost. Amortization is calculated using the straight-line method over the estimated useful life of the amortized assets, which is 13 years.

In accordance with Financial Accounting Standards Board Statement (SFAS) No. 121, *Impairment of Long-Lived Assets and Long-Lived Assets to Be Disposed Of,* the Company recognizes impairment losses on long-lived assets when indicators of impairment are present and future undiscounted cash flows are insufficient to support the assets' recovery. Management believes that no such indicators of impairment of its long-lived assets exist at October 31, 2001.

Revenue Recognition

The Company recognizes revenue from product sales when evidence of arrangement exists, collectibility is probable, price is fixed and shipment has occurred.

In fiscal 2001, the Company adopted Staff Accounting Bulletin (SAB) No. 101, issued by the Securities and Exchange Commission. SAB No. 101 summarizes some of the Staff's interpretations and positions on the application of generally accepted accounting principles to revenue recognition. The adoption of SAB No. 101 had no significant impact on the Company's financial position or results of its operations.

Research and Development Costs

Research and development costs are expensed as they are incurred. These costs include employee salary and related costs, supplies, outside services, costs of product used in trials and tests, occupancy costs and an allocation of a portion of the unabsorbed fixed costs of manufacturing.

Stock-Based Compensation

The Company grants stock options for a fixed number of shares, generally with an exercise price equal to the market value of the shares at the date of grant, as determined by the board of directors. The Company has elected to follow Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25) and related interpretations, in accounting for its stock-based compensation plans, rather than the alternative fair value accounting method provided under SFAS 123, *Accounting for Stock-Based Compensation*, as the latter alternative requires the use of option valuation models that were not developed for use in valuing employee stock options. Under APB 25, when the exercise price of options granted to employees equals the market price of the underlying stock on the date of grant, no compensation expense is required.

The Company applies SFAS 123 and EITF 96-18 *Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services* with respect to options issued to nonemployees.

Net Loss Per Common Share

Basic net loss per common share is computed based on the weighted-average number of common shares outstanding during the period. Diluted net loss per common share is computed based upon the weighted-average number of common shares outstanding during the year, adjusted for the dilutive effect of shares issuable upon the conversion of preferred stock outstanding and the exercise of common stock options and warrants determined based upon average market price of common stock for the period. Diluted net loss per common share is not presented in the accompanying consolidated financial statements because the Company had losses for all periods presented and, consequently, the effect of such preferred stock, options and warrants is anti-dilutive.

Unaudited Pro Forma Net Loss Per Common Share

The unaudited pro forma basic net loss per common share is computed using the weighted-average number of outstanding common shares assuming conversion of all convertible preferred shares into common shares (at date of original issuance), which occurred upon completion of the initial public offering.

Calculation of Net Loss Per Share

	Year Ended October 31,		
	2001	2000	1999
	In thousands, except share and per share data		
Per share data:			
Net loss	$ (49,419)	$ (36,078)	$ (35,530)
Stock dividends on preferred stock	—	—	(17,915)
Net loss applicable to common stockholders	$ (49,419)	$ (36,078)	$ (53,445)
Weighted-average number of common shares outstanding	25,066,132	23,947,251	14,813,045
Basic net loss per common share	$ (1.97)	$ (1.51)	$ (3.61)
Pro forma (unaudited):			
Weighted-average number of common shares:			
Historical outstanding			14,813,045
Issued upon assumed conversion of preferred stock			5,555,815
Total weighted-average number of common shares used in computing basic pro forma net loss per common share			20,368,860
Basic pro forma net loss per common share			$ (2.62)

Recently Issued Accounting Standards

In November 2000, the Company adopted Financial Accounting Standards Board Statement (FASB) SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. This statement provides a comprehensive and consistent standard for the recognition and measurement of derivatives and hedging activities. Adoption of this standard had no material effect on the Company's financial position or results of operations.

In July 2001, the FASB issued SFAS No. 141, *Business Combinations*, and SFAS No. 142, *Goodwill and Other Intangible Assets*. SFAS No. 141 applies to all business combinations completed after June 30, 2001, which among other things, requires the use of the purchase method of accounting. SFAS No. 141 also establishes new criteria for determining whether intangible assets should be recognized separately from goodwill. SFAS No. 142 provides that goodwill and intangible assets with indefinite lives will not be amortized, but rather will be reviewed for impairment at least annually. SFAS No. 142 is effective for fiscal years beginning after December 31, 2001. The Company will apply SFAS No. 142 beginning in the first quarter of fiscal 2002. Management does not expect that the application of SFAS No. 141 or No. 142 will have a significant impact on the results of operations or financial position of the Company.

In August 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which superseded SFAS No. 121, *Accounting for Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*. The Company is required to adopt SFAS No. 144 in the first quarter of fiscal 2003. The adoption of SFAS No. 144 is not expected to have a material effect on the Company's financial position or results of its operations.

3. Transactions with Related Parties

At October 31, 2001, approximately 3% of the outstanding shares of Class A Common Stock of Biopure were owned by two limited partnerships, Biopure Associates Limited Partnership and Biopure Associates Limited Partnership II. The primary purpose of these partnerships is to own shares of common stock of the Company. The general partner of these partnerships is an officer of the Company, and the limited partners include certain current and former employees, officers, directors and consultants to the Company.

In August 1990, the Company made loans to certain directors and officers to allow them to purchase Class A Common Stock. The principal and interest for two loans that remain outstanding, not including the loan made to Carl Rausch, the Company's Chairman and CEO, was due on July 31, 2000 and arrangements have been made for their payment in full by March 31, 2002. The principal balances continue to bear interest until all principal and interest are paid. In December 2001, the Company received payment in full for one of the two remaining loans. Since October 31, 2001, notes receivable has been reduced by the principal and interest payment amount of $80,000. The principal and interest on Mr. Rausch's loan is due on July 31, 2003. The notes receivable for all loans, except the loan made to Mr. Rausch, bear interest at the prime rate (7.0% at October 31, 2001) and are included in stockholders' equity in the accompanying consolidated financial statements. The loan for Mr. Rausch bears interest at a fixed 4.71% rate.

On May 24, 2001, the Company acquired by merger the 74% of Reperfusion Systems, Inc., a Delaware corporation, it did not already own. Reperfusion was formed in 1993 to investigate a device for resuscitation to be used with Hemopure or other oxygen carrying fluids. Related to this acquisition, the Company issued 67,270 shares of Biopure Class A Common Stock and paid $55,000 to the Reperfusion shareholders. A one-time expense of $1,604,000, of which $1,511,000 is non-cash, was recorded as research and development for intellectual property and pre-clinical studies.

4. Inventories

Inventories, net of reserves, consisted of the following:

	October 31,	
	2001	2000
	In thousands	
Raw materials	$ 771	$ 980
Work-in-process	243	476
Finished goods — Oxyglobin	1,886	1,270
Finished goods — Hemopure	1,765	—
	$4,665	$2,726

5. Investment in Affiliate

The Company accounts for its investments in affiliated companies under the equity method of accounting. In July 1994, the Company acquired a 50% general partnership interest in Eleven Hurley Street Associates (EHSA), a real estate partnership, which owns the Company's principal office and research and development facilities. The Company's lease with EHSA requires annual rental payments of $239,000 through 2002 and $262,000 from 2003 through 2007. The partnership's income was not significant for any of the periods presented. At October 31, 2001 and 2000, the Company's proportionate share of EHSA's net equity was approximately $32,000 and $66,000, respectively.

6. Accrued Expenses

Accrued expenses consisted of the following:

	October 31,	
	2001	2000
	In thousands	
Settlement	$ —	$3,508
Clinical trials	662	3,156
Preparation of Biologic License Application	306	—
Accrued payroll and related employee expenses	1,365	520
Accrued vacation	398	243
Other	2,218	1,801
	$4,949	$9,228

7. Long-Term Debt

In January 2001, Biopure signed a Letter of Intent for the construction and financing of a new 500,000 unit Hemopure plant in South Carolina. The new plant is expected to cost approximately $120,000,000 and is expected to be financed through a capital lease. As such, the financial statements include property, plant and equipment and offsetting debt. During 2001, Biopure paid $10,000,000 into an escrow account, which has been recorded as a deposit in long-term assets. These escrow funds, constituting the Company's cash contribution during the construction phase of the new facility, are being used to fund initial expenditures for the new facility. Under the agreement, the $10,000,000 in project cost funded by Biopure will be refunded upon receipt of approval of Hemopure by the United States Food and Drug Administration (FDA) and if a formal lease agreement has been executed. If FDA approval is not received, the $10,000,000 deposit will not be returned to the Company and will be treated as a capital expenditure, subject to immediate impairment review pursuant to SFAS No. 121. As of October 31, 2001, $5,205,000 has been included in property, plant and equipment and long-term debt reflecting expenses to date for the engineering and design costs of the facility. A formal lease for the South Carolina facility has not been signed.

8. Deferred Compensation

The Company has a deferred compensation agreement with Mr. Rausch requiring a base payment of $700,000 plus accrued interest of $854,000 as of October 31, 2001. In June 1999, the payment date was extended to July 31, 2003, subject to certain conditions.

The Company has an Incentive Compensation Plan for all employees, which provides for discretionary deferred bonus awards annually. Commencing three years after grant, awards are paid ratably over a five-year period. No grants were made in 2001 or 2000.

9. Stockholders' Equity

On March 24, 2000, the Company completed a public offering of 2,565,000 shares of Class A Common Stock. The Company received proceeds of $84,388,000 before expenses of $637,000 and recorded an increase in stockholders' equity of $83,751,000.

On August 4, 1999, the Company completed an initial public offering (IPO) of 3,500,000 shares of Class A Common Stock. The Company received proceeds of $39,060,000 before expenses of $1,358,000 and recorded an increase in stockholders' equity of $37,702,000.

Convertible Preferred Stock

On December 23, 1998, the Company sold 1,489,498 units at $12.00 per unit, each consisting of one share of Series D Preferred Stock plus a warrant to purchase 1/15th of a share of Class A Common Stock. In connection with the issuance of the Series D shares, warrants were issued to the placement agents to purchase 30,667 shares of Class A Common Stock and warrants were issued to the holders of the Series B and Series C Convertible Preferred Stock to purchase 1/15th of a share of Class A Common Stock for each share of Series B and Series C Convertible Preferred Stock held by them. Warrants issued to the placement agents and the preferred stockholders have an exercise price of $18.00 and $12.00 per share, respectively. Warrants issued to the placement agents and the preferred stockholders expire three years and four years, respectively, from the date of the IPO. Net cash proceeds, after deducting approximately $930,000 in commissions and expenses associated with the offering, were $16,946,000. Subsequent to May 1, 1999, an additional 397,250 units of Series D Convertible Preferred Stock were sold with aggregate net proceeds of $4,700,000.

Each share of Series D Convertible Preferred Stock was convertible into two-thirds of a share of Class A Common Stock or such greater ratio so that conversion resulted in a 35% annualized rate of return on the Series D original offering price of $12 per share.

Upon closing of the IPO (see above), all shares of preferred stock converted into shares of Class A Common Stock giving effect to the two-for-three stock split. In accordance with the provisions of EITF 98-5, for those units sold after May 20, 1999, the Company treated any shares of Class A Common Stock issued upon conversion in excess of two-thirds of one share of Class A Common Stock for each share of Series D Convertible Preferred Stock as a dividend for accounting purposes. The Company recorded a dividend of $155,000 in the third quarter of 1999 for the 12,936 additional shares of Class A Common Stock issued. The holders of the Series B Convertible Preferred Stock received an additional 280,000 shares in the aggregate upon conversion and the holders of the Series C Convertible Preferred Stock received an additional 1,200,000 shares in the aggregate upon conversion. The fair market value of such additional shares was, for accounting purposes, treated as a dividend on such convertible preferred stock in the quarter in which the offering and conversion occurred. The Company recorded a dividend of $17,760,000 in the third quarter of 1999.

Common Stock

The Class B Common Stock is authorized for issuance only to Pharmacia Corporation. The holder of Class B Common Stock is not entitled to vote or receive dividends. The Class B Common Stock is convertible into shares of Class A Common Stock according to a formula that is based upon a future fair market value of the Class A Common Stock and is dependent upon the Company achieving U.S. FDA approval for Hemopure. The number of shares of Class A Common Stock to be issued in exchange for the Class B Common Stock will be determined based upon an independent valuation of the Company, after FDA approval of the Company's human oxygen therapeutic product, which valuation cannot exceed $3 billion. The valuation is then divided by 13,635,525 shares to arrive at a fair value per share of Class A Common Stock. Pharmacia's total investment in the Company, $142.3 million, divided by such per share fair value of Class A Common Stock, results in the number of shares of Class A Common Stock Pharmacia will receive, limited to a maximum of 1,272,119 shares.

Equity Line

In June 2001, Biopure entered into a $75,000,000 equity line stock purchase agreement with Société Générale ("SG"). Under this agreement, Biopure has the option of selling Biopure Class A Common Stock to SG until June 2003, aggregating up to $75,000,000, subject to certain limitations. The primary limitation is a minimum trading price for our common stock of $13 per share, unless waived. The maximum size of each such sale may be up to $3,000,000 in a five-day draw down period or up to $4,500,000 if the average daily dollar trading volume of the Company's Class A Common Stock increases above $7,500,000. The Company is

under no obligation to draw down funds and had not drawn any funds under this agreement as of October 31, 2001. Also see Note 14 regarding subsequent events.

Dividends

At this time, the Company does not intend to pay dividends.

Stock Accumulation Plan

In August 1990, the Company issued 1,606,000 shares of Class A Common Stock to certain employees, officers, consultants and directors for $1.35 per share, which was $4.05 per share less than the then fair market value, as determined by the Company's Board of Directors, of $5.40 per share. This $4.05 per share market value differential is associated with a permanent nonlapse restriction on the value of the stock. The stock can be sold at the then-current fair market value less the permanent discount of $4.05 per share, adjusted for an annual interest factor. At May 1, 1999, the discount plus accrued interest per share was fixed at $7.92. 1,000,052 shares were outstanding with these restrictions at October 31, 2001.

Contributed Capital

The Company recorded as contributed capital research and development costs incurred by Pharmacia Corporation on behalf of the Company. Upon conversion of the Class B Common Stock, the cumulative amount of contributed capital will be treated as consideration for the Class A Common Stock issued in the conversion.

Stock Options and Warrants

The Company has two active stock option plans, the 1998 Stock Option Plan (the 1998 Plan) and the 1999 Omnibus Securities and Incentive Plan (the 1999 Plan) under which key employees, directors and consultants may be granted options to purchase Class A Common Stock at a price determined by the Board of Directors at the date of grant. Under these plans and a previous plan, a majority of the options become exercisable on a pro rata basis over a four-year period and expire ten years from date of grant.

Presented below is a summary of transactions under the stock option plans during 2001, 2000 and 1999:

	Year Ended October 31,					
	2001		2000		1999	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Options outstanding at beginning of year	2,179,600	$14.98	1,945,161	$13.84	546,634	$18.54
Granted	87,500	17.46	435,200	18.94	1,558,687	12.00
Exercised	(162,715)	12.52	(34,816)	11.90	(17,117)	5.19
Forfeited	(24,847)	14.30	(165,945)	12.65	(143,043)	12.48
Options outstanding at end of year	2,079,538	$15.28	2,179,600	$14.98	1,945,161	$13.84
Options exercisable	1,352,406		748,000		192,680	

The following table summarizes information about options outstanding at October 31, 2001:

	Options Outstanding			Options Exercisable	
Exercise Price	Shares	Weighted Average Remaining Contractual Life (Yrs.)	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
$ 5.40-$11.81	103,333	8.5	$10.76	53,333	$10.59
$12.00-$13.50	1,126,252	7.8	12.01	813,041	12.01
$16.69-$22.50	769,953	7.1	18.93	473,532	19.26
$26.10-$35.69	80,000	8.8	32.09	12,500	35.69
	2,079,538	7.6	$15.28	1,352,406	$14.72

During 1998, the Company's 1988 Stock Option Plan expired. In March 1998, the Board of Directors approved the adoption of the 1998 Plan to provide for the granting of options for up to 98,293 shares of Class A Common Stock, the number of shares remaining in the expired 1988 plan. Options outstanding under the Company's 1988 plan forfeited in future periods will be available for grant under the new plan.

In June 1999, the Company established the 1999 Plan, which provides for the granting of incentive stock options, non-qualified stock options, restricted stock awards, deferred stock awards, unrestricted stock awards, performance share awards, distribution equivalent rights, or any combination of the foregoing to key management, employees and directors. The maximum number of shares of Class A Common Stock reserved for issuance under the 1999 Plan is 1,866,666.

At October 31, 2001, there were 185,408 shares available for future grants under stock option plans.

One of the Company's vendors was granted options to acquire 88,000 shares of Class A Common Stock in exchange for certain land and real property lease and license rights. In June 2001, the vendor exercised its option to acquire 80,000 shares of Class A Common Stock. The Company issued 80,000 shares for consideration consisting of land and real property lease and license rights valued at $1,004,500, $262,000 of which was recorded as land and $742,500 was recorded as other assets.

In connection with the sale of Series C Convertible Preferred Stock in November 1997, the Company issued to the placement agent warrants to purchase 66,667 shares of Common Stock at a price per share equal to $12.00, adjusted for certain events. The warrants expire on August 4, 2002. At October 31, 2001, 2,388 of these warrants were outstanding.

During fiscal 2001, Biopure granted to two external third parties 400,000 warrants at an exercise price of $19.30 per share and 350,000 warrants with an exercise price of $35.00 per share. Both warrants vested in April 2001 and expire three years from the date of grant. The Company recorded $4,174,500 as a one-time compensation expense in April 2001. The weighted-average fair value per warrant was $5.57. In November 1999, the Company granted 25,000 warrants to consultants at an exercise price of $12.00 per share. The warrants vested immediately and expire five years from the date of grant. The related compensation expense was recorded on the grant date and was not significant. At October 31, 2001, all such warrants were outstanding.

SFAS No. 123 Disclosures

The Company has adopted the disclosure provisions only of SFAS No. 123. The fair value of options and warrants granted was estimated at the date of grant using the Black-Scholes option pricing model for 2001, 2000 and 1999, with the following assumptions: risk-free interest rates ranging from 4.29% to 6.32%; dividend yield of 0% and an expected life between one and seven years. For 2001, 2000 and 1999 a volatility factor of the expected market price of the Company's Common Stock of .80 was used. If the compensation cost for options and warrants granted had been determined based on the fair value of the options and warrants at the

date of grant, the SFAS No. 123 pro forma net loss applicable to common stockholders for 2001, 2000, and 1999 would have been $53,692,000, $38,901,000 and $55,854,000, respectively.

The SFAS No. 123 pro forma net loss per share for 2001, 2000 and 1999 would have been $(2.14), $(1.62) and $(3.77), respectively. Compensation expense under SFAS No. 123 for 2001, 2000 and 1999 is not representative of future expense, as it includes only four, three and two years of grants, respectively. In future years, the effect of determining compensation cost using the fair value method will include additional vesting and associated expense.

The weighted-average fair value per option and warrant of options and warrants granted during 2001, 2000 and 1999 was $7.73, $13.89 and $6.50, respectively.

Reserved Shares

At October 31, 2001, there were 4,969,495 shares of Class A Common Stock reserved for issuance under the stock option plans, stock option agreements and warrants and upon conversion of Class B Common Stock.

Rights Agreement

Each holder of Class A Common Stock has a preferred stock purchase right for each share owned. The rights entitle the holders to acquire preferred stock following an acquisition of more than 20% by any person or group, if the board of directors does not redeem the rights. If the rights were not redeemed, their exercise would cause substantial dilution to the acquiring person or group.

10. Employee Benefit Plan

The Company has a defined contribution plan, the Biopure Corporation Capital Accumulation Plan, qualified under the provisions of Internal Revenue Code section 401(k). Employees are eligible for enrollment upon becoming employed and for discretionary matching after one year of service. The Company's discretionary contribution vests after a period of three years from the date of employment. In 2001, 2000 and 1999, the Company contributed $223,000, $225,000, and $211,000 respectively, to the plan.

11. Income Taxes

At October 31, 2001, the Company had available for the reduction of future years' federal taxable income and income taxes, net operating loss carryforwards of approximately $195,078,000, expiring from the year ended October 31, 2004 through 2021, along with research and development and investment tax credits of approximately $7,442,000, expiring from the year ended October 31, 2001 through 2021. Since the Company has incurred only losses since inception and due to the degree of uncertainty with respect to future profitability, the Company believes at this time that it is more likely than not that sufficient taxable income will not be earned to allow for realization of the tax loss and credit carryforwards and other deferred tax assets. Accordingly, the tax benefit of these items has been fully reserved.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Company's deferred tax assets and liabilities as of October 31, 2001 and 2000 were as follows:

	2001	2000
	In thousands	
Deferred tax assets:		
Net operating loss carryforward	$ 75,522	$ 65,586
Capitalized research and development	39,644	31,515
Accruals and reserves	2,368	3,339
Tax credit carryforwards	7,442	6,408
Total deferred tax assets	124,976	106,848
Deferred tax liabilities:		
Depreciation	2,169	2,035
Total deferred tax liabilities	2,169	2,035
Net deferred tax assets	122,807	104,813
Valuation allowance for deferred tax assets	(122,807)	(104,813)
Net deferred tax assets	$ —	$ —

In 2001, the valuation allowance increased by $17,994,000 due primarily to the increase in net operating losses, capitalized research and development costs, and research and development tax credits.

12. Commitments

In 1997, the Company entered into an agreement with B. Braun Melsungen A.G. (Braun) to repurchase 2,013,956 shares of the Company's common stock for $6,300,000. The agreement required the Company to place in escrow installment payments of such purchase price equal to an annual amount of $1,000,000 plus five percent of the Company's revenues from human product sales and license fees, if any, in a certain European region. The Company received Braun's agreement to delay the deposit of $1,000,000 due in August 1998 to February 1999. The aggregate repurchase amount of $6,300,000 (subsequently negotiated to $6,000,000 as a result of accelerated repurchase) had to be funded by the year 2002. At any time, the stockholder could withdraw funds in escrow to complete the repurchase in installments by simultaneous delivery out of escrow to the Company of a pro rata portion of the stock. In December 1998, Braun withdrew all funds from escrow to complete the repurchase of 319,683 shares of Class A Common Stock. On August 5, 1999 the Company paid $4,000,000 in addition to the existing balance of $1,000,000 in escrow and Braun withdrew all funds from escrow to complete the repurchase of 1,694,273 shares of Class A Common Stock.

The agreement also requires the Company to pay Braun a royalty of two percent of the Company's revenues from human product sales and license fees in a certain European region. Payments must be made on a quarterly basis until such amounts aggregate $7,500,000. In exchange for this royalty commitment, the rights to manufacture and market specified products in Braun's territory were reacquired by the Company. No payments have been required or made to date as of October 31, 2001.

Future minimum lease payments under operating leases for the Company's various office, laboratory, warehouse and processing facilities at October 31, 2001 are as follows:

2002	$ 962,000
2003	969,000
2004	955,000
2005	898,000
2006	615,000
Thereafter	744,000
	$5,143,000

Rent expense was approximately $977,000, $992,000 and $1,035,000 in 2001, 2000 and 1999, respectively.

13. Major Customers

The Company derived revenue from four unrelated parties in 2001 individually accounting for a total of 42%, 20%, 11% and 11% of total revenues. The Company derived revenue from three unrelated parties in 2000 individually accounting for a total of 45%, 16%, and 11% of total revenues. The Company derived revenue from five unrelated parties in 1999 individually accounting for a total of 25%, 15%, 12%, 12% and 11% of total revenues.

14. Subsequent Events

As of January 22, 2002, the Company has drawn $7,250,000 in exchange for 516,531 shares of Class A Common Stock in connection with the $75,000,000 equity line stock purchase agreement with Société Générale, as described in Note 9.

15. Quarterly Financial Information (Unaudited)

The following is a summary of quarterly financial results for the fiscal years 2001 and 2000:

	4Q '01	3Q '01	2Q '01	1Q '01
In thousands, except per share data				
Statements of Operations Data:				
Total revenues	$ 970	$ 946	$ 838	$ 735
Gross profit (loss)	(108)	43	(76)	(35)
Operating expenses:				
Research & development	7,123	10,297	9,002	8,187
Sales and marketing	737	784	664	622
General & administration	2,001	1,538	8,753	3,073
Total operating expenses	9,861	12,619	18,419	11,882
Loss from operations	(9,969)	(12,576)	(18,495)	(11,917)
Other income, net	578	654	990	1,316
Net loss	$(9,391)	$(11,922)	$(17,505)	$(10,601)
Per share data:				
Basic net loss per common share	$ (0.37)	$ (0.47)	$ (0.70)	$ (0.42)
Weighted-average shares used in computing basic net loss per common share	25,208	25,134	24,958	24,960

	4Q '00	3Q '00	2Q '00	1Q '00
In thousands, except per share data				
Statements of Operations Data:				
Total revenues	$ 920	$ 836	$ 710	$ 598
Gross profit (loss)	(352)	(379)	(392)	(591)
Operating expenses:				
Research & development	3,747	6,229	8,143	8,259
Sales and marketing	698	617	569	579
General & administration	3,501	1,529	1,736	3,112
Total operating expenses	7,946	8,375	10,448	11,950
Loss from operations	(8,298)	(8,754)	(10,840)	(12,541)
Other income, net	1,502	1,563	933	358
Net loss	$(6,796)	$(7,191)	$ (9,907)	$(12,183)
Per share data:				
Basic net loss per common share	$ (0.27)	$ (0.29)	$ (0.42)	$ (0.55)
Weighted-average shares used in computing basic net loss per common share	24,937	24,933	23,580	22,282

In the third quarter of fiscal 2001, research and development expenses include a one-time expense of $1,604,000, of which $1,511,000 is non-cash, for intellectual property and pre-clinical studies related to the acquisition of Reperfusion Systems, Inc., an inactive company 26% owned by Biopure.

General and administrative expenses include non-cash compensation expense for stock options and warrants granted to certain consultants and directors. This non-cash compensation must be accounted for at fair value, per SFAS 123 and EITF 96-18, and be amortized over the vesting period and revalued each quarter based on the closing stock price. The quarterly expenses/(credits) to operations for fiscal 2001 were ($80,000), ($793,000), $6,370,000 and $1,347,000 for the fourth, third, second and first quarters, respectively. The quarterly expenses/(credits) to operations for fiscal 2000 were $1,895,000, ($34,000), $131,000 and $1,688,000 for the fourth, third, second and first quarters, respectively.