FORM 10-K

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

(Mark One)

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

For the fiscal year ended December 31, 1998  $$\operatorname{\textsc{OR}}$$ 

[ ] 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 1-13165

CRYOLIFE, INC.

(Exact name of registrant as specified in its charter)

Florida
(State or other jurisdiction of incorporation or organization)

59-2417093 (I.R.S. Employer Identification No.)

1655 Roberts Boulevard N.W., Kennesaw, GA 30144 (Address of principal executive offices) (zip code)

Registrant's telephone number, including area code (770) 419-3355

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

Title of each class
----Common Stock, \$.01 par value
Preferred Share Purchase Rights

Name of each exchange on which registered -----New York Stock Exchange

New York Stock Exchange

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

None

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 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. X Yes

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.

The aggregate market value of voting stock held by nonaffiliates of the registrant was approximately \$119,519,000 at March  $25,\ 1999$  (10,743,292 shares). The number of common shares outstanding at March  $25,\ 1999$  was 12,415,991 (exclusive of treasury shares).

Documents Incorporated By Reference
Part III: Portions of Registrant's Proxy Statement relating to the Annual
Meeting of Shareholders to be filed not later than April 30, 1999.

PART I

CryoLife is the leader in the cryopreservation of viable human tissues for cardiovascular, vascular and orthopaedic transplant applications, and develops and commercializes additional implantable products and single-use medical devices. The Company estimates that it provided approximately 70% of the cryopreserved human tissue implanted in the U.S. in 1998. The Company uses its expertise in biochemistry and cell biology, and its understanding of the needs of the cardiovascular, vascular and orthopaedic surgery medical specialties, to continue expansion of its core cryopreservation business and to develop or acquire complementary implantable products and technologies for these fields. The Company develops bioprosthetic cardiovascular devices including two novel design stentless porcine heart valves currently marketed in the European Community. The Company also develops proprietary implantable surgical bioadhesives, including BioGlue(R) surgical adhesive, which it began commercializing for vascular applications within the European Community in April 1998. In addition, the Company serves as an Original Equipment Manufacturer ("OEM") manufacturer, through its Ideas For Medicine, Inc. ("IFM") subsidiary, of single-use medical devices for use in vascular surgical procedures.

CryoLife processes and distributes for transplantation cryopreserved human heart valves and conduits, human vascular tissue and human connective tissue for the knee. Management believes that cryopreserved human heart valves and conduits offer certain advantages over mechanical, synthetic and animal-derived alternatives. Depending on the alternative, these advantages include more natural functionality, elimination of a chronic need for anti-coagulation drug therapy, reduced incidence of reoperation and reduced risk of catastrophic failure, thromboembolism (stroke) or calcification. The Company estimates that the potential U.S. market for implantable products targeting indications addressed by the Company's cryopreserved tissues was approximately \$950 million in 1997. The Company seeks to expand the availability of human tissue through its established relationships with over 250 tissue banks and organ procurement agencies nationwide.

CryoLife has developed and markets outside of the U.S. bioprosthetic cardiovascular devices for implantation, currently consisting of fixed stentless porcine heart valves. Fixed porcine heart valves are often preferred by surgeons for procedures involving elderly patients because they eliminate the risk of patient non-compliance with long-term anti-coagulation drug therapy associated with mechanical valves, are less expensive than human heart valves or mechanical valves and their shorter longevity is more appropriately matched with these patients' life expectancies. Fixed porcine heart valves address a worldwide target market estimated to have been \$175 million in 1997. Unlike most other available porcine heart valves, the Company's stentless porcine heart valves do not contain synthetic materials which increase the risk of endocarditis, a debilitating and potentially fatal bacterial infection. The Company's CryoLife-O'Brien(R) aortic heart valve, currently marketed in the European Community and certain other territories outside the U.S., is a stentless porcine heart valve which contains a matched composite leaflet design that approximates human heart valve blood flow characteristics and requires only a single suture line which simplifies surgical implantation. The Company's CryoLife-Ross pulmonary heart valve, another of the Company's fixed stentless porcine valves, is also marketed in the European Community and certain territories outside the U.S. The Company plans to apply its proprietary SynerGraft(R) technology to some of its stentless porcine heart valves. SynerGraft involves the depopulation of living cells from the structure of non-viable animal heart tissue and the repopulation of such tissue with human cells. This process is designed to reduce calcification of porcine heart valves, thereby increasing longevity, and more generally to improve the biocompatibility and functionality of such tissue. The Company believes that its porcine heart valves, when treated with SynerGraft technology, will expand its opportunity to address the broader international and U.S. heart valve markets, estimated to have been \$348 million and \$395 million, respectively, in 1997.

CryoLife is developing implantable biomaterials for use as surgical adhesives and sealants. The Company's patent protected BioGlue surgical adhesive, designed for cardiovascular, peripheral vascular and pulmonary applications, is a polymer based on a derivative of a blood protein and a cross linking agent. The

2

Company's patent protected FibRx(R) surgical sealant, designed for tissue hemostasis and suture line sealing, is a light activated, biodegradable surgical sealant under development which is based on a derivative of the human blood factors fibrinogen and thrombin. Both of these products may offer advantages

over sutures and staples, including more effective sealing and easier application. The Company estimates that the annual worldwide market for surgical sutures and staples in 1998 was in excess of \$2 billion. The Company received CE Mark Certification in 1998 for use of its BioGlue surgical adhesive in vascular applications and began marketing this product in April 1998 in the European Community. In 1998, the Company engaged a firm to provide financial advisory services in connection with a potential private placement of up to \$30 million in equity or equity-oriented securities to form a minority-owned subsidary company, AuraZyme Pharmaceuticals, LLC (AuraZyme), for the commercial development of its photo-activated reversible inhibitor technology (FibRx), including the FibRx adhesive. Such strategy is designed to allow the Company to continue development of this technology without incurring additional research and development expenditures, other than through Aurazyme, and allow the Company to focus its resources on the commercial development of its surgical adhesive and other products under development.

Prior to October 1, 1998 CryoLife manufactured and distributed, through its IFM subsidiary, single-use medical devices, including endarterectomy surgical instruments, intravascular shunts, infusion ports, accessories utilized in laparoscopic procedures and a wide range of single and dual lumen balloon catheters. On September 30, 1998, the Company sold substantially all of its IFM product line to Horizon Medical Products, Inc. ("Horizon") pursuant to an asset purchase agreement. As part of this agreement, the Company committed to continue manufacturing the IFM product line as an OEM manufacturer of such products for Horizon for four years. The Company is benefiting from, and intends to utilize, its design and manufacturing expertise to develop single-use medical devices for use in conjunction with its cryopreserved human tissue and biomaterial products. An example of such a device under development includes a family of balloon catheters designed to assist in applying BioGlue surgical adhesive.

In the U.S., the Company markets its cryopreservation services for human heart valves and conduits and human vascular tissue through its direct technical service representatives and relies on independent orthopaedic sales representatives to market its cryopreservation services for human connective tissue for the knee. Internationally, cryopreserved human tissues, bioprosthetic cardiovascular devices and BioGlue surgical adhesive are distributed through independent representatives located in several countries in Europe, South America and Asia. The Company plans to market and distribute its BioGlue surgical adhesive, if approved for sale in the U.S., through its direct technical service representatives.

# Growth Strategy

The Company's primary objective is to continue its consistent growth in revenues and profitability. The Company's strategy to generate continued growth is based on increasing the use of cryopreserved tissues as an alternative to mechanical and synthetic implantable products, developing new markets for existing products and technologies and developing new products and technologies for new and existing markets. The Company also selectively considers strategic acquisitions of complementary technologies and businesses to supplement its internal growth. The key elements of the Company's business and growth strategy are to:

Continue Leadership in Cryopreservation of Human Heart Valves and Conduits. The Company intends to increase the market penetration of its cryopreserved human heart valves and conduits by (i) expanding awareness of clinical advantages of cryopreserved human tissues through continuing educational efforts directed to physicians, prospective heart valve and conduit recipients and tissue procurement agencies, (ii) expanding its relationships with the more than 250 tissue banks and procurement agencies across the U.S. which direct tissue to the Company for cryopreservation and (iii) expanding its physician training activities.

3

- Expand Distribution of Cryopreserved Human Vascular Tissue and Connective Tissue for the Knee. Using the same strategy it has successfully employed to expand its distribution of cryopreserved human heart valves and conduits, the Company intends to increase its cryopreservation revenues from human vascular tissue and connective tissue for the knee through continuing educational efforts directed to

vascular and orthopaedic surgeons about the clinical advantages of cryopreserved vascular and orthopaedic tissue, expanding its relationships with tissue banks and procurement agencies and expanding its programs for training physicians in the use of tissue cryopreserved by the Company.

- Broaden Application of Cryopreservation Services. The Company will continue to collect, monitor and evaluate implant data to (i) develop expanded uses for the human tissues currently cryopreserved by the Company and (ii) identify new human tissues as candidates for cryopreservation. In 1997, the Company began providing cryopreserved human vascular tissue to be used as dialysis access replacement grafts for patients undergoing long-term dialysis, and separately, as venous valve replacements for patients suffering from diseases of the venous system. The Company has recently begun providing cryopreserved posterior tibialis and anterior tibialis tendons for use in knee repairs, and preserved human osteochondral grafts to repair articular defects. The Company is also investigating the use of cryopreserved human endothelial cells, peripheral nerves and spinal disks in various surgical applications.
- Develop and Commercialize Bioprosthetic Cardiovascular Devices. The Company intends to leverage its expertise with stentless human heart valves to expand commercialization of its stentless porcine heart valves and to use its stentless porcine heart valves as a platform for the development and commercialization of the Company's SynerGraft technology. The Company has expanded its production capacity for its bioprosthetic cardiovascular devices to address the increased demand it is currently experiencing. Separately, the Company's patent protected SynerGraft technology is being developed to expand the target market for the stentless porcine heart valves by minimizing calcification often associated with porcine tissues and thereby increasing their longevity.
- Develop and Commercialize Biomaterials for Surgical Adhesive and Sealant Applications. In the second quarter of 1998, the Company began commercializing its patent protected BioGlue surgical adhesive in the European Community through its existing independent representatives and in April 1998 received approval under an Investigational Device Exemption (IDE) to conduct clinical trials for BioGlue surgical adhesive in the U.S. The Company has formed a minority-owned subsidiary to raise equity or equity-related capital in order to continue development of its patent protected FibRx surgical sealant. In addition to the adhesive and sealant applications of these biomaterials, the Company intends to pursue, either directly or through strategic alliances, certain drug delivery applications of BioGlue surgical adhesive and FibRx surgical sealant, such as administering antibiotics, attaching chemotherapy drugs to tumors, delivering growth agents or delivering bone chips for orthopaedic bone repair.
- Leverage Existing Capability across Product Lines The Company intends to apply its expertise with stentless human heart valves to expand commercialization of its stentless porcine heart valves and to use its stentless porcine heart valves as a platform for the development and commercialization of the Company's SynerGraft technology. New complementary products under development include modified single and double lumen balloon catheters for use in delivering the Company's implantable bioadhesives.

4

Services and Products

Cryopreservation of Human Tissue for Transplant/Living Biologic Devices

The Company's proprietary and patent protected cryopreservation process involves the procurement of tissue from deceased human donors, the timely and controlled delivery of such tissue to the Company, the screening, disinfection, dissection and cryopreservation of the tissue by the Company, the storage and shipment of the cryopreserved tissue and the controlled thawing of the tissue. Thereafter, the tissue is surgically implanted into a human recipient.

The transplant of human tissue that has not been preserved must be accomplished within extremely short time limits (not to exceed eight hours for transplants of the human heart). Prior to the advent of human tissue cryopreservation, these time constraints resulted in the inability to use much of the tissue donated for transplantation. The application by the Company of its cryopreservation technologies to donated tissue expands the amount of human tissue available to physicians for transplantation. Cryopreservation also expands the treatment options available to physicians and their patients by offering alternatives to implantable mechanical, synthetic and animal-derived devices. The tissues presently cryopreserved by the Company include human heart valves and conduits, vascular tissue and connective tissue for the knee.

CryoLife maintains and collects extensive clinical data on the use and effectiveness of implanted human tissues that it has cryopreserved, and shares this data with implanting physicians. The Company also uses this data to help direct its continuing efforts to improve its cryopreservation services through ongoing research and development. Its research staff and technical representatives assist physicians by providing educational materials, seminars and clinics on methods for handling and implanting the tissue cryopreserved by the Company and the clinical advantages, indications and applications for those tissues. The Company has ongoing efforts to train and educate physicians on the indications for and uses of its cryopreserved tissues, as well as its programs whereby surgeons train other surgeons in necessary techniques. The Company also assists organ procurement agencies through training and development of protocols and provides necessary materials to improve their internal tissue processing techniques and to increase efficiency and the yield of usable tissue.

Human Heart Valves and Conduits. The Company's revenues have been primarily derived from the cryopreservation of human heart valves and conduits for use in reconstructive heart valve replacement surgery. CryoLife shipped approximately 35,000 cryopreserved human heart valves and conduits from 1984 through 1998. Based on CryoLife's records of documented implants, management believes that the Company's success in the allograft heart valve market is due in part to physicians' recognition of the longevity and natural functionality of the Company's cryopreserved human tissues as compared to mechanical and porcine heart valve alternatives in certain applications. The Company currently applies its cryopreservation services to human aortic, pulmonary and, more recently, mitral heart valves for implantation by cardiac surgeons. In addition, the Company provides cryopreserved conduit tissue, which is the only source of tissue available to surgeons who wish to perform certain specialized cardiac repair procedures. Each of these human heart valves and conduits maintains a viable tissue structure which more closely resembles and performs like the patient's own tissue than non-human tissue alternatives.

The Company estimates that the total heart valve and conduit replacement market in the U.S. in 1997 was approximately \$395 million. Management believes that approximately 95,000 heart valve and conduit surgeries were conducted in the U.S. in 1997. Of the total number of heart valve and conduit surgeries, approximately 64,000, or 67%, involved mechanical heart valves, and approximately 31,500, or 33%, involved tissue heart valves or conduits, including porcine and cryopreserved human tissues. Of these tissue heart valve or conduit replacements, management believes that approximately 6,500, or 21%, involved cryopreserved human heart valve or conduit replacements. Over 5,500 human heart valves and conduits cryopreserved by the Company were shipped for implantation in 1998.

5

Management believes cryopreserved human heart valves and conduits have characteristics that make them the preferred replacement for most patients. Specifically, human heart valves, such as those cryopreserved by the Company, allow for more normal blood flow and provide higher cardiac output than porcine and mechanical heart valves. Human heart valves are not as susceptible to progressive calcification, or hardening, as are porcine heart valves, and do not require anti-coagulation drug therapy, as do mechanical valves. The synthetic sewing rings contained in mechanical and stented porcine valves are difficult to treat with antibiotics after they have become infected, a condition which usually necessitates the surgical removal of these valves at considerable cost, morbidity and risk of mortality. Consequently, for many physicians human heart valves are the preferred alternative to mechanical and stented porcine valves

for patients who have, or are at risk to contract, endocarditis.

The following table sets forth the characteristics of alternative heart valve implants that management believes make cryopreserved human heart valves the preferred replacement for most patients:

Porcine							
	Cryopreserved Human			Mechanical	Bovine Pericardium		
		Stented	Stentless(1)				
Materials:	human tissue	Glutaraldehyde- Fixed pig tissue Synthetic sewing ring	glutaraldehyde- fixed pig tissue	pyrolitic carbon bi-leaflet and synthetic sewing ring	Glutaraldehyde- fixed cow tissue and synthetic sewing ring		
Blood Flow Dynamics:	normal	moderate elevation	nearly normal	high elevation	high elevation		
(Required Pressure) (2) Mode of Failure:	(0-5) gradual	(10-20) gradual	(5-15) expected to be gradual	(10-25) catastrophic	(10-30) gradual		
Longevity:	20 years	7-10 years	expected to exceed stented porcine valves	20 years	10-15 years		
Increased Risk of Thromboembolic Events							
(strokes or other clotting):	no	occasional	expected to be rare	yes	occasional		
Anti-Coagulation Drug Therapy Required:	none	short-term	short-term	chronic	short-term		
Responsiveness to Antibiotic Treatment of Endocarditis:	high	low	low	low	low		
Average Valve Cost in U.	s.: \$7,000	\$4,228	\$5,500	\$4,100(3)	\$4,500		

- (1) Limited long-term clinical data is available since stentless porcine heart valves only recently became commercially available.
- (2) Pressure measured in mm/Hg.
- (3) Mechanical valves also require chronic anti-coagulation drug therapy at a cost of approximately \$450 per year.

6

While the clinical benefits of cryopreserved human heart valves discussed above are relevant to all patients, they are particularly important for (i) pediatric patients (newborn to 14 years) who are prone to calcification of porcine tissue, (ii) young or otherwise active patients who face an increased risk of severe blood loss or even death due to side effects associated with the anti-coagulation drug therapy required with mechanical valves and (iii) women in their childbearing years for whom anti-coagulation drug therapy would interfere with normal pregnancy.

Human Vascular Tissues. The Company cryopreserves human saphenous and superficial femoral veins for use in vascular surgeries that require small diameter conduits (3mm to 6mm), such as coronary bypass surgery and peripheral vascular reconstructions. Failure to bypass or revascularize an obstruction in such cases may result in death or the loss of a limb. The Company believes it offers the only available small diameter conduit product for below-the-knee vascular reconstruction and shipped approximately 12,900 human vascular tissues from 1986 through 1998.

A surgeon's first choice for replacing diseased or damaged vascular tissue is generally the patient's own tissue. However, in cases of advanced vascular disease, the patient's own tissue is often unusable and the surgeon may consider using synthetic grafts or transplanted human vascular tissue. Synthetic small diameter vascular grafts are not available for below-the-knee surgeries and, in other procedures, have a tendency to shut down due to occlusion because the synthetic materials in these products attract cellular material from the blood stream which in turn closes off the vessel to normal blood flow. Cryopreserved

vascular tissues tend not to occlude as quickly because of the presence of an endothelial cell lining in the donor vein which remains intact following the cryopreservation process. The Company's cryopreserved human vascular tissues are used for coronary artery bypass surgeries, peripheral vascular reconstruction, dialysis access graft replacement and venous valve transplantation.

In 1986, the Company began a program to cryopreserve saphenous veins for use in coronary artery bypass surgeries. Although the Company's cryopreserved human tissue was used in only a small percentage of the nearly 310,000 coronary artery bypass procedures performed in 1997, the Company believes it is the only commercially available alternative to the patient's own tissue. The Company estimates that, in 1998, approximately 20,000 coronary artery bypass surgeries using the patient's own vascular tissue were performed in which human vascular tissues cryopreserved by the Company could have been used.

In 1989, the Company began a program to cryopreserve long segment saphenous veins for use in peripheral vascular reconstruction. In cases of peripheral arteriosclerosis, a cryopreserved saphenous vein can be implanted as a bypass graft for the diseased artery in order to improve blood flow and maintain a functional limb. Analysis of clinical data has shown that 80% of patients receiving CryoLife's preserved vascular tissues in this type of surgical procedure still have the use of the affected leg three years after surgery. The alternative for many of these patients was amputation. The Company estimates that, in 1998, approximately 20,000 peripheral vascular reconstruction surgeries were performed in which its cryopreserved human vascular tissues could have been used.

In 1996, the Company began a program for the cryopreservation of human superficial femoral veins for use in dialysis access graft replacement as an alternative for synthetic grafts which have a higher risk of infection than human tissue. The Company estimates that, in 1998, approximately 30,000 dialysis access graft replacements were performed in which its cryopreserved human vascular tissues could have been used.

In 1997, the Company began a program for the cryopreservation of human superficial femoral veins for venous valve transplant. The cryopreservation of these human tissues is designed for patients suffering from chronic venous insufficiency, a condition in which the blood flow returning to the heart from the legs is compromised due to absent, improperly functioning or destroyed venous valves. Prior to the introduction of CryoLife's cryopreserved venous valves, treatment for patients suffering from this ailment generally was limited to drug therapy or compression stockings. The Company estimates that, in 1998, approximately 25,000 patients with chronic venous insufficiency could have benefitted from venous valve transplant procedures using its cryopreserved human vascular tissues.

Human Connective Tissue for the Knee. The Company provides cryopreserved surgical replacements for the meniscus and the anterior and posterior cruciate ligaments, which are connective tissues critical to the proper operation of the human knee. CryoLife has shipped approximately 7,600 human connective tissues for the knee through 1998.

7

Human menisci cryopreserved by the Company provide orthopaedic surgeons with an alternative treatment in cases where a patient's meniscus has been completely removed. When a patient has a damaged meniscus, the current surgical alternatives are to repair, partially remove or completely remove the patient's meniscus, with partial removal being the most common procedure. Meniscal removal increases the risk of premature knee degeneration and arthritis and typically results in the need for knee replacement surgery at some point during the patient's life. Management believes that the Company is the only provider of cryopreserved meniscal tissue and that there are no synthetic menisci on the market. The Company estimates that in 1997 in the U.S. approximately 683,000 patients underwent partial or total meniscectomies. The Company believes up to 30% of these patients could become candidates for meniscal replacement within five years.

Tendons cryopreserved by the Company are used for the reconstruction of anterior cruciate ligaments in cases where the patient's ligaments are irreparably damaged. Surgeons have traditionally removed a portion of the patient's patellar tendon from the patient's undamaged knee for use in repairing a damaged anterior cruciate ligament. Tendons cryopreserved by the Company provide an alternative to this procedure. Because surgeries using cryopreserved tissue do not involve

the removal of any of the patient's own patellar tendon, the patient recovery period is typically shorter. The Company estimates that in 1998 approximately 165,000 cruciate ligament reconstruction surgeries were performed.

Based on its experience with human heart valves and conduits, management believes that as the body of clinical data builds regarding the use of cryopreserved human connective tissues for the knee, the use of such tissues will increase, although there can be no assurance that this will be the case.

Other Allograft Tissues Under Development. The Company has other projects for the use of cryopreserved human endothelial cells, peripheral nerves and spinal discs, in various surgical applications.

# Bioprosthetic Cardiovascular Devices

The Company is developing bioprosthetic cardiovascular devices based on its experience with cryopreserved human tissue implants. Like human heart valves, the Company's porcine heart valves are stentless with the valve opening, or annulus, retaining a more natural flexibility. Stented porcine and mechanical heart valves are typically fitted with synthetic sewing rings which are rigid and can impede normal blood flow. Unlike most other available porcine heart valves, the Company's stentless porcine heart valves do not contain synthetic materials which increase the risk of endocarditis, a debilitating and potentially deadly bacterial infection.

Fixed porcine heart valves are often preferred by surgeons for procedures involving elderly patients because they eliminate the risk of patient non-compliance with anti-coagulation drug therapy associated with mechanical valves, are less expensive than allograft valves and their shorter longevity is more appropriately matched with these patients' life expectancies. Fixed porcine heart valves address a worldwide target market estimated to have been \$175 million in 1997.

The Company's SynerGraft technology involves the removal of living cells from the structure of non-viable animal tissue and the repopulation of such tissue with human cells. This process is designed to reduce calcification of porcine heart valves, thereby increasing their longevity, and more generally to improve the biocompatibility and functionality of such tissue. The Company believes that its porcine heart valves, when treated with SynerGraft technology, will expand its opportunity to address the broader international and U.S. heart valve markets, estimated to have been \$348 million and \$395 million, respectively, in

8

The following table sets forth the bioprosthetic cardiovascular devices currently marketed by the Company, along with the product features and market status for each.

Fixed Steneless Porcine Valves	Features	Regulatory/Market Status	
CryoLife-O'Brien	aortic valve of matched composite leaflet design; single suture line	currently marketed in Europe with regulatory approval under CE Mark	
CryoLife-Ross	pulmonary valve with attached conduit	currently marketed in Europe with regulatory approval under CE Mark	

The CryoLife-O'Brien aortic valve is a stentless porcine valve with design features which management believes provide significant advantages over other stentless porcine heart valves. CryoLife began exclusive worldwide distribution of this valve in 1992 and acquired all rights to the underlying technology in 1995. The Company's CryoLife-O'Brien aortic heart valve, currently marketed in the European Community and certain other territories outside the U.S., contains a matched composite leaflet design that approximates human heart valve blood flow characteristics and requires only a single suture line thereby simplifying surgical implantation. Other stentless porcine valves require a more complicated implant procedure.

The CryoLife-Ross(TM) pulmonary valve, the patent for which the Company acquired in October 1996, is an advanced design stentless porcine heart valve within an attached conduit of porcine tissue, which mimics the structure of a human heart valve. The Company began manufacturing and distributing the Cryolife-Ross pulmonary heart valve, another of the Company's fixed stentless porcine valves, in the European Community in September 1998.

The Company plans to apply its proprietary SynerGraft technology to stentless porcine heart valves. The first of the SynerGraft technology applications involves developing depopulated stentless porcine heart valves with antigen reduction properties. This technology removes viable cells from animal tissues, thereby reducing the transplant recipient's immune response to the remaining depopulated tissues. The auto-immune response typically deposits calcium which attaches to and hardens implanted porcine heart valve tissue, a process known as calcification, which reduces the useful life of the implant. By removing viable animal cells from the tissue while maintaining the underlying structural strength of the porcine heart valve, this SynerGraft application is designed to provide a platform for a patient's own cells to naturally populate the implant.

The second of the SynerGraft technology applications involves developing stentless porcine heart valves repopulated with viable human cells prior to implantation. This technology uses porcine tissues that have been depopulated of viable animal cells.

Implantable Biomaterials for Use as Surgical Adhesives and Sealants

The effective closure of internal wounds following surgical procedures is critical to the restoration of the function of tissue and to the ultimate success of the surgical procedure. Failure to effectively seal surgical wounds can result in leakage of air in lung surgeries, cerebral spinal fluids in neurosurgeries, blood in cardiovascular surgeries and gastrointestinal contents in abdominal surgeries. Air and fluid leaks resulting from surgical procedures can lead to significant post-surgical morbidity resulting in prolonged hospitalization, higher levels of post-operative pain and a higher mortality rate.

9

Sutures and staples facilitate healing by joining wound edges and allowing the body to heal naturally. However, because sutures and staples do not have inherent sealing capabilities, they cannot consistently eliminate air and fluid leakage at the wound site. This is particularly the case when sutures and staples are used to close tissues containing air or fluids under pressure, such as the lobes of the lung, the dural membrane surrounding the brain and spinal cord, blood vessels and the gastrointestinal tract. In addition, in minimally invasive surgical procedures, where the physician must operate through small access devices, it can be difficult and time consuming for the physician to apply sutures and staples. The Company believes that the use of surgical adhesives and sealants with or without sutures and staples could enhance the efficacy of these procedures through more effective and rapid wound closure.

In order to address the inherent limitations of sutures and staples, the Company has developed and begun  $\,$  commercializing  $\,$  its BioGlue  $\,$  surgical  $\,$  adhesive and is developing its FibRx surgical sealant. The BioGlue surgical adhesive is a polymeric surgical bioadhesive based on a derivative of a blood protein and a cross-linking agent. BioGlue surgical adhesive is nonbiodegradable and has a tensile strength that is four to five times that of FibRx surgical sealant. Target clinical applications for BioGlue surgical adhesive include cardiovascular, peripheral vascular, and pulmonary repair. A derivative of the BioGlue technology is BioLastic(TM), an implantable biomaterial under development which is capable of exchanging oxygen and carbon dioxide. BioLastic is being developed for use in reinforcing or patching vascular tissue, repairing air leaks in lungs, and replacing or sealing holes in dura mater. FibRx surgical sealant is a light activated surgical sealant based on a derivative of the  $\bar{\text{human}}$ blood factors fibrinogen and thrombin. The Company believes that FibRx is the only surgical sealant under development offering ease of use to the surgeon through either single-syringe or spray applicators. The Company is currently seeking funding for FibRx and other photo-activated reversible inhibitors through AuraZyme.

The following table summarizes certain important features, targeted applications

and regulatory and market status of BioGlue surgical adhesive and FibRx surgical sealant:

	BioGlue Surgical Adhesive	FibRx Surgical Sealant
Composition:	animal albumin and glutaraldehyde	thrombin, fibrinogen and a thrombin inhibitor
Method of Application:	<pre>double syringe; mixing device provided</pre>	light activated single syringe; or light activated spray applicator
Targeted Clinical Applications:	vascular repair; anastomotic sealing; aortic dissection repair; carotid endarterectomy patching; tissue bonding; pulmonary repair	hemostasis in cardiovascular proceduresmodified tPA, drug delivery
Performance Characteristics:	high tensile strength; non-biodegradable	strength of normal human blood clot; biodegradable; flexible, easily manipulated
Regulatory/Market Status Europe:	Approved for cardiovascular, vascular and pulmonary repair applications	regulatory pathway to be determined pending AuraZymefunding
United States:	clinical trials began in second quarter of 1998	regulatory pathway to be determined pending AuraZyme funding

The Company estimates that the worldwide market for surgical sutures and staples in 1998 was in excess of \$2 billion. The Company began shipping BioGlue surgical adhesive for distribution in the European Community in the second quarter of 1998 for use in vascular applications. The regulatory pathway for FibRx surgical sealant will be determined upon the funding of Aurazyme.

10

# Single-Use Medical Devices

The Company serves as an OEM manufacturer, through its IFM subsidiary, of single-use medical devices including endarterectomy surgical instruments, intravascular shunts, infusion ports, accessories utilized in laparoscopic procedures and a wide range of single and dual lumen balloon catheters. The Company is benefiting from, and intends to utilize, its design and manufacturing expertise in developing single-use medical devices for use in conjunction with its human tissue and biomaterial products. An example of such a single-use medical device under development includes a family of balloon catheters designed to assist in applying the BioGlue surgical adhesive.

The Company plans to expand sales of the single-use medical devices which it has retained by leveraging its established cryopreservation services marketing and sales staff to market existing products and by introducing new products. New complementary products under development include modified single and double lumen balloon catheters to be used to deliver the Company's implantable bioadhesives. The Company is working to develop single-use medical devices for use with its BioGlue surgical adhesive. The Company believes that the introduction of BioGlue surgical adhesive in the European Community for vascular repair will create additional marketing opportunities for its single-use medical devices.

Sales, Distribution and Marketing

Cryopreservation Services

CryoLife markets its cryopreservation services to tissue procurement agencies,

implanting physicians and prospective tissue recipients. The Company works with tissue banks and organ procurement agencies to ensure consistent and continued availability of donated human tissue for transplant and educates physicians and prospective tissue recipients with respect to the benefits of cryopreserved human tissues.

Procurement of Tissue. Donated human tissue is procured from deceased human donors by organ procurement agencies and tissue banks. After procurement, the tissue is packed and shipped, together with certain information about the tissue and its donor, to the Company in accordance with the Company's protocols. The tissue is transported to the Company's laboratory facilities via commercial airlines pursuant to arrangements with qualified courier services. Timely receipt of procured tissue is important, as tissue that is not received promptly cannot be cryopreserved successfully. The procurement agency receives a fee for its services, which is paid by the Company. The procurement fee and related shipping costs are ultimately reimbursed to the Company by the hospital with which the implanting physician is associated. The Company has developed relationships with over 250 tissue banks and organ procurement agencies throughout the U.S. Management believes the establishment of these relationships is critical for a growing business in the cryopreservation services industry and that the breadth of these existing relationships provides the Company a significant advantage over potential new entrants to this market. As a result of its maintaining and developing these relationships, the Company has consistently increased its annual human heart valve procurement since its inception. The Company employs approximately 14 individuals in the area of tissue procurement, seven of whom are employed as procurement relations managers and are stationed throughout the country. The Company's central procurement office is staffed 24 hours per day, 365 days per year.

Preservation of Tissue. Upon receiving tissue, a Company technician completes the documentation control for the tissue prepared by the procurement agency and gives it a control/inventory number. The documentation identifies, among other things, donor age and cause of death. A trained technician then removes the portion or portions of the delivered tissue that will be cryopreserved. These procedures are conducted under aseptic conditions in clean rooms. At the same time, additional samples are taken from the donated tissue and subjected to the Company's comprehensive quality assurance program. This program may identify characteristics which would disqualify the tissue for cryopreservation.

Human heart valves and conduits, vascular tissue and connective tissue for the knee are cryopreserved in a proprietary freezing process conducted according to strict Company protocols. After the cryopreservation process, the specimens are transferred to liquid nitrogen freezers for long-term storage at temperatures below -135(Degree)C. The entire cryopreservation process is rigidly controlled by guidelines established by the Company.

11

Distribution of Tissue to Implanting Physicians. After cryopreservation, tissue is stored by the Company or is delivered directly to hospitals at the implanting physician's request. Cryopreserved tissue must be transported under stringent handling conditions and maintained within specific temperature tolerances at all times. Cryopreserved tissue is packaged for shipment using the Company's proprietary processes. At the hospital, the tissue is held in a liquid nitrogen freezer according to Company protocols pending implantation. The Company provides a detailed protocol for thawing the cryopreserved tissue. The Company also makes its technical personnel available by phone or in person to answer questions. After the Company transports the tissue to the hospital, the Company invoices the institution for its services, the procurement fee and transportation costs.

The Company encourages hospitals to accept the cryopreserved tissue quickly by providing Company-owned liquid nitrogen freezers to client hospitals without charge. The Company has currently installed more than 300 of these freezers. Participating hospitals pay the cost of liquid nitrogen and regular maintenance. The availability of on-site freezers makes it easier for a hospital's physicians to utilize the Company's cryopreservation services by making the cryopreserved tissue more readily available. Because fees for the Company's cryopreservation services become due upon the delivery of tissue to the hospital, the use of such on-site freezers also reduces the Company's working capital needs.

Marketing, Educational and Technical Support. The Company maintains active relationships with approximately 2,000 cardiovascular, vascular and orthopaedic

surgeons who have active practices implanting cryopreserved human tissues and markets to a broader group of physicians within these medical specialties. Because the Company markets its cryopreservation services directly to physicians, an important aspect of increasing the distribution of the Company's cryopreservation services is educating physicians on the use of cryopreserved human tissue and on proper implantation techniques. Trained field support personnel provide back-up and support to implanting institutions and surgeons. The Company currently has over 100 independent technical service representatives and sub-representatives (who deal primarily with orthopaedic surgeons and who are paid on a commission basis) as well as 40 persons employed as technical service representatives (who deal primarily with cardiovascular and vascular surgeons and receive a base salary with a performance bonus) all of whom provide field support.

The Company sponsors physician training seminars where physicians teach other physicians the proper technique for handling and implanting cryopreserved human tissue Physicians pay their own expenses to attend these seminars in addition to paying the Company a fee for attendance. The Company also produces educational videotapes for physicians. The Company coordinates live surgery demonstrations at various medical schools. The Company also coordinates laboratory sessions that utilize animal tissue to demonstrate the respective surgical techniques. Members of the Company's Medical Advisory Board often lead the surgery demonstrations and laboratory sessions. Management believes that these activities improve the medical community's acceptance of the cryopreserved human tissue processed by the Company.

In order to increase the Company's supply of human tissue for cryopreservation, the Company educates and trains procurement agency personnel in procurement, dissection, packaging and shipping techniques. The Company also produces educational videotapes and coordinates laboratory sessions on procurement techniques for procurement agency personnel. To supplement its educational activities, the Company employs in-house technical specialists that provide technical information and assistance and maintains a staff 24 hours per day, 365 days per year for customer support.

12

# Bioprosthetic Cardiovascular Devices

The Company markets the CryoLife-O'Brien and CryoLife-Ross stentless porcine heart valves in the European Community and Australia. The Company's European sales, distribution and marketing force consists of 15 independent representatives, representing each of the Benelux countries, France, Germany, Greece, Denmark, Norway, Finland, Sweden, Italy, Turkey and the United Kingdom. Marketing efforts are directed almost exclusively toward cardiovascular and vascular surgeons, and the Company conducts educational seminars and conferences to train these surgeons and educate them with respect to the uses and benefits of its porcine stentless heart valves.

# BioGlue Surgical Adhesive

The Company markets and distributes its BioGlue surgical adhesive internationally, excluding Japan, through its existing independent representatives, and if approved for sale in the U.S., will market it through its direct technical service representatives. During 1998, the Company signed a five-year exclusive agreement with Century Medical, Inc. for the introduction and distribution of BioGlue in Japan. Under the terms of the agreement, Century Medical will be responsible for the applications and clearances through the Japanese Ministry of Health and Welfare. Marketing efforts are directed almost exclusively toward cardiovascular, vascular and thoracic surgeons, and the Company conducts training sessions for European doctors with respect to the application and administration of BioGlue surgical adhesive.

# Single-Use Medical Devices

The Company serves as an OEM manufacturer for single-use medical devices for Horizon Medical Products, Inc. The Company plans to expand sales of its single-use medical devices by continuing new product development and leveraging its established cryopreservation services and product marketing and sales staff

### Research and Development

The Company uses its expertise in biochemistry and cell biology, and its understanding of the needs of the cardiovascular, vascular and orthopaedic surgery medical specialties, to continue to expand its core cryopreservation business in the U.S. and to develop or acquire implantable products and technologies for these fields. The Company seeks to identify market areas that can benefit from preserved living tissues and other related technologies, to develop innovative techniques and products within these areas, to secure their commercial protection, to establish their efficacy and then to market these techniques and products. The Company employs approximately 26 people in its research and development department. There are 10 PhDs with specialties as diverse as immunology, molecular biology, protein chemistry, organic chemistry and vascular biology.

In order to expand the Company's service and product offerings, the Company is currently in the process of developing or investigating several technologies and products, including FibRx surgical sealant, SynerGraft and additional applications of BioGlue surgical adhesive. The Company is currently investigating certain drug delivery applications for BioGlue surgical adhesive and FibRx surgical sealant, such as administering antibiotics, attaching chemotherapy drugs to tumors, delivering growth agents or delivering bone chips for orthopaedic bone repair. To the extent the Company identifies additional applications for these products, the Company may attempt to license these products to corporate partners for further development of such applications or seek funding from outside sources to continue the commercial develoment of such technologies. The Company's research and development strategy is to allocate available resources among the Company's four core market areas of cryopreservation services, bioprosthetic cardiovascular devices, implantable biomaterials and single-use medical devices, based on the size of the potential market for any specific product candidate and the estimated development time and cost required to bring the product to market.

13

Research on these and other projects is conducted in the Company's research and development laboratory or at universities or clinics where the Company sponsors research projects. In 1996, 1997 and 1998, the Company spent approximately \$2.8 million, \$3.9 million and \$4.7 million, respectively, on research and development activities on new and existing products. These amounts represented approximately 8% of the Company's revenues for those respective years. The Company's research and development program is overseen by its medical and scientific advisory boards. The Company's pre-clinical studies are conducted at universities and other locations outside the Company's facilities by third parties under contract with the Company. In addition to these efforts, the Company may, as situations develop, pursue other research and development activities.

# Manufacturing and Operations

The Company's facilities (other than its single-use medical device manufacturing plant) are located in suburban Atlanta, Georgia, and consist of three separate locations totaling approximately 130,000 square feet of leased office, laboratory and warehouse space. Approximately 17,500 square feet are dedicated to laboratory work areas. The primary facility, which does not include the FibRx laboratory and the bioprosthetic manufacturing operation, has four main laboratory facilities: human tissue processing BioGlue manufacturing, research and development and microbiology. Each of these areas consists of a general technician work area and adjoining "clean rooms" for work with human tissue or Bioglue manufacturing, and for aseptic processing. The clean rooms are supplied with highly filtered air which provides a near-sterile environment.

# Human Tissue Processing

The human tissue processing laboratory is responsible for the processing and cryopreservation of human tissue for transplant. This includes all processing of heart valves and conduits, vascular tissue and connective tissue for the knee supplied by CryoLife. This laboratory contains approximately 7,700 square feet with a suite of seven clean rooms. Currently there are 43 technicians employed

in this area, and the laboratory is staffed for two shifts, 365 days per year. In 1998, the laboratory processed approximately 21,000 human tissues for distribution and transplant. The current staffing level is estimated to be at about half of total capacity. Increasing this capacity could be accomplished by increasing employees and expanding to three shifts.

# Bioprosthetic Cardiovascular Devices

The bioprosthesis laboratory is responsible for the manufacturing of the CryoLife-O'Brien and CryoLife-Ross stentless porcine heart valves. This laboratory is located in Marietta, Georgia and contains approximately 13,000 square feet, with about 3,500 square feet of laboratory space and a suite of four clean rooms for tissue processing. Currently, this laboratory employs 21 technicians and is scheduled to manufacture approximately 2,000 CryoLife-O'Brien and CryoLife-Ross valves in 1999. The recently renovated facility's capacity is over 6,000 valves.

### Implantable Biomedical Devices

The Company produces limited quantities of FibRx surgical sealant in the biomedical products laboratory, which is located in Marietta, Georgia and employs 4 technicians. This laboratory contains approximately 11,000 square feet, including 4,000 square feet of laboratory space and a suite of eight clean rooms. BioGlue surgical adhesive is presently manufactured at the Company's headquarters facility, which has an annual capacity of approximately 300,000 units. This laboratory contains approximately 12,900 square feet, including a suite of 2 cleanrooms.

14

#### Single-Use Medical Devices

The manufacturing of single-use medical devices is conducted at the Company's IFM subsidiary located in St. Petersburg, Florida. IFM was purchased by CryoLife in 1997 and has recently moved to a renovated 30,000 square foot facility. The Company has approximately 130 employees at this facility. In the new facility, a single shift can produce approximately 300,000 units annually with full capacity expected to be nearly 800,000 units annually.

# Quality Assurance

The Company's operations encompass the provision of cryopreservation services and the manufacturing of bioprosthetics, bioadhesives and single-use medical devices. In all of its facilities, the Company is subject to regulatory standards for good manufacturing practices, including current Quality System Regulations, which are U.S. Food and Drug Administration ("FDA") regulatory requirements for medical device manufacturers. The FDA periodically inspects Company facilities to ensure Company compliance with these regulations. The Company also operates according to ISO 9001 Quality System Requirements, an internationally recognized voluntary system of quality management for companies that design, develop, manufacture, distribute and service products. The Company maintains a Certification of Approval to the ISO 9001, as well as EN46001 and ANSI/ISO/ASQC/Q9001, the European and U.S. versions of the international standard, respectively. This approval is issued by Lloyd's Register Quality Assurance Limited ("LRQA"). LRQA is a Notified Body officially recognized by the European Community to perform assessments of compliance with ISO 9001 and its derivative standards. LRQA performs semi-annual on-site inspections of the Company's quality systems.

The Company's quality assurance staff is comprised primarily of experienced professionals from the medical device and pharmaceutical manufacturing industries. The quality assurance department, in conjunction with the Company's research and development and select university research staffs, routinely evaluates the Company's processes and procedures.

# Cryopreservation Services

The Company employs a comprehensive quality assurance program in all of its tissue processing activities. The Company is subject to Quality System Regulations, additional FDA regulations and ISO 9001. The Company's quality assurance program begins with the development and implementation of training courses for the employees of procurement agencies. To assure uniformity of procurement practices among the tissue recovery teams, the Company provides procurement protocols, transport packages and tissue transport liquids to the donor sites.

Upon receipt by the Company, each tissue is assigned a unique control number that provides traceability of tissue from procurement through the processing and preservation processes, and ultimately to the tissue recipient. Blood samples from each tissue donor are subjected to a variety of tests to screen for infectious diseases. Samples of certain tissues are also sent to independent laboratories for pathology testing. Following removal of the tissue to be cryopreserved, a separate disinfection procedure is begun during which the removed tissue is treated with proprietary antibiotic solutions. A trained technician then removes samples from the disinfected tissue upon which serial cultures are performed to identify bacterial or fungal growth.

The materials and solutions used by the Company in processing tissue are pre-screened to determine if they are of desired quality as defined by Company protocols. Only materials and solutions that meet the Company's requirements are approved by quality assurance personnel for use in processing. Throughout tissue processing, detailed records are maintained and reviewed by quality assurance personnel.

15

The Company's tissue processing facilities are annually licensed by the States of Georgia, New York, Florida and California as facilities that process, store and distribute human tissue for implantation. The regulatory bodies of these states perform appropriate inspections of the facilities to ensure compliance with state law and regulations. In addition, the Company's human heart valve operations are additionally regulated by the FDA and periodically inspected for compliance to Quality System Regulations. Other human tissue processed by the Company is periodically inspected for compliance with the Code of Federal Regulation ("CFR") Part 1270. CFR 1270 is a FDA regulation which sets forth the requirements with which the Company must comply in determining the suitability of human tissue for implantation.

Bioprosthetic, Bioadhesive and Single-Use Medical Device Manufacturing

The Company employs a comprehensive quality assurance program in all of its manufacturing activities. The Company is subject to Quality System Regulations, additional FDA regulations and ISO 9001.

All materials and components utilized in the production of the Company's products are received and thoroughly inspected by trained quality control personnel, according to written specifications and standard operating procedures. Only materials and components found to comply with Company procedures are accepted by quality control and utilized in production.

All materials, components and resulting sub-assemblies are traced throughout the manufacturing process to assure that appropriate corrective actions can be implemented if necessary. Each process is documented along with all inspection results, including final finished product inspection and acceptance. Records are maintained as to the consignee of product to facilitate product removals or corrections, if necessary. All processes in manufacturing are validated by quality engineers to assure that they are capable of consistently producing product meeting specifications. The Company maintains a rigorous quality assurance program of measuring devices used for manufacturing and inspection to ensure appropriate accuracy and precision.

Each manufacturing facility is subject to periodic inspection by the FDA and LRQA to independently assure the Company's compliance with its systems and regulatory requirements.

Patents, Licenses and Other Proprietary Rights

The Company relies on a combination of patents, trade secrets, trademarks and confidentiality agreements to protect its proprietary products, processing technology, rights and know-how. The Company believes that its patents, trade secrets, trademarks and technology licensing rights provide it with important competitive advantages. The Company owns or has licensed rights to 19 U.S. patents and nine foreign patents, including patents relating to its technology for human heart valve and conduit, vascular tissue and connective tissue for the knee preservation; tissue revitalization prior to freezing; tissue transport; fibrin adhesive; organ storage solution; and packaging. Certain of the above patents relate to the Company's BioGlue surgical adhesive and FibRx surgical sealant. The Company has eight pending U.S. patent applications and in excess of 14 pending foreign applications that relate to areas including heart valve and tissue processing technology and delivery of bioadhesives for anastomosis and other uses. In connection with the sale of the IFM product line to Horizon, the Company sold all patents related to such product line. There can be no assurance that any patents pending will result in issued patents. The Company also has exclusive licensing rights for technology relating to light-sensitive enzyme inhibitors. The remaining duration of the Company's issued patents ranges from 3 to 17 years. The Company has licensed from third parties certain technologies used in the development of its FibRx surgical sealant and SynerGraft technology. These licenses call for the payment of both development milestones and royalties based on product sales, when and if such products are approved for marketing. The loss of these licenses could adversely affect the Company's ability to successfully develop its FibRx surgical sealant and SynerGraft technologies.

16

There can be no assurance that the claims allowed in any of the Company's existing or future patents will provide competitive advantages for the Company's products, processes and technologies or will not be successfully challenged or circumvented by competitors. To the extent that any of the Company's products are not patent protected, the Company's business, financial condition and results of operations could be materially adversely affected. Under current law, patent applications in the U.S. are maintained in secrecy until patents are issued and patent applications in foreign countries are maintained in secrecy for a period after filing. The right to a patent in the U.S. is attributable to the first to invent, not the first to file a patent application. The Company cannot be sure that its products or technologies do not infringe patents that may be granted in the future pursuant to pending patent applications or that its products do not infringe any patents or proprietary rights of third parties. The Company may incur substantial legal fees in defending against a patent infringement claim or in asserting claims against third parties. In the event that any relevant claims of third-party patents are upheld as valid and enforceable, the Company could be prevented from selling certain of its products or could be required to obtain licenses from the owners of such patents or be required to redesign its products to avoid infringement. There can be no assurance that such licenses would be available or, if available, would be on terms acceptable to the Company or that the Company would be successful in any attempt to redesign its products or processes to avoid infringement. The Company's failure to obtain these licenses or to redesign its products could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company has entered into confidentiality agreements with all of its employees and several of its consultants and third-party vendors to maintain the confidentiality of trade secrets and proprietary information. There can be no assurance that the obligations of employees of the Company and third parties with whom the Company has entered into confidentiality agreements will effectively prevent disclosure of the Company's confidential information or provide meaningful protection for the Company's confidential information if there is unauthorized use or disclosure, or that the Company's trade secrets or proprietary information will not be independently developed by the Company's competitors. Litigation may be necessary to defend against claims of infringement, to enforce patents and trademarks of the Company, or to protect trade secrets and could result in substantial cost to, and diversion of effort by, the Company. There can be no assurance that the Company would prevail in any such litigation. In addition, the laws of some foreign countries do not protect the Company's proprietary rights to the same extent as do the laws of the U.S.

 ${\tt Competition}$ 

The Company faces competition from non-profit tissue banks that cryopreserve and distribute human tissue, as well as from companies that market mechanical, porcine and bovine heart valves for implantation. Many established companies, some with resources greater than those of the Company, are engaged in manufacturing, marketing and selling alternatives to cryopreserved human tissue. Management believes that it competes favorably with other entities that cryopreserve human tissue on the basis of technology, customer service and quality assurance. As compared to mechanical, porcine and bovine heart valves, management believes that the human heart valves cryopreserved by the Company compete on the factors set forth above, as well as by providing a tissue that is the preferred replacement alternative with respect to certain medical conditions, such as pediatric cardiac reconstruction, valve replacements for women in their child-bearing years and valve replacements for patients with endocarditis. Although human tissue cryopreserved by the Company is initially higher priced than are mechanical alternatives, these alternatives typically require that the patient take anti-coagulation drug therapy for the lifetime of the implant. As a result of the costs associated with anti-coagulants, mechanical valves are generally, over the life of the implant, more expensive than tissue cryopreserved by the Company. Notwithstanding the foregoing, management believes that, to date, price has not been a significant competitive factor.

Generally, for each procedure that may utilize other human tissue that the Company cryopreserves, there are alternative treatments. Often, as in the case of veins and ligaments, these alternatives include the repair, partial removal

17

or complete removal of the damaged tissue and may utilize other tissues from the patients themselves or synthetic products. The selection of treatment choices is made by the attending physician in consultation with the patient. Any newly developed treatments will also compete with the use of tissue cryopreserved by the Company.

Human and Stentless Porcine Heart Valves. Alternatives to human heart valves cryopreserved by the Company include mechanical valves, porcine valves and valves constructed from bovine pericardium. St. Jude Medical, Inc. is the leading supplier of mechanical heart valves, and has a marketing and distribution arrangement with a tissue bank for supplies of cryopreserved human heart valves and Baxter International Inc. is the leading supplier of porcine heart valves. In addition, management believes that at least three tissue banks offer cryopreservation services for human heart valves in competition with the Company. The Company presently distributes its stentless porcine heart valves only outside the U.S. These stentless porcine heart valves compete with mechanical valves, human heart valves and processed bovine pericardium. The Company is aware of at least two other companies that offer stentless porcine heart valves.

Human Vascular Tissue. Synthetic alternatives to veins cryopreserved by the Company are available primarily in medium and large diameters. Currently, management believes that there are no other providers of cryopreserved human vascular tissue in competition with the Company. Companies offering either synthetic or allograft products may enter this market in the future.

Human Connective Tissue for the Knee. The Company's competition in the area of connective tissue for the knee varies according to the tissue involved. When transplant is indicated, the principal competition for human tissues cryopreserved by the Company are freeze-dried and fresh frozen human connective tissues. These alternative allografts are distributed by distributors of Osteotech, Inc. and various tissue banks, among others. Ligaments and tendons cryopreserved by the Company constitute the principal treatment options for injuries which require anterior cruciate ligament repair. To management's knowledge, there are presently no processed or synthetic alternatives to menisci cryopreserved by the Company or preserved osteochondral grafts..

# Implantable Biomedical Devices

The Company competes with many domestic and foreign medical device, pharmaceutical and biopharmaceutical companies. In the surgical adhesive and surgical sealant area, the Company will compete with existing methodologies, including traditional wound closure products such as sutures and staples,

marketed by companies such as Johnson & Johnson, United States Surgical Corporation, Sherwood, Davis & Geck and others. Other products currently being marketed include fibrin glue sold by Immuno AG, a subsidiary of Baxter Healthcare Company, Chemo-Sero Therapeutic Research Institute, Hoechst AG and others, and management believes other products are under development by Baxter Healthcare Corporation, Bristol-Myers Squibb Company, V.I. Technologies, Inc. and others. Other competitors in the surgical sealant market include Closure Medical Corporation, B. Braun GmbH and Focal, Inc. Competitive products may also be under development by other large medical device, pharmaceutical and biopharmaceutical companies. Many of the Company's current and potential competitors have substantially greater financial, technological, research and development, regulatory and clinical, manufacturing, marketing and sales, and personnel resources than the Company.

These competitors may also have greater experience in developing products, conducting clinical trials, obtaining regulatory approvals, and manufacturing and marketing such products. Certain of these competitors may obtain patent protection, approval or clearance by the FDA or foreign countries or product commercialization earlier than the Company, any of which could materially adversely affect the Company. Furthermore, if the Company commences significant commercial sales of its products, it will also be competing with respect to manufacturing efficiency and marketing capabilities, areas in which it currently has limited experience.

Other recently developed technologies or procedures are, or may in the future be, the basis of competitive products. There can be no assurance that the Company's current competitors or other parties will not succeed in developing

18

alternative technologies and products that are more effective, easier to use or more economical than those which have or are being developed by the Company or that would render the Company's technology and products obsolete and non-competitive in these fields. In such event, the Company's business, financial condition and results of operations could be materially adversely affected. See "Risk Factors--Rapid Technological Change."

Government Regulation

# U.S. Federal Regulation

Because human heart valves are, and other Company products may be regulated in the future as, medical devices, the Company and these products are subject to the provisions of the Federal Food, Drug and Cosmetic Act ("FDCA") and implementing regulations. Pursuant to the FDCA, the FDA regulates the manufacture, distribution, labeling and promotion of medical devices in the U.S. In addition, various foreign countries in which the Company's products are or may be distributed impose additional regulatory requirements.

The FDCA provides that, unless exempted by regulation, medical devices may not be distributed in the U.S. unless they have been approved or cleared for marketing by the FDA. There are two review procedures by which medical devices can receive such approval or clearance. Some products may qualify for clearance to be marketed under a Section  $510\,(k)$  (" $510\,(k)$ ") procedure, in which the manufacturer provides a premarket notification that it intends to begin marketing the product, and shows that the product is substantially equivalent to another legally marketed product (i.e., that it has the same intended use and that it is as safe and effective as a legally marketed device and does not raise different questions of safety and effectiveness than does a legally marketed device). In some cases, the submission must include data from clinical studies. Marketing may commence when the FDA issues a clearance letter finding such substantial equivalence.

If the product does not qualify for the 510(k) procedure (either because it is not substantially equivalent to a legally marketed device or because it is a Class III device required by the FDCA and implementing regulations to have an approved application for premarket approval ("PMA"), the FDA must approve a PMA application before marketing can begin. PMA applications must demonstrate, among other matters, that the medical device is safe and effective. A PMA application is typically a complex submission, usually including the results of human clinical studies, and preparing an application is a detailed and time-consuming process. Once a PMA application has been submitted, the FDA's review may be

lengthy and may include requests for additional data. By statute and regulation, the FDA may take 180 days to review a PMA application although such time may be extended. Furthermore, there can be no assurance that a PMA application will be reviewed within 180 days or that a PMA application will be approved by the FDA.

The FDCA also provides for an investigational device exemption ("IDE") which authorizes distribution for clinical evaluation of devices that lack a PMA or  $510\,(k)$ . Devices subject to an IDE are subject to various restrictions imposed by the FDA. The number of patients that may be treated with the device is limited, as are the number of institutions at which the device may be used. Patients must give informed consent to be treated with an investigational device. The device must be labeled that it is for investigational use and may not be advertised, or otherwise promoted, and the price charged for the device may be limited. Unexpected adverse experiences must be reported to the FDA.

The FDCA requires all medical device manufacturers and distributors to register with the FDA annually and to provide the FDA with a list of those medical devices which they distribute commercially. The FDCA also requires manufacturers of medical devices to comply with labeling requirements and to manufacture devices in accordance with Quality System Regulations, which require that companies manufacture their products and maintain their documents in a prescribed manner with respect to good manufacturing practices, design, document production, process, labeling and packaging controls, process validation and other quality control activities. The FDA's medical device reporting regulation requires that a device manufacturer provide information to the FDA on death or serious injuries alleged to have been associated with the use of its products, as well as product malfunctions that would likely cause or contribute to death or serious injury if the malfunction were to recur. The FDA's medical device tracking regulation requires the adoption of a method of device tracking by

19

manufacturers of life-sustaining or implantable products, the failure of which would be reasonably likely to have serious adverse health consequences. The manufacturer must adopt methods to ensure that such devices can be traced from the manufacturing facility to the ultimate user, the patient. The FDA further requires that certain medical devices not cleared for marketing in the U.S. follow certain procedures before they are exported.

The FDA inspects medical device manufacturers and distributors and has authority to seize noncomplying medical devices, to enjoin and/or to impose civil penalties on manufacturers and distributors marketing non-complying medical devices, to criminally prosecute violators and to order recalls in certain instances.

Human Heart Valves. The Company's human heart valves became subject to regulation by the FDA in June 1991, when the FDA published a notice stating that human heart valves are Class III medical devices under the FDCA. The June 1991 notice provided that distribution of human heart valves for transplantation would violate the FDCA unless they were the subject of an approved PMA or IDE on or before August 26, 1991.

On October 14, 1994, the FDA announced in the Federal Register that neither an approved application for PMA nor an IDE is required for processors and distributors who had marketed heart valve allografts before June 26, 1991. This action by the FDA has resulted in the allograft heart valves being classified as Class II Medical Devices and has removed them from clinical trial status. It also allows the Company to distribute such valves to cardiovascular surgeons throughout the U.S.

Other Tissue. Other than human and porcine heart valves, none of the Company's other tissue services or products are currently subject to regulation as medical devices under the FDCA or FDA regulation. Heart valves are one of a small number of processed human tissues over which the FDA has asserted medical device jurisdiction. In July 1997, the FDA published a final rule, which became effective in January 1998, regulating "human tissue." The rule clarifies and modifies an earlier interim rule and defines human tissue as any tissue derived from a human body which is (i) intended for administration to another human for the diagnosis, cure, mitigation, treatment or prevention of any condition or disease and (ii) recovered, processed, stored or distributed by methods not intended to change tissue function or characteristics. The FDA definition excludes, among other things, tissue that currently is regulated as a human drug, biological product or medical device and excludes kidney, liver, heart,

lung, pancreas or any other vascularized human organ. Human tissue is regulated by the FDA in a manner the agency has deemed necessary to protect the public health from the transmission of HIV infection and hepatitis infection through transplantation of tissue from donors with or at risk for these diseases. Unlike certain drugs, biologicals and medical devices, human tissue is not subject to premarket notification or approval by the FDA. It is likely, moreover, that the FDA will expand its regulation of processed human tissue in the future. For example, the FDA may determine that the veins and connective tissue that are currently processed by the Company are medical devices, or the FDA may determine to regulate human heart valves as "human tissue" rather than medical devices, but the FDA has not done so at this time. Complying with FDA regulatory requirements or obtaining required FDA approvals or clearances may entail significant time delays and expenses or may not be possible, any of which may have a material adverse effect on the Company. In addition, the U.S. Congress is expected to consider legislation that would regulate human tissue for transplant or the FDA could impose a separate regulatory scheme for human tissue. Such legislation or regulation could have a material adverse effect on the Company.

Porcine Heart Valves. Porcine heart valves are Class III medical devices, and FDA approval of a PMA is required prior to commercial distribution of such valves in the U.S. The porcine heart valves currently marketed by the Company have not been approved by the FDA for commercial distribution in the U.S. but may be manufactured in the U.S. and exported to foreign countries if the valves meet the specifications of the foreign purchaser, do not conflict with the laws of and are approved by the country to which they will be exported and the FDA determines that their exportation is not contrary to the public health and safety.

Single-Use Medical Devices. The products manufactured by the Company through IFM are regulated as Class I and Class II medical devices by the FDA. These products require clearance under a  $510\,(k)$  procedure. All products currently marketed by IFM have received a  $510\,(k)$  clearance from the FDA. In addition, the IFM facilities are subject to periodic review by the FDA, as are the Company's records on returned products and reported problems.

20

BioGlue Surgical Adhesive. BioGlue surgical adhesive is regulated as a Class III medical device by the FDA. The Company is currently conducting clinical trials for BioGlue surgical adhesive. There can be no assurance that BioGlue will receive FDA approval.

The Company intends to submit an application for a Humanitarian Device Exemption (HDE) in May 1999 for BioGlue surgical adhesive for use in repair of aortic dissections. If successful, the Company would be able to commercially distribute BioGlue in the US for this indication and would likely discontinue clinical trials of BioGlue under its current IDE. Additionally, the Company intends to submit a 510(k) Premarket Notification during the second quarter of 1999 for BioLastic Patch (BioLastic) for sealing air leaks in lungs. If successful, the Company would be able to commercially distribute BioLastic for this indication in the US. However, there can be no assurance that the Company will be successful in gaining approval for either the HDE or clearance for the 510(k).

Possible Other FDA Regulation. Other products and processes under development by the Company are likely to be subject to regulation by the FDA (e.g., SynerGraft and FibRx surgical sealant). Some may be classified as medical devices; others may be classified as drugs or biological products or subject to a regulatory scheme for human tissue that the FDA may adopt in the future. Regulation of drugs and biological products is substantially similar to regulation of medical devices. Obtaining FDA approval to market these products is likely to be a time consuming and expensive process, and there can be no assurance that any of these products will ever receive FDA approval, if required, to be marketed.

NOTA Regulation. The Company's activities in processing and transporting human hearts and certain other organs are also subject to federal regulation under the National Organ Transplant Act ("NOTA"), which makes it unlawful for any person to knowingly acquire, receive or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce. NOTA excludes from the definition of "valuable consideration" reasonable payments associated with the removal, transportation, implantation, processing, preservation, quality control and storage of a human organ. The purpose of this statutory provision is to allow for compensation for legitimate services. The Company believes that to the extent its activities are

subject to NOTA, it meets this statutory provision relating to the reasonableness of its charges. There can be no assurance, however, that restrictive interpretations of NOTA will not be adopted in the future that would call into question one or more aspects of the Company's methods of charging for its preservation services.

#### State Licensing Requirements

Some states have enacted statutes and regulations governing the processing, transportation and storage of human organs and tissue. The activities engaged in by the Company require it to be licensed as a clinical laboratory and tissue bank under Georgia, New York, California and Florida law. The Company has such licenses, and the Company believes it is in compliance with applicable state laws and regulations relating to clinical laboratories and tissue banks which store, process and distribute human tissue designed to be used for medical purposes in human beings. There can be no assurance, however, that more restrictive state laws or regulations will not be adopted in the future that could adversely affect the Company's operations. Certain employees of the Company have obtained other required licenses.

# Foreign Approval Requirements

Sales of medical devices and biological products outside the U.S. are subject to foreign regulatory requirements that vary widely from country to country. Approval of a product by comparable regulatory authorities of foreign countries must be obtained prior to commercialization of the product in those countries. The time required to obtain foreign approvals may be longer or shorter than that required for FDA approval. The European Community recognizes a single approval, called a CE Mark, which allows for distribution of an approved product throughout the European Community (15 countries) without additional applications to each country. The CE Mark is awarded by third parties called Notified Bodies.

21

These Notified Bodies are approved and subject to review by the Competent Authorities of their respective countries. A number of countries outside of the European Community accept the CE Mark in lieu of clinical data submission as an addendum to that country's application process. The Company has been issued CE Marks for its CyroLife-O'Brien and CryoLife-Ross porcine heart valves, BioGlue surgical adhesive and IFM single-use medical devices that it has retained by LRQA. The Company's porcine heart valves may be exported to specified developed nations, including countries in the European Community, Australia, Canada, Israel, Japan, New Zealand, South Africa and Switzerland if they comply with the laws of that country and have valid marketing authorization by the appropriate authority in that country. Beginning in July 1998, CE Mark Certification is required to market porcine heart valves and other bioprosthetics in the European Community.

# Environmental Matters

The Company's tissue processing activities generate some biomedical wastes consisting primarily of human pathological and biological wastes, including human tissue and body fluids removed during laboratory procedures. The biomedical wastes generated by the Company are placed in appropriately constructed and labeled containers and are segregated from other wastes generated by the Company. The Company contracts with third parties for transport, treatment and disposal of biomedical waste. Although the Company believes it is in compliance with applicable laws and regulations promulgated by the U.S. Environmental Protection Agency and the Georgia Department of Natural Resources, Environmental Protection Division, the failure by the Company to comply fully with any such regulations could result in an imposition of penalties, fines or sanctions, which could have a material adverse effect on the Company's business.

# Employees

The Company presently has approximately 400 employees. These employees include 13 persons with PhD degrees. None of the Company's employees is represented by a labor organization or covered by a collective bargaining agreement, and the Company has never experienced a work stoppage or interruption due to labor

#### RISK FACTORS

Dependence on Cryopreservation of Human Tissue

A significant portion of the Company's current revenues is derived from the cryopreservation of human tissue, particularly heart valves and conduits. The success of this business depends upon, among other factors, the availability of sufficient quantities of tissue from human donors. Any material reduction in the supply of donated human heart tissue could restrict the Company's growth. The Company relies primarily upon the efforts of third party procurement agencies (all of which are  $\mbox{not-for-profit}$ ) and others to educate the public and foster a willingness to donate tissue. Based on the Company's experience with human heart valves, management believes that once the use by physicians of a particular transplantable tissue gains acceptance, demand for that tissue will exceed the amount of tissue available from human donors. [While availability is not currently a limiting factor for most vascular tissue and connective tissue for the knee, growth in these areas could ultimately be limited by tissue availability, in addition to other factors.] Failure of the Company to maintain its supply of tissue for cryopreservation could have a material adverse effect on the Company's business, financial condition and results of operations. Furthermore, a reduction in the demand for the Company's cryopreserved human tissue could also have a material adverse effect on the Company's business, financial condition and results of operations. Such reduction could occur if competitors' products were perceived as either functionally superior or more cost effective, if the number of procedures in which cryopreserved tissues are used declines or if hospitals acquire sufficient inventories of cryopreserved tissue to allow a reduction in new orders. See "--Intense Competition" and "--Uncertainties Regarding Future Health Care Reimbursement."

22

#### Intense Competition

The Company faces competition from other companies that cryopreserve human tissue, as well as companies that market mechanical valves and synthetic and animal tissue for implantation. Management believes that at least three tissue banks offer cryopreservation services for human heart valves and many companies offer processed porcine heart valves and mechanical heart valves. A few companies dominate portions of the mechanical and porcine heart valve markets, including St. Jude Medical, Inc., Medtronic, Inc. and Baxter International Inc. The Company is aware that several companies have surgical adhesive products under development. Competitive products may also be under development by other large medical device, pharmaceutical and biopharmaceutical companies. Many of the Company's competitors have greater financial, technical, manufacturing and marketing resources than the Company and are well established in their markets. There can be no assurance that the Company's products and services will be able to compete successfully with the products of these or other companies. Any products developed by the Company that gain regulatory clearance or approval will have to compete for market acceptance and market share. Failure of the Company to compete effectively could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Competition."

# Rapid Technological Change

The technologies underlying the Company's products and services are subject to rapid and profound technological change. The Company expects competition to intensify as technical advances in each field are made and become more widely known. There can be no assurance that others will not develop products or processes with significant advantages over the products and processes that the Company offers or is seeking to develop. Any such occurrence could have a material adverse effect on the Company's business, financial condition and results of operations.

# Uncertainties Regarding Products in Development

The Company's growth and profitability will depend, in part, upon its ability to complete development of and successfully introduce new products. The Company may

be required to undertake time consuming and costly development activities and seek regulatory clearance or approval for new products. See "--Extensive Government Regulation." Although the Company has conducted pre-clinical studies on many of its products under development which indicate that such products may be effective in a particular application, there can be no assurance that the results obtained from expanded clinical studies will be consistent with earlier trial results or be sufficient for the Company to obtain any required regulatory approvals or clearances. There can be no assurance that the Company will not experience difficulties that could delay or prevent the successful development, introduction and marketing of new products, that regulatory clearance or approval of these or any new products will be granted on a timely basis, if ever, or that the new products will adequately meet the requirements of the applicable market or achieve market acceptance. The completion of the development of any of the Company's products remains subject to all of the risks associated with the commercialization of new products based on innovative technologies, including unanticipated technical or other problems, manufacturing difficulties and the possible insufficiency of the funds allocated for the completion of such development. Consequently, there can be no assurance that any of the Company's products under development will be successfully developed or manufactured or, if developed and manufactured, that such products will meet price or performance objectives, be developed on a timely basis or prove to be as effective as competing products. The inability to complete successfully the development of a product or application, or a determination by the Company, for financial, technical or other reasons, not to complete development of any product or application, particularly in instances in which the Company has made significant capital expenditures, could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's porcine heart valve products and its BioGlue surgical adhesive are currently only offered for sale outside of the U.S. The Company's porcine heart valves and BioGlue surgical adhesive are subject to the risk that the Company may be unable to obtain regulatory approval necessary to permit commercial distribution of these products in the U.S.

23

The Company's research and development efforts are time consuming and expensive and there can be no assurance that these efforts will lead to commercially successful products or services. Even the successful commercialization of a new service or product in the medical industry can be characterized by slow growth and high costs associated with marketing, under-utilized production capacity and continuing research, and development and education costs. Generally, the introduction of new human tissue products requires significant physician training and years of clinical evidence derived from follow-up studies on human implant recipients in order to gain acceptance in the medical community.

# Extensive Government Regulation

Government regulation in the U.S., the European Community and other jurisdictions represents a potentially determinative factor in the success of the Company's efforts to market and develop its products. See "Business--Government Regulation." The human heart valves to which the Company applies its cryopreservation services are currently regulated as Class II medical devices by the FDA and are subject to significant regulatory requirements, including Quality System Regulations and recordkeeping requirements. There can be no assurance that changes in regulatory treatment or the adoption of new statutory or regulatory requirements will not occur, which could adversely impact the marketing or development of these products or could adversely affect market demand for these products.

Other allograft tissues processed and distributed by the Company are currently regulated as "human tissue" under a rule promulgated by the FDA pursuant to the Public Health Services Act. This rule establishes requirements for donor testing and screening of human tissue and recordkeeping relating to these activities. Although the Company's other human tissue allografts are not currently regulated as medical devices, such tissue may in the future become subject to more extensive FDA regulation, which could include PMA or product licensing requirements.

BioGlue surgical adhesive is regulated as a Class III medical device and the Company believes that FibRx surgical sealant will be regulated as a biologic by the FDA. These products have not been approved for distribution within the U.S. Fixed porcine heart valve products are classified as Class III medical devices.

There can be no assurance that the Company will be able to obtain the FDA approval required to distribute its surgical adhesives, surgical sealants or porcine heart valve products in the U.S. Distribution of these products within the European Community is dependent upon the Company maintaining its CE Mark and ISO 9001 certifications, of which there can be no assurance.

Most of the Company's products in development, if successfully developed, will require regulatory approvals from the FDA and perhaps other regulatory authorities before they may be commercially distributed. The process of obtaining required regulatory approvals from the FDA normally involves clinical trials and the preparation of an extensive PMA application and often takes many years. The process is expensive and can vary significantly based on the type, complexity and novelty of the product. There can be no assurance that any products developed by the Company, independently or in collaboration with others, will receive the required approvals for manufacturing and marketing. Delays in obtaining U.S. or foreign approvals could result in substantial additional cost to the Company and adversely affect the Company's competitive position. The FDA may also place conditions on product approvals that could restrict commercial applications of such products. Product marketing approvals or clearances may be withdrawn if compliance with regulatory standards is not maintained or if problems occur following initial marketing. Delays imposed by the governmental clearance process may materially reduce the period during which the Company has the exclusive right to commercialize patented products. Also, delays or rejections may be encountered during any stage of the regulatory approval process based upon the failure of the clinical or other data to demonstrate compliance with, or upon the failure of the product to meet, the regulatory agency's requirements for safety, efficacy and quality, and those requirements may become more stringent due to changes in applicable law, regulatory agency policy or the adoption of new regulations. Clinical trials may also be delayed due to unanticipated side effects, inability to locate, recruit and qualify sufficient numbers of patients, lack of funding, the inability to locate or recruit scientists, the redesign of clinical trial programs, the inability to manufacture or acquire sufficient quantities of the particular product candidate or any other components required for clinical trials, changes in the Company's or its collaborative partners' development focus and disclosure of trial results by competitors. Even if regulatory approval is obtained for any of the Company's products or services, the scope of the approval may significantly limit the indicated usage for which such products or services may be marketed.

24

Products marketed by the Company pursuant to FDA or foreign oversight or approval are subject to pervasive and continuing regulation. In the U.S., devices and biologics must be manufactured and registered and, in the case of biologics, licensed establishments and must be produced in accordance with Quality System Regulations. Manufacturing facilities and processes are subject to periodic FDA inspection. Labeling and promotional activities are also subject to scrutiny by the FDA and, in certain instances, by the Federal Trade Commission. The export of devices and biologics is also subject to regulation and may require FDA approval. From time to time, the FDA may modify such regulations, imposing additional or different requirements. Failure to comply with any applicable FDA requirements, which may be ambiguous, could result in civil and criminal enforcement actions, product recalls or detentions and other penalties and could have a material adverse effect on the Company's business, financial condition and results of operations. In addition, NOTA' prohibits the acquisition or transfer of human organs for "valuable" consideration" for use in human transplantation. NOTA permits the payment of reasonable expenses associated with the removal, transportation, processing, preservation, quality control and storage of human organs. There can be no assurance that restrictive interpretations of NOTA will not be adopted in the future that will challenge one or more aspects of the Company's methods of charging for its cryopreservation services. The Company's laboratory operations are subject to the U.S. Department of Labor, Occupational Safety and Health Administration and Environmental Protection Agency requirements for prevention of occupational exposure to infectious agents and hazardous chemicals and protection of the environment. Some states have enacted statutes and regulations governing the processing, transportation and storage of human organs and tissue. While management believes that the Company is presently in compliance in all material respects with all such applicable statutes and regulations, there can be no assurance that more restrictive state laws or regulations will not be adopted in the future that could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Government Regulation."

Uncertainties Related to Patents and Protection of Proprietary Technology

The Company owns several patents, patent applications and licenses relating to its technologies, which it believes provide important competitive advantages. There can be no assurance that the Company's pending patent applications will issue as patents or that challenges will not be instituted concerning the validity or enforceability of any patent owned by the Company, or, if instituted, that such challenges will not be successful. The cost of litigation to uphold the validity and prevent infringement of a patent could be substantial. Furthermore, there can be no assurance that competitors will not independently develop similar technologies or duplicate the Company's technologies or design around the patented aspects of the Company's technologies. There can be no assurance that the Company's proposed technologies will not infringe patents or other rights owned by others. In addition, under certain of the Company's license agreements, if the Company fails to meet certain contractual obligations, including the payment of minimum royalty amounts, such licenses may become nonexclusive or terminable by the licensor, which could have a material adverse effect on the Company's business, financial condition and results of operations. Additionally, the Company protects its proprietary technologies and processes in part by confidentiality agreements with its collaborative partners, employees and consultants. There can be no assurance that these agreements will not be breached, that the Company will have adequate remedies for any breach or that the Company's trade secrets will not otherwise become known or independently discovered by competitors, any of which could have a material adverse effect on the Company's business, financial condition and results of operations.

# Uncertainties Regarding Future Health Care Reimbursement

Even though the Company does not receive payments directly from third-party health care payors, their reimbursement methods and policies impact demand for the Company's cryopreserved tissue and other services and products. The Company's cryopreservation services may be particularly susceptible to third-party cost containment measures. In particular, the initial cost of a cryopreserved human heart valve generally exceeds the cost of a mechanical,

25

synthetic or animal-derived valve. The Company is unable to predict what changes will be made in the reimbursement methods and policies utilized by third-party health care payors or their effect on the Company. Changes in the reimbursement methods and policies utilized by third-party health care payors, including Medicare, with respect to cryopreserved tissues provided for implant by the Company and other Company services and products, could have a material adverse effect on the Company. Significant uncertainty exists as to the reimbursement status of newly approved health care products and services and there can be no assurance that adequate third-party coverage will be available for the Company to maintain price levels sufficient for realization of an appropriate return on its investment in developing new products. Government and other third-party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for new products approved for marketing by the FDA and by refusing in some cases to provide any coverage for uses of approved products for indications for which the FDA has not granted marketing approval. If adequate coverage and reimbursement levels are not provided by government and other third-party payors for uses of the Company's new products and services, market acceptance of these products would be adversely affected, which could have a material adverse effect on the Company's business, financial condition and results of operations.

# Dependence on Key Personnel

The Company's business and future operating results depend in significant part upon the continued contributions of its key technical personnel and senior management, many of whom would be difficult to replace. The Company's business and future operating results also depend in significant part upon its ability to attract and retain qualified management, processing, technical, marketing, sales and support personnel for its operation. Competition for such personnel is intense and there can be no assurance that the Company will be successful in attracting and retaining such personnel. The loss of key employees, the failure

of any key employee to perform adequately or the Company's inability to attract and retain skilled employees as needed could have a material adverse effect on the Company's business, financial condition and results of operations.

# Product Liability and Insurance

The use of the Company's products involves the possibility of adverse effects that could expose the Company to product liability claims. A recent U.S. Supreme Court decision held that product liability may exist despite FDA approval, and future court decisions may also increase the Company's risk of product liability. From time to time, the Company is involved in legal proceedings based on product liability claims of a nature considered normal to its business. The Company's products are used by health care providers in connection with the treatment of patients, who will, on occasion, sustain injury or die as a result of their condition or medical treatment. If a lawsuit is filed because of such an occurrence, the Company, along with physicians and nurses, hospitals and other medical suppliers, may be named as a defendant, and whether or not the Company is ultimately determined to be liable, the Company may incur significant legal expenses. In addition, such litigation could damage the Company's reputation and therefore impair its ability to market its products or obtain product liability insurance and could cause the premiums for such insurance to increase. Although the Company has incurred minimal losses due to product liability claims to date, there can be no assurance that it will not incur significant losses in the future. The Company currently maintains product liability insurance in the aggregate amount of \$14 million per year. There can be no assurance that such coverage will continue to be available on terms acceptable to the Company or will be adequate to cover any losses due to product claims if actually incurred. Furthermore, if any such claim is successful, it could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business--Legal Proceedings."

# Use and Disposal of Hazardous Material

The Company's research, development and processing activities involve the controlled use of small quantities of radioactive compounds, chemical solvents and other hazardous materials. The Company's activities also include the preservation and growth of human cells and the processing of human tissue.

26

Although the Company believes that its safety procedures for handling, processing and disposing of hazardous materials and human tissue comply with the standards prescribed by federal, state and local regulations, the risk of accidental contamination, injury or disease transmission from these materials cannot be completely eliminated. In the event of such an accident or transmission, the Company could be held liable for resulting damages and any liability could have a material adverse effect on the Company's business, financial condition and results of operations. Also, any failure to comply with applicable regulations could result in the imposition of penalties, fines and sanctions, which could have a material adverse effect on the Company's business, financial condition and results of operations.

# Volatility of Securities Prices

The trading price of the Company's Common Stock has been subject to wide fluctuations from time to time and may continue to be subject to such volatility in the future. Trading price fluctuations can be caused by a variety of factors, including quarter to quarter variations in operating results, announcement of technological innovations or new products by the Company or its competitors, governmental regulatory acts, developments with respect to patents or proprietary rights, general conditions in the medical device or service industries, actions taken by government regulators, changes in earnings estimates by securities analysts or other events or factors, many of which are beyond the Company's control. If the Company's revenues or operating results in future quarters fall below the expectations of securities analysts and investors, the price of the Company's Common Stock would likely decline, perhaps substantially. Changes in the trading price of the Company's Common Stock may bear no relation to the Company's actual operational or financial results.

### Anti-Takeover Provisions

The Company's Articles of Incorporation and Bylaws contain provisions that may discourage or make more difficult any attempt by a person or group to obtain control of the Company, including provisions authorizing the issuance of preferred stock without shareholder approval, restricting the persons who may call a special meeting of the shareholders and prohibiting shareholders from taking action by written consent. In addition, the Company is subject to certain provisions of Florida law that may discourage or make more difficult takeover attempts or acquisitions of substantial amounts of the Company's Common Stock. Further, pursuant to the terms of a shareholder rights plan adopted in 1995, each outstanding share of Common Stock has one attached right. The rights will cause substantial dilution of the ownership of a person or group that attempts to acquire the Company on terms not approved by the Board and may have the effect of deterring hostile takeover attempts.

#### Absence of Dividends

The Company has not paid, and does not presently intend to pay, cash dividends. The Company's major credit agreement contains, and future credit agreements may contain, financial covenants, including covenants to maintain certain levels of net worth and certain leverage ratios, which could have the effect of restricting the amount of dividends that the Company may pay. It is not likely that any cash dividends will be paid in the foreseeable future.

### Forward-Looking Statements

This Form 10-K includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included or incorporated by reference in this Form 10-K which address activities, events or developments which the Company expects or anticipates will or may occur in the future, including statements regarding the Company's competitive position, the timing and of the application to the FDA for the stentless CryoLife-O'Brien and CryoLife-Ross porcine heart valves, and for BioGlue and the BioLastic Patch and FibRx surgical

27

sealant, other estimated dates relating to the Company's proposed regulatory submissions, estimates regarding 1999 research and development expenditures, the Company's expectations regarding the adequacy of current financing arrangements, product demand and market growth, the impact of the introduction of BioGlue in Europe or marketing opportunities for the Company's single-use medical devices and other statements regarding future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts are forward-looking statements. These statements are based on certain assumptions and analyses made by the Company in light of its experience and its perception of historical trends, current conditions and expected future developments as well as other factors it believes are appropriate in the circumstances. However, whether actual results and developments will conform with the Company's expectations and predictions is subject to a number of risks and uncertainties which could cause actual results to differ materially from the Company's expectations, including the risk factors discussed in this Form 10-K and other factors, many of which are beyond the control of the Company. Consequently, all of the forward-looking statements made in this Form 10-K are qualified by these cautionary statements and there can be no assurance that the actual results or developments anticipated by the Company will be realized or, even if substantially realized, that they will have the expected consequences to or effects on the Company or its business or operations. The Company assumes no obligation to update publicly any such forward-looking statements, whether as a result of new information, future events or otherwise.

# Item 2. Properties.

The Company's facilities (other than its single use medical device manufacturing plant) are located in suburban Atlanta, Georgia, and consist of three separate

locations totaling approximately 130,000 square feet of leased office, laboratory and warehouse space. Approximately 30,000 square feet are dedicated to laboratory work areas. The primary facility, which does not include the FibRx laboratory and the bioprosthetic manufacturing operation, has four main laboratory facilities: human tissue processing, BioGlue manufacturing, research and development, and microbiology. Each of these areas consists of a general technician work area and adjoining "clean rooms" for work with human tissue and for aseptic processing. The clean rooms are supplied with highly filtered air which provides a near-sterile environment. The human tissue processing laboratory contains approximately 7,700 square feet with a suite of seven clean rooms. The Bioglue manufacturing laboratory contains approximately 12,900 square feet with a suite of 2 clean rooms. The research and development laboratory is approximately 5,500 square feet with a suite of five clean rooms. The microbiology laboratory is approximately 3,200 square feet with a suite of three clean rooms. The FibRx laboratory facility contains approximately 11,000 square feet, including approximately 4,000 square feet of laboratory space with a suite of eight clean rooms. The Company's porcine heart valves are manufactured in the Company's bioprosthesis laboratory, which contains approximately 13,000 square feet, with about 3,500 square feet of laboratory space and a suite of four clean rooms for tissue processing. The Company's single-use medical devices are manufactured at the Company's IFM subsidiary located in St. Petersburg, Florida. This facility is approximately 30,000 square feet and is leased from the former principal shareholder of IFM.

# Item 3. Legal Proceedings.

From time to time, the Company is involved in litigation relating to claims arising out of its operations in the normal course of business. Management believes that no currently ongoing litigation, if determined adversely to the Company, will have a material adverse effect on the Company's business, financial condition or results of operations.

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

Inapplicable.

28

# Item 4A. Executive Officers of the Registrant.

Each of the executive officers of the Registrant was elected by the Board of Directors to serve until the Board of Directors' meeting immediately following the next annual meeting of shareholders or until their earlier removal by the Board of Directors or their resignation. The following table lists the executive officers of the Registrant and their ages, positions with the Registrant, and the dates from which they have continually served in their present positions with the Registrant.

Name	Age	Position	Date First Elected to Present Office
Steven G. Anderson	60	President, Chief Executive Officer and Chairman	February, 1984
Kirby S. Black, PhD	44	Vice President, Research and Development	July, 1995
Edwin B. Cordell, Jr., CPA	40	Vice President and Chief Financial Officer	December, 1994
David M. Fronk	35	Vice President, Clinical Research	December, 1998
Albert E. Heacox, PhD	48	Vice President, Laboratory Operations	June, 1995
Gerald B. Seery	42	Vice President, Marketing	August, 1995
James C. Vander Wyk, PhD	54	Vice President, Regulatory Affairs and Quality	February, 1996
		Assurance	
Ronald D. McCall, Esq.	62	Director, Secretary and Treasurer	January, 1984

Steven G. Anderson, a founder of the Company, has served as the Company's President, Chief Executive Officer and Chairman since its inception. Mr. Anderson has more than 30 years of experience in the implantable medical device industry. Prior to joining the Company, Mr. Anderson was Senior Executive Vice

President and Vice President, Marketing, from 1976 until 1983 of Intermedics, Inc. (now Guidant, Inc.), a manufacturer and distributor of pacemakers and other medical devices. Mr. Anderson received his BA from the University of Minnesota.

Kirby S. Black, PhD, has served as Vice President of Research and Development since July 1995. Dr. Black is responsible for the continued development of the Company's current products as well as the evaluation of new technologies. Dr. Black is listed on three patents and has authored over 125 publications. Prior to joining the Company, Dr. Black was Director, Medical Information and Project Leader from July 1993 until July 1994 at Advanced Tissue Sciences, LaJolla, California. Dr. Black has also held a number of positions at the University of California at Irvine, including Director, Transplantation and Immunology Laboratories, Department of Surgery. Dr. Black received his BS degree from the University of California, Los Angeles, and his PhD degree from the University of California at Irvine.

Edwin B. Cordell, Jr., CPA, has served as Vice President and Chief Financial Officer of the Company since November 1994. From August 1987 to November 1994, Mr. Cordell served as Controller and Chief Financial Officer of Video Display Corporation, a publically held consumer electronics manufacturing and distribution company. Mr.

Cordell received his BS in Accounting from the University of Tennessee.

David M. Fronk was appointed to the position of Vice President of Clinical Research in December 1998 and has been with the Company since 1992. Mr. Fronk is responsible for managing the preclinical and clinical investigations for all products, as well as monitoring product performance. Prior to joining the Company, Mr. Fronk held engineering positions with Zimmer Inc. from 1986 until 1988 and Baxter Healthcare Corporation from 1988 until 1991. Mr Fronk served as a market manager with Baxter Healthcare Corporation from 1991 until 1992. Mr. Fronk received his BS in Mechanical Engineering at The Ohio State University in 1985 and his MS in Biomedical Engineering at The Ohio State University in 1986.

Albert E. Heacox, PhD, has served as Vice President, Laboratory Operations since June 1988 and has been with the Company since June of 1985. Dr. Heacox has been responsible for developing protocols and procedures for both cardiovascular and connective tissues, implementing upgrades in procedures in conjunction with the

29

Company's quality assurance programs, and overseeing all production activities of the Company's laboratories. Prior to joining the Company, Dr. Heacox worked as a researcher with the U.S. Department of Agriculture and North Dakota State University, developing methods for the cryopreservation of cells and animal germ plasm storage. Dr. Heacox received a BA and an MS in Biology from Adelphi University, and received his PhD in Biology from Washington State University and completed his post-doctorate training in cell biology at the University of Cologne, West Germany.

Gerald B. Seery has served as Vice President of Marketing since August 1995 and has been with the Company since July 1993. Mr. Seery is responsible for developing and implementing the Company's sales and marketing plans and supervising all tissue procurement activities. Prior to joining the Company, Mr. Seery held senior marketing management positions with Meadox Medicals from 1982 until 1985, Electro Catheter Corporation from 1985 until 1989 and Daig Corporation from 1992 until 1993, accumulating fifteen years of specialized marketing experience in cardiovascular medical devices. Mr. Seery received his BA in International Economics at The Catholic University of America in Washington, D.C. in 1978 and completed his MBA at Columbia University in New York in 1980.

James C. Vander Wyk, PhD, has served as Vice President, Regulatory Affairs and Quality Assurance of the Company since February 1996. Prior to joining the Company, Dr. Vander Wyk held senior management positions at Schneider (USA), Inc. from 1993 until 1996, Pharmacia Deltec, Inc. from 1985 until 1993, Delmed, Inc. from 1980 until 1985 and Pharmaco, Inc. from 1975 to 1979, gaining 20 years of experience in Regulatory Affairs and Quality Assurance. Dr. Vander Wyk received his BS in Pharmacy from the Massachusetts College of Pharmacy and his PhD in Microbiology from the University of Massachusetts. Dr. Vander Wyk performed his NIH Postdoctoral Fellowship at the University of Illinois.

Ronald D. McCall has served as a director of the Company and as the Secretary and Treasurer of the Company since January 1984. From 1985 to the present, Mr.

McCall has been the proprietor of the law firm of Ronald D. McCall, Attorney At Law, Tampa, Florida. Mr. McCall was admitted to the practice of law in Florida in 1961. Mr. McCall received his BA and JD degrees from the University of Florida.

30

#### PART II

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

The response to Item 5 is incorporated herein by reference to the information set forth under the caption "Market Price of Common Stock" on page 33 of the annual shareholders report for the year ended December 31, 1998.

Item 6. Selected Financial Data.

The response to Item 6 is incorporated herein by reference to the information set forth under the caption "Selected Financial Information" on page 34 of the annual shareholders report for the year ended December 31, 1998.

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

The response to Item 7 is incorporated herein by reference to the information set forth under the caption "Management's Discussion and Analysis" on pages 14 though 19 of the annual shareholders report for the year ended December 31, 1998.

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

The response to Item 7A is incorporated herein by reference to the information set forth under the caption "Quantitative and Qualitative Disclosures About Market Risk" appearing on page 19 of the annual shareholders report for the year ending December 31, 1998.

Item 8. Financial Statements and Supplementary Data.

The report of independent auditors and consoldiated financial statements included on pages 20 through 33 of the annual shareholders report for the year ended December 31, 1998 are incorporated herein by reference. Quarterly Results of Operations on page 34 of the annual shareholders report for the year ended December 31, 1998 is incorporated herein by reference.

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

 ${\tt Inapplicable.}$ 

31

# PART III

Item 10. Directors and Executive Officers of the Registrant.

The response to Item 10, applicable to the Directors of the Company, is incorporated herein by reference to the information set forth under the caption "Election of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be filed with the Commission not later than April 30, 1999. Information concerning executive officers is included in Part I, Item 4A of this Form 10-K.

The response to Item 10, applicable to Section 16(a) of the Securities Exchange Act of 1934, as amended, is incorporated herein by reference to the information set forth under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement for the Annual Meeting of Shareholders to be filed with the Commission not later than April 30, 1999.

Item 11. Executive Compensation.

The response to Item 11 is incorporated herein by reference to the information set forth under the caption "Executive Compensation" in the Proxy Statement for the Annual Meeting of Shareholders to be filed with the Commission not later than April 30, 1999.

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

The response to Item 12 is incorporated herein by reference to the information set forth under the captions "Ownership of Principal Shareholders and Certain Executive Officers" and "Election of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be filed with the Commission not later than April 30, 1999.

Item 13. Certain Relationships and Related Transactions0 .

The response to Item 13 is incorporated herein by reference to the information set forth under the caption "Executive Compensation" in the Proxy Statement for the Annual Meeting of Stockholders to be filed with the Commission not later than April 30, 1999.

32

#### PART IV

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

The following are filed as part of this report:

(a) 1. Financial Statements

The report of independent auditors and consoldiated financial statements included on pages 20 through 33 of the annual shareholders report for the year ended December 31, 1998 are incorporated herein by reference.

2. Financial Statement Schedule

Independent Auditors' Report on Schedule

Schedule II--Valuation and Qualifying Accounts

33

All other financial statement schedules not listed above are omitted, as the required information is not applicable or the information is presented in the consolidated financial statements or related notes.

# 3. A. Exhibits

The following exhibits are filed herewith or incorporated herein by reference:

- 2.1 Sale Agreement dated August 16, 1996 between the Company and Donald Nixon Ross. (Incorporated by reference to Exhibit 2.1 to the Registrant's Quarterly report on form 10-Q for the quarter ended September 30, 1996.)
- 2.2 Asset Purchase Agreement among the Company and United Cryopreservation Foundation, Inc., United Transplant Foundation, Inc. and QV, Inc. dated September 11, 1996. (Incorporated by reference to Exhibit 2.2 to

the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.)

- 2.3 Agreement and Plan of Merger dated as of March 5, 1997 among Ideas for Medicine, Inc., J. Crayton Pruitt, Sr., M.D., Thomas Benham, Thomas Alexandris, Tom Judge, Natalie Judge, Helen Wallace, J. Crayton Pruitt, Jr., M.D., and Johanna Pruitt, and CryoLife, Inc. and CryoLife Acquisition Corporation. (Incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on March 19, 1997.)
- 2.4 Asset Purchase Agreement by and between Horizon Medical Products, Inc. and Ideas for Medicine, Inc. dated September 30, 1998. (Incorporated by reference to Exhibit 2 to Horizon Medical Products, Inc.'s Current Report on Form 8K-filed with the Securities and Exchange Commission on October 14, 1998.)
- 3.1 Restated Certificate of Incorporation of the Company, as amended. (Incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 3.2 Amendment to Articles of Incorporation of the Company dated November 29, 1995. (Incorporated by reference to Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 3.3 Amendment to the Company's Articles of Incorporation to increase the number of authorized shares of common stock from 20 million to 50 million shares and to delete the requirement that all preferred shares have one vote per share. (Incorporated by reference to Exhibit 3.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1996.)
- 3.4 ByLaws of the Company, as amended. (Incorporated by reference to Exhibit 3.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 4.1 Form of Certificate for the Company's Common Stock. (Incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 4.2 Form of Certificate for the Company's Common Stock. (Incorporated by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1997.)

34

- Lease, by and between New Market Partners III, Laing Properties, Inc., General Partner, as Landlord, and the Company, as Tenant, dated February 13, 1986, as amended by that Amendment to Lease, by and between the parties, dated April 7, 1986, as amended by that Amendment to Lease, by and between the parties, dated May 15, 1987, as amended by that Second Amendment to Lease, by and between the parties, dated June 22, 1988, as amended by that Third Amendment to Lease, by and between the parties, dated April 4, 1989, as amended by that Fourth Amendment to Lease, by and between the parties, dated April 4, 1989 as amended by that Fifth Amendment to Lease, by and between the parties, dated October 15, 1990. (Incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.1(a) Seventh Amendment to Lease dated February 13, 1986, by and between New Market Partners III, Laing Properties, Inc., General Partner, as Landlord, and the Company as tenant, dated May 15, 1996. (Incorporated by reference to Exhibit 10.1(a) to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1996.)

- Lease by and between Newmarket Partners I, Laing Properties, Inc. and Laing Management Company, General Partner, as Landlord, and the Company as Tenant, dated July 23, 1993. (Incorporated by reference to Exhibit 10.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993.)
- 10.3 1993 Employee Stock Incentive Plan adopted on July 6, 1993. (Incorporated by reference to Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1993.)
- 10.4 1989 Incentive Stock Option Plan for the Company, adopted on March 23, 1989. (Incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.5 Incentive Stock Option Plan, dated as of April 5, 1984. (Incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.6 Form of Stock Option Agreement and Grant under the Incentive Stock Option and Employee Stock Incentive Plans. (Incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.7 CryoLife, Inc. Profit Sharing 401(k) Plan, as adopted on December 17, 1991. (Incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- Form of Supplemental Retirement Plan, by and between the Company and its Officers -- Parties to Supplemental Retirement Plans: Steven G. Anderson, David M. Fronk, Gerald B. Seery, James C. Vander Wyk, Albert E. Heacox, Kirby S. Black, and Edwin B. Cordell, Jr. (Incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.9(a)\* Employment Agreement, by and between the Company and Steven G. Anderson.

35

- 10.9(b) Employment Agreement, by and between the Company and Albert E. Heacox. (Incorporated by reference to Exhibit 10.7(c) to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.9(c) Employment Agreement, by and between the Company and Edwin B. Cordell, Jr. (Incorporated by reference to Exhibit 10.9(f) to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994.)
- 10.9(d) Employment Agreement, by and between the Company and Gerald B. Seery. (Incorporated by reference to Exhibit 10.9(e) to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 10.9(e) Employment Agreement, by and between the Company and James C. Vander Wyk, Ph.D. (Incorporated by reference to Exhibit 10.9(f) to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 10.9(f) Employment Agreement, by and between the Company and Kirby S. Black, Ph.D. (Incorporated by reference to Exhibit 10.9(g) to the Registrant's Annual Report on Form 10-K/A for the fiscal year ended December 31, 1996.)
- 10.9(g)\* Employment Agreement, by and between the Company and David M. Fronk.
- 10.10 Form of Secrecy and Noncompete Agreement, by and between the Company and its Officers. (Incorporated by reference to Exhibit 10.9 to the

Registrant's Registration Statement on Form S-1 (No. 33-56388).)

- 10.11 Registration Rights Agreement, by and among the Company, Galen Partners, L.P., and Galen Partners International, L.P., both Delaware limited partnerships, dated August 22, 1991. (Incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10.12 Technology Acquisition Agreement between the Company and Nicholas Kowanko, Ph.D., dated March 14, 1996. (Incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- Option Agreement, by and between the Company and Duke University, dated July 9, 1990, as amended by that Option Agreement Extension, by and between the parties, dated July 9, 1991. (Incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- Research and License Agreement by and between Medical University of South Carolina and CryoLife dated November 15, 1985, as amended by Amendment to the Research and License Agreement dated February 25, 1986 by and between the parties and an Addendum to Research and License Agreement by and between the parties, dated March 4, 1986. (Incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)

36

- 10.15 CryoLife, Inc. Non-Employee Directors Stock Option Plan, as amended.

  (Incorporated by reference to Appendix 2 to the Registrant's Definitive Proxy Statement filed with the Securities and Exchange Commission on April 17, 1998.)
- 10.16 Lease Agreement between the Company and Amli Land Development--I Limited Partnership, dated April 18, 1995. (Incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 10.17 Funding Agreement between the Company and Amli Land Development--I Limited Partnership dated April 18, 1995. (Incorporated by reference to Exhibit 10.28 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1995.)
- 10.18 CryoLife, Inc. Employee Stock Purchase Plan (Incorporated by reference to Exhibit "A" of the Registrant's Definitive Proxy Statement filed with the Securities and Exchange Commission on April 10, 1996.)
- Noncompetition Agreement between the Company and United Cryopreservation Foundation, Inc. dated September 11,1996. (Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.)
- Noncompetition Agreement between the Company and QV, Inc. dated September 11, 1996. (Incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.)
- 10.21 RevolvingTerm Loan Facility between the Company and NationsBank N.A., dated August 30, 1996. (Incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.)
- Technology License Agreement between the Company and Colorado State University Research Foundation dated March 28, 1996. (Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1996.)

- 10.23 Noncompetition Agreement between the Company and United Transplant Foundation, Inc. dated September 11, 1996. (Incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1996.)
- 10.24(a) First Amendment of Third Amended and Restated Loan Agreement between CryoLife, Inc., as Borrower and NationsBank, N.A. (South), as Lender, dated April 14, 1997. (Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1997.)
- 10.24(b) Second Modification of Third Amended and Restated Loan Agreement dated December 16, 1997 by and between the Registrant and NationsBank, N.A. (Incorporated by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1997.)
- 10.25 Consulting Agreement dated January 1, 1998 by and between Robert T. McNally and the Registrant. . (Incorporated by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1997.)

37

- 10.26 CryoLife, Inc. 1998 Long-Term Incentive Plan. (Incorporated by reference to Appendix 2 to the Registrant's Definitive Proxy Statement filed with the Securities and Exchange Commission on April 17, 1998.)
- 10.27 Consulting Agreement dated March 5, 1997 between CryoLife Acquisition Corporation and J. Crayton Pruitt, Sr., M.D. (Incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997.)
- 10.28 Subordinated Convertible Debenture dated March 5, 1997 between the Company and J. Crayton Pruitt, Sr., M.D. (Incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997.)
- 10.29 Lease Agreement dated March 5, 1997 between the Company and J. Crayton Pruitt, Sr., M.D. (Incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997.)
- Lease Guaranty dated March 5, 1997 between J. Crayton Pruitt Family Trust U/T/A and CryoLife, Inc., as Guarantor for CryoLife Acquisition Corporation. (Incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997.)
- Form of Non-Competition Agreement dated March 5, 1997 between the Company and J. Crayton Pruitt, Sr., M.D., Thomas Benham, Thomas Alexandris, Tom Judge, Natalie Judge, Helen Wallace, J. Crayton Pruitt, Jr., M.D., and Johanna Pruitt. (Incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997.)
- 13.1\* Portions of the Registrant's Annual Report to Shareholders for the year ended December 31, 1998 which are incorporated by reference herein.
- 21.1\* Subsidiaries of CryoLife, Inc.
- 23.1\* Consent of Independent Auditors.
- 27.1\* Financial Data Schedule

- -----

#### \* Filed herewith.

- 3.B. Executive Compensation Plans and Arrangements.
- 1. 1993 Employee Stock Incentive Plan adopted on July 6, 1993. (Exhibit 10.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994.)
- 1989 Incentive Stock Option Plan for the Company, adopted on March 23, 1989 (Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- Incentive Stock Option Plan, dated as of April 5, 1984 (Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 4. Form of Stock Option Agreement and Grant under the Incentive Stock Option and Employee Stock Incentive Plans (Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)

38

- 5. CryoLife, Inc. Profit Sharing 401(k) Plan, as adopted on December 17, 1991 (Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 6. Form of Supplemental Retirement Plan, by and between the Company and its Officers -- Parties to Supplemental Retirement Plans: Steven G. Anderson, Robert T. McNally, Gerald B. Seery, James C. Vander Wyk, Albert E. Heacox, Kirby S. Black and Edwin B. Cordell, Jr. (Exhibit 10.6 to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 7. Employment Agreement, by and between the Company and Steven G. Anderson
- 8. Employment Agreement, by and between the Company and David M. Fronk.
- 9. Employment Agreement, by and between the Company and Albert E. Heacox. (Exhibit 10.7(c) to the Registrant's Registration Statement on Form S-1 (No. 33-56388).)
- 10. Employment Agreement, by and between the Company and Gerald B. Seery. (Incorporated by reference to Exhibit 10.9(e) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1995.)
- 11. Employment Agreement, by and between the Company and James C. Vander Wyk, Ph.D. (Incorporated by reference to Exhibit 10.9(f) to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1995.)
- 12. Employment Agreement, by and between the Company and Edwin B. Cordell, Jr. (Incorporated by reference to Exhibit 10.9(f) to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994.)
- 13. CryoLife, Inc. Non-Employee Directors Stock Option Plan, as amended. (Incorporated by reference to Exhibit 10.15 to this Form 10-K.)
- 14. CryoLife, Inc. Employee Stock Purchase Plan. (Incorporated by reference to Exhibit "A" of the Registrant's Definitive Proxy Statement filed with the Securities and Exchange Commission on April 10, 1996.)
- 15. Employment Agreement by and between the Company and Kirby S. Black (Incorporated by reference to Exhibit 10.9(g) to the Registrant's Annual Report on Form 10-K/A for the fiscal year ended December 31, 1996.)
- 16. CryoLife, Inc. 1998 Long-Term Incentive Plan. (Incorporated by reference to Exhibit 10.26 to this Form 10-K).
  - (b) Reports on Form 8-K
- 1. The Registrant filed a Current Report on Form 8-K with respect to the Asset Purchase Agreement by and between Horizon Medical Products, Inc. and Ideas for Medicine, Inc. dated September 30, 1998 with the Securities and Exchange Commission on October 15, 1998.

2. The Registrant filed a Current Report on Form 8-K/A with respect to the Asset Purchase Agreement by and between Horizon Medical Products, Inc. and Ideas for Medicine, Inc. dated September 30, 1998 with the Securities and Exchange Commission on November 14, 1998.

39

#### 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.

CRYOLIFE, INC.

March 26, 1999

By /S/ STEVEN G. ANDERSON

Steven G. Anderson, President, Chief Executive Officer and Chairman of the Board of Directors

Pursuant to the requirements of the Securities Exchange Act of 1934, this 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/ STEVEN G. ANDERSON	President, Chief Executive Officer	March 26, 1999
Steven G. Anderson	and Chairman of the Board of Directors (Principal Executive Officer)	
/s/ EDWIN B. CORDELL, JR.	Vice President and Chief Financial	March 26, 1999
Edwin B. Cordell, Jr.	Officer (Principal Financial and Accounting Officer)	
/s/ RONALD D. MCCALL	Director	March 26, 1999
Ronald D. McCall		
/s/ BENJAMIN H. GRAY	Director	March 26, 1999
Benjamin H. Gray		
/s/ VIRGINIA C. LACY	Director	March 26, 1999
Virginia C. Lacy		
/s/ RONALD CHARLES ELKINS, M.D.	Director	March 26, 1999
Ronald Charles Elkins, M.D.		

# CRYOLIFE, INC. AND SUBSIDIARIES

# VALUATION AND QUALIFYING ACCOUNTS

Years ended December 31, 1998, 1997, and 1996

Description	e beginnin	g Additions	Deductions	Balance end of Period
Description	-		Deductions	reliou
Year ended December 31, 1998				
Allowance for doubtful accounts	\$ 103,000	\$171,000	\$18,000	\$256,000
Deferred preservation costs	152,000	-	99,000	53,000
Year ended December 31, 1997				
Allowance for doubtful accounts	\$ 94,000	\$ 46,000	\$ 37,000	\$ 103,000
Deferred preservation costs	278,000		126,000	152,000
Year ended December 31, 1996				
Allowance for doubtful accounts	\$ 30,000	\$ 88,000	\$ 24,000	\$ 94,000
Allowance for doubtful note receivable	225,000		225,000	
Deferred preservation costs	247,000	140,000	109,000	278,000

#### EMPLOYMENT AGREEMENT

THIS AGREEMENT made as of the 18th day of January, 1999 by and between STEVEN G. ANDERSON (hereinafter referred to as "EMPLOYEE"), and CRYOLIFE, INC., a Florida Corporation (hereinafter referred to as "EMPLOYER"):

#### WITNESSETH:

- 1. Employment: Employer hereby employs Employee and Employee hereby accepts employment upon the terms and conditions as set forth hereinafter. It is agreed that this Employment Agreement shall replace the previous Employment Agreement dated April 10, 1995.
- 2. Term of Employment: Subject to the provisions of termination as hereinafter provided, the term of this Agreement shall begin on the 18th day of January, 1999, and terminate on the 18th day of January, 2004 and shall automatically be renewed for one successive five (5) year term unless either party gives the other notice to terminate the Employment Agreement at the expiration of the original term, which notice must be given at least sixty (60) days prior to the expiration of said original five year term.
- 3. Compensation: The Employer shall pay to the Employee the following compensation:
  - (a) A base salary of \$442,750.00 per year which may be increased annually during the term of this agreement. Said salary may be increased annually by the Compensation Advisory Committee of the Company, pursuant to its annual review. In this agreement all references to "salary" shall be defined as the "base salary" and any increases thereof of the Employee at the time involved, whether the amount set forth above, or the amount hereafter set by the said Compensation Advisory Committee. Nothing in this agreement shall be deemed to preclude the Employee from receiving raises in salary or options to purchase stock during the term of this agreement. The salary will be reviewed annually by the Compensation Committee of the Company, being guided by the Radford study and his performance;
  - (b) Additional compensation may be paid to Employee in the form of salary increases and stock option grants, depending upon his performance as determined by Employer;
  - (c) The Employee may receive an annual bonus in addition to said salary; and
  - (d) The Employer agrees to reimburse the Employee for the costs of the motor vehicle that he drives by making payments to Employee to reimburse him for the down payment and monthly payments on the motor vehicle purchased by him, together with payments to reimburse him for the gasoline, oil and repairs of the Employee's motor vehicle and for all other reasonable motor vehicle expenses. Employee shall maintain the motor vehicle in good operating condition.
- 4. Duties: Employee is engaged as President and Chief Executive Officer for the Employer and shall serve as a Director and Chairman of the Board of Directors, and shall perform such duties of those positions including but not limited to the following:
  - (a) Employee shall have such duties as may from time to time be assigned to him by the Employer;
  - (b) Employee shall devote his full time to the performance of his duties as the President and Chief Executive Officer of the Employer and shall not enter into competition with Employer and/or any of its subsidiaries or affiliates during the term of this Agreement; and

- (c) Employee's duties shall include acting as Chief Executive Officer for the Employer and he shall be responsible for the operation of all of the business of the Employer. The requirements imposed in this paragraph are not intended to be all inclusive and Employee will perform all of the duties associated with being Chairman, President and Chief Executive Officer for this enterprise. The titles "President", "CEO", and "Chairman" will not be assigned to any other person.
- 5. Extent of Service: Employee shall be employed on a full time basis and exercise his efforts to the optimum benefit of the Employer. Employee shall be granted a vacation of up to four (4) weeks per year and shall be eligible for such vacation upon the signing of this agreement. Scheduling of such vacation shall be arranged at least fifteen (15) days in advance thereof if possible. Any vacation time unused during any one year period of employment may be carried forward to the next year. Employee shall be compensated for any unused vacation time remaining at the end of the contract.
- 6. Illness and Incapacity: Employee shall receive compensation for any period of illness or incapacity during the terms of this Agreement, at the same rate provided under this agreement.
- 7. Disability Insurance: Employer agrees to provide to the Employee appropriate disability insurance coverage, providing the Employee with disability benefits appropriate to his position in the company and his earnings therefor. Employee agrees to obtain quotations for disability insurance and provide them to Employer for its consideration. The decision as to which disability insurance carrier to select remains in the sole discretion of Employer. The coverage obtained shall provide disability benefits to Employee appropriate to his income at the time of disability. The disability policy shall be owned by the Employee, but the annual premium shall be paid by the Employer. The Employer shall have the right to terminate this Agreement if such illness or incapacity shall be of such a character as to totally prohibit Employee from rendering substantially all services to the Employer for a period of more than one hundred eighty (180) days in one calendar year, by giving at least sixty (60) days written notice of intention to do so. For the purposes of determining ability or inability to render substantial services, the criterion to be used shall be that which is used in determining total disability under the Social Security Act of 1934 as Amended. If Employee shall resume his duties within sixty (60) days following receipt of such notice, and shall perform such duties on a regular basis for 180 consecutive days thereafter, this Agreement and Employee's employment shall continue and the notice of intention to terminate shall have no further force, effect or validity.

2

- 8. Termination Upon Disability: Employer may terminate the employment of Employee in the event of the disability of Employee. As used herein, "Disability" shall mean a mental or physical condition of Employee which, in the professional determination of an independent physician chosen by Employer, renders Employee incapable of performing his duties under this Agreement for a continuous period of six (6) months or longer. In the event Employee (or his custodian) disagrees with the determination of the independent physician, Employee may obtain the determination of another physician, reasonably acceptable to Employee and Employer, whose opinion shall be conclusive.
- 9. Major Medical and Life Insurance: Employer agrees to provide major medical and life insurance coverage for Employee. The major medical policy shall designate Employee's wife, Ann B. Anderson, as an insured under the said policy in addition to Employee. Said insurance coverage shall be provided to Employee and his wife, Ann B. Anderson, during the employment of Employee and as otherwise provided for hereinafter. A life insurance policy shall be provided to Employee by Employer provided Employee meets the requirements of the insurer for coverage. Said policy shall provide benefits in an amount up to two (2) times Employee's current salary or more. Employee shall designate the beneficiaries of said life insurance policy. Employee agrees to cooperate with the Company to obtain key-man life insurance on Employee's life should Employer desire to purchase same for its benefit.
- 10. Death and Survivor Benefits: If Employee should die during the term of his employment, the employment is terminated and the Employer shall pay to

the spouse of the Employee, or other survivor designated by Employee, including the Employee's estate if so designated, the compensation which would otherwise be payable to Employee through to the end of the month in which his death occurs, plus one (1) year's salary. The Employer shall have no other financial obligations to Employee's spouse or other designated survivor, or estate with the exception of the provisions for health insurance to Employee's wife, Ann B. Anderson. In the event of Employee's demise prior to the termination of this agreement, Employer agrees to continue the major medical insurance as described hereinabove for Employee's wife, Ann B. Anderson, for the duration of her life.

11. Termination of Employment: Notwithstanding any provision stated in Paragraph 3 hereinabove, the Employee may terminate this Agreement upon giving adequate notice thereof as described herein. In the event the Employee terminates this Agreement, he shall be required to give one hundred eighty (180) days written notice. Said termination shall be effective upon the expiration of said one hundred eighty (180) days.

Employer may terminate the employment of the Employee hereunder with or without good cause (as defined hereinbelow, and also sometimes referred to as "cause") by giving one hundred eighty (180) days written notice of its intention to do so. If the termination of the employment of Employee is without good cause, Employer shall pay compensation to Employee consisting of the base salary and any increase thereof for the period remaining on the agreement or for two

3

(2) years whichever is greater. If the Employer gives notice of termination without good cause, or if the termination is without good cause, the Employer will be required to pay to the Employee the sum due to Employee for his base salary, plus any increase thereof, for the year(s) remaining on the contract or for a period of twenty four (24) months, whichever is greater, as reasonable compensation for the reminder of the term of this agreement and its renewal term. The said compensation shall be paid in a lump sum within one hundred eighty (180) days from the date of the notice of termination. The termination shall be effective as of the date set forth by the Employer in the Notice of Termination, which may not be less than one hundred eighty (180) days after delivery of the notice.

In the event of termination for good cause, the Employee will be paid his base salary and increases thereof for one hundred eighty (180) days, but no other compensation shall be due under this agreement for the remainder of the term of this agreement, however, Employee shall be entitled to a hearing before the board of directors of the Company within one hundred eighty (180) days, and Employee may sue for damages claiming the termination was not for good cause and seek damages and he may pursue such other remedies as may be available.

Employer may terminate Employee's employment under this agreement for good cause which shall mean (i) Employee's willful and wanton wrongful act having a substantial material adverse effect on the Employer; (ii) Employee's acts amounting to gross negligence to the material detriment and substantial material adverse effect on the Employer; (iii) Embezzlement of funds of the Employer; or (iv) Employee's conviction of a felony. In order to terminate the employment of Employee pursuant to this paragraph, Employer must first provide Employee with written notice of termination which notice shall specifically identify the circumstances which constitute cause for termination as defined herein. In the event of termination for cause under the provisions set forth in subsections (i) or (ii) of this paragraph, Employee shall have one hundred eighty (180) days in which to cure such default. In the event the Notice of Termination states that it is "for good cause", then during the one hundred eighty (180) days, Employee shall be entitled to meet with the directors at a meeting called for the purpose of reconsidering the termination. At that meeting, the Employee may present such information or evidence as may bear upon the issue of cause for termination. Upon the Employee making such presentation, the directors shall reconsider the issue of termination and determine whether the Employee is or is not terminated at the close of said directors' meeting. If the Employer's notice of termination is for good cause the employee may make the above presentation and if the directors do not reconsider and withdraw the termination, then the Employee may sue at law for damages or may pursue such other remedies available. If the notice of termination is withdrawn then the Employee will remain employed pursuant to this agreement. Nothing set forth above shall require that the Employee request a meeting with the directors for

reconsideration or present any evidence at such a meeting. If no meeting is requested by Employee he shall be entitled to file suit at law for damages for breach of contract or to pursue any other remedies available to him.

In the event that Employer terminates this agreement, the employment shall cease one hundred eighty (180) days after such notice is delivered and this agreement shall be terminated. The Employer reserves the right to discharge the Employee without good cause and without hearing provided the Employee is paid the base salary, plus any increases thereof for the period specified above, together with any earned but unpaid salary, earned but unused vacation time, bonus or other compensation, as of the date of the termination. Both parties shall be bound to honor any and all bonuses,

4

allowances, unpaid but earned vacation time, loans and separate agreements which have previously been specified in writing. The Employer's notice of termination must state whether the termination is "for good cause" or "without good cause". The parties agree that any termination by the Employer which fails to state whether it is "for good cause" or "without good cause" shall be deemed as being "without good cause" and shall be treated as a termination "without good cause". The parties agree that the Employer may not change its Notice of Termination from being "without good cause" to being "with good cause". Upon delivery of the Notice of Termination by the Employer to the Employee, Employee may request reconsideration or he may sue at law for damages or he may do both.

- 12. Personal Information: Employee agrees to provide the Employer with complete pertinent information upon request. Such information shall be in the form of a completed application for employment as requested. Employee agrees to supplement or update such information in writing upon request of Employer.
- 13. Approval: Employer shall be the sole judge as to whether the Employee is performing his duties in a satisfactory manner.

Employee covenants and agrees that he will treat as confidential and will not, without the prior written approval of Employer, use (other than in the performance of his designated duties of Employer) or disclose in any manner either during or after the term of his employment hereunder any Trade Secret.

All records, notes, files, memoranda, reports, price lists, client lists, drawings, plans, sketches, documents, equipment, apparatus and like items, and all copies thereof, relating to the business of Employer or Trade Secrets, which shall be prepared by Employee or which shall be disclosed to or which shall come into the possession of the Employee, shall be and remain the sole and exclusive property of Employer. Employee agrees that at any time upon request from Employer, he will promptly deliver to Employer, as the case may be, the originals and all copies of any of the foregoing that are in his possession, custody or control, and any other property belonging to Employer.

- 14. Reproduction Rights: The Employer shall have the exclusive right to reproduce any design or invention completed by Employee during the term of his employment and to reproduce any design or invention produced from such design work, or to make any and all modifications to such design work and modifications produced therefrom which the Employer, in its sole discretion, may feel necessary or desirable.
- 15. Employee's Warranties: By executing this Agreement, Employee warrants:
  - (a) That Employee shall not infringe upon any statutory copyright, common law right, proprietary right, patent right, or any other right whatsoever in performing his duties;
  - (b) That any design work to be done by Employee shall contain no matter contrary to law; and

5

(c) That Employee will not invade the right of privacy by depicting persons or places in any design work without first obtaining the written release of privacy rights from all such persons or owners of such places and shall remit the originals of such release to the Employer. Employee agrees that the warranties contained herein are true as of the date of the execution of this Employment Agreement and shall remain true throughout the term of his employment, and Employee further agrees to indemnify and hold harmless the Employer from any and all claims arising from breaches of the aforesaid warranties.

16. Intellectual Property: The Employee specifically waives any rights he might be construed to have as a consequence of that industry convention which grants an employee the right to use for his, in whole or in part, after termination of his employment, any inventions, innovations or designs, etc. (hereinafter referred to as "Intellectual Property") susceptible to patent, registrations, copyright or other legal protection (hereinafter referred to as "Protection"), whether domestic or foreign, which he may originate during the term of his employment, using facilities or any other form of assistance provided by the Employer.

In the specialized case in which the Employee may originate on his own time, on other than Employer's premises, and with no assistance from Employer, including use of Employer's facilities, any Intellectual Property susceptible to Protection, it is understood that he shall have the right to exploit the same for his personal account (provided he personally undertakes the expense involved in establishing Protection). In such specialized case, however, the Employer shall have, and is hereby granted, a fully-paid royalty-free license to use in its own operation such Intellectual Property for the period of employment and for two (2) years thereafter.

With further respect to any item of Intellectual Property developed in the manner defined by the immediately preceding paragraph, in the event the Employee does not wish or is unable personally to pay for such Protection of any Intellectual Property, the Employer shall have the option to do so, but shall not be required to do so, and shall thereafter enjoy the sole proprietorship and ownership of such Intellectual Property without any duty or liability to Employee. The Employee shall make available to the Employer all the information at his disposal relating to such Intellectual Property, and shall cooperate with it in every way necessarily implied to obtain such Protection for the Employer.

Employee further agrees to execute whatever conveyances, assignments, bills of sale or other documents that may at any time become necessary to execute or to provide whatever further assurances Employer deems necessary in its sole discretion in order to perfect Employer's title to the rights to such Intellectual Property that Employer has been granted by this Agreement. Employee agrees not to incorporate in any writings composed by him such Intellectual Property or any other information of a proprietary nature or trade secrets (including but not limited to ideas or items susceptible to Protection) that may

6

belong to the Employer or subsequently come to, belong or be possessed by the Employer without the prior written consent of the Employer, which consent may be arbitrarily, unreasonably or capriciously withheld. In order to effectuate the rights granted to the Employer, pursuant to this paragraph, Employee agrees to submit all tracts, manuscripts, texts and writings he intends to publish to Employer prior to submitting them for publication to any publisher or causing them to be published himself. In the event the Employer determines the material submitted violates the provisions of this paragraph, the offending portions shall be deleted. It is further provided that if Employee disputes the Employer's decision, the dispute shall be decided by arbitration pursuant to the Florida Arbitration Code.

17. Restrictive Covenant: Employee recognizes that opportunities afforded him by Employer are valuable assets and of great personal benefit to him in his line of work, and therefor, provide sufficient basis for the restrictive covenants contained in this paragraph. In recognition of the above, and in further consideration of his employment by Employer, Employee further agrees that during the term of this Agreement and for a period of two (2) years from the date of any termination of his employment, whether by termination of this Agreement, by wrongful discharge, or otherwise, shall not directly or indirectly, in the United States or on offshore islands, engage in competition which the Employer or its affiliates of which at the time of such termination is conducting or has conducted business, nor in any State, territory or other countries in which the Employee knows that the Employer intends to extend, carry

on, or is carrying on, business by expansion of its activities. Competition of the Employer as referred to in this paragraph shall include but not be limited to business of the Employer as it now exists or may exist in the future, either as an individual on his own account, as a partner, joint venture, employee, agent, salesman or contractor for any person; an officer, director or stockholder of a corporation or otherwise. Solicitation or acceptance of business outside the restricted territories for purchase of, shipment to, or delivery of materials in any of the restricted territories shall constitute "engaging in business" in the restricted territories and by all reasons of this paragraph, be a violation of this paragraph. This covenant on the part of Employee shall be construed as an agreement independent of any other provision of this Agreement. The existence of any claim or cause of action of Employee against the Employer, whether predicated on this Agreement or otherwise, shall not constitute a defense to the enforcement by the Employer of this covenant. It is agreed by the parties hereto that if any portion of this non-compete covenant is held to be unreasonable, arbitrary or against public policy, the covenant herein shall be considered divisible both as to time and geographical area. Each month of the specified period shall be deemed a separate period of time. Each state of the United States of America, any other country, or territory shall be deemed a separate geographical area so that the lesser period of time or geographical area shall remain effective so long as the same is not unreasonable, arbitrary, or against public policy. The parties hereto agree that, in the event any court determines the specified time period or the specified geographical area to be unreasonable, arbitrary or against public policy, then a lesser time period or geographical area which is determined to be reasonable, non-arbitrary and not against public policy may be enforced against Employee.

- 18. Resolution of Disputes: In case of any conflicts or disputes, normal industry practices shall be considered but the decision of the Employer shall be final.
- 19. Entire Agreement: This Agreement represents the entire agreement between the parties with respect to employment and any matters not specifically mentioned herein shall not be binding on the parties.

7

- 20. Governing Law: This contract shall be governed by the laws of the State of Florida.
- $21.\ \text{Miscellaneous:}$  Whenever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall include all genders.
- 22. Waiver of Breach: The waiver by the Employer of a breach of any condition of this Agreement by Employee shall not be construed as a waiver of any subsequent breach by Employee.
- $\,$  23. Effective Date: This Agreement shall be effective as of January 18, 1999.
- 24. Notice: Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by certified or registered mail, return receipt requested, to the parties at the following addresses:

To the Employer:

CryoLife, Inc. c/o: Ronald McCall, Esquire Secretary/Treasurer 1655 Roberts Boulevard, N.W. Kennesaw, Georgia 30144

To the Employee:

Steven G. Anderson President & CEO 5040 Northside Drive Atlanta, Georgia 30327

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

WITNESSES:	CRYOLIFE, INC./EMPLOYER:				
	BY: /s/ Ronald D. McCall				
	RONALD D. MCCALL It's: Secretary/Treasurer				
	Attest: (SEAL)				
	/s/ Suzanne K. Gabbert				
	SUZANNE GABBERT It's: Assistant Secretary				
	EMPLOYEE:				
	/s/ Steven G. Anderson				
	STEVEN G. ANDERSON  Print or type name of Employee				

#### EMPLOYMENT AGREEMENT

In consideration of the promises hereinafter contained, CryoLife, Inc., a Florida corporation ("we", "our" and "us") and David M. Fronk ("you") hereby agree as of this 24th day of August, 1992 to the following:

- 1. Employment. We hereby employ you and you hereby accept employment on the terms and conditions set forth below. Your duties and compensation are set forth on the Exhibit attached hereto.
- 2. Extent of Services. During your employment, you agree to devote your full and exclusive time and attention to your employment duties and not to engage in any other business activity which conflicts or competes with our business or which reduces your effectiveness in performing your duties under this Agreement unless you have first obtained our prior written consent.
- 3. Benefits and Absences. You are entitled to all benefits offered by us for which you meet the eligibility requirements. You are subject to the obligations concerning absences due to disability, sick leave, and other absences, described in the current benefit summary schedule, and as revised hereafter.
- 4. Term and Termination. Your employment shall commence on the date of this Agreement. Both you and we shall have the right upon giving 30 days written notice to the other to terminate with or without cause the employment under this Agreement. However, if one party to this Agreement terminates the employment, the other party may at his option effect the separation immediately. This Agreement shall automatically terminate in the event of your death. Such automatic termination shall discharge both parties hereto from any and all further liability or responsibility to the other under this Agreement.
- 5. Right to Change Duties. We reserve the right to change the nature and scope of your duties. In the event of any transfer to another corporate facility, we shall defray the reasonable cost of transporting you and your family with household furnishings to your new location.
- 6. Secrecy and Noncompetition. Your employment and continued employment with us is conditioned upon your signing our standard Secrecy and Noncompete Agreement whose terms and agreements you agree to be bound by. You agree that under no condition will any breach or infraction of this Agreement be assertable as a defense to any action or responsibility incurred by you under the Secrecy and Noncompete Agreement.
- 7. Your Warranties. You present and warrant that you will not utilize or disclose any trade secrets or proprietary information of others to us and that the only secrecy and/or noncompetition agreements you have with others are identified on the attached exhibit.
- 8. Miscellaneous. This Agreement may not be changed or terminated orally and no change, termination or attempted waiver of the provisions hereof shall be binding unless in writing and signed by the parties against whom the same is sought to be enforced; provided, however, that the compensation paid to you hereunder may be increased at any time by us without in any way affecting any other term or condition of this Agreement which in all other respects shall remain in force and effect. This Agreement shall be governed by the laws of the State of Georgia.

IN WITNESS  $\,$  WHEREOF,  $\,$  this  $\,$  Agreement has been duly executed on the day and year first above written.

CRYOLIFE, INC.

By: /s/ Steven G. Anderson

-----

Its: President

EMPLOYEE

/s/ David M. Fronk

\_\_\_\_\_

#### MARKET PRICE OF COMMON STOCK

The Company's Common Stock is traded in the NYSE under the symbol "CRY." Prior to July 15, 1997, the Company's Common Stock was traded on the Nasdaq National Market under the symbol "CRYL." The following table sets forth, for the periods indicated, the intra-day high and low sale prices per share of Common Stock on the NYSE or the Nasdaq National Market, as applicable.

1998	High	Low
First quarter Second quarter Third quarter Fourth quarter	17 15/16 18 1/4 16 1/4 15 11/16	12 1/4 14 3/4 12 1/16 9 3/16
1997	High	Low
First quarter Second quarter Third quarter Fourth quarter	14 1/4 13 1/4 16 1/8 19	8 7 5/8 11 1/4 13

SELECTED FINANCIAL INFORMATION (In thousands except share data) December 31.

OPERATIONS	1998	1997	1996	1995	1994
Revenues	\$60,601	\$50,571	\$26.066	620 226	620 010
Net income		4,725			
	0,400	4,723	3,921	2,202	1,200
Research and development  as a percent of revenues	7.8%	7 0%	7.6%	0.0%	8.3%
as a percent of revenues	1.00	7.85	7.05	9.0%	8.35
EARNINGS PER SHARE (1),(2)					
Basic	\$0.54	\$0.49	\$0.41	\$0.23	\$0.14
Diluted	\$0.53	\$0.48	\$0.40	\$0.23	\$0.14
YEAR-END FINANCIAL POSITION					
mater) and the		CEA 400	624 072	604 130	601 417
Total assets		\$54,402			
Working capital		19,478 17,846			
Long-term liabilities	,	30,227	,		
Shareholders' equity Current ratio		4:1			
Current ratio Shareholders'	8:1	4;1	3:1	5:1	5:1
Shareholders.					
equity					
per diluted common shares (1),(2)	\$6.56	\$3.04	\$2.52	\$2.14	\$1.91

 ${\tt SELECTED} \ \ {\tt QUARTERLY} \ \ {\tt FINANCIAL} \ \ {\tt INFORMATION} \ \ ({\tt In} \ \ {\tt thousands} \ \ {\tt except} \ \ {\tt share} \ \ {\tt data})$ 

REVENUES	Year	Quarter	Quarter	Quarter	Quarter
	1998	\$14,561	\$15,554	\$16,014	\$14,562
	1997	10,411	12,641	14,569	12,950
	1996	8,372	9,644	10,211	8,639
NET INCOME					
	1998	\$1,172	\$2,048	\$1,902	\$1,364
	1997	952	1,160	1,458	1,155
	1996	782	988	1,261	896
EARNINS PER SHARE - DILUTED (1),(2)					
	1998	0.12	0.16	0.15	0.11
	1997	0.10	0.12	0.15	0.12
	1996	0.08	0.10	0.13	0.09

(1) Reflects adjustment for the 2-for-1 stock split effected June 28, 1996.

\_\_\_\_\_

(2) Presented, and where appropriate, restated to conform to Statement 128 requirements.

#### MANAGEMENT'S DISCUSSION AND ANALYSIS

#### Overview

The Company was organized in 1984 to address market opportunities in the area of biological implantable products and materials, and today is the leader in the cryopreservation of viable human tissue for cardiovascular, vascular, and orthopedic applications. A majority of the Company's current revenues are derived from the cryopreservation of human heart valves and conduits, reflecting CryoLife's initial exclusive focus on this area. The Company began cryopreserving aortic heart valves in 1984, pulmonary heart valves in 1986, and mitral heart valves in 1995. CryoLife has also expanded into the cryopreservation of other human tissue, including vascular tissue and connective tissue for the knee.

The Company pays a fee to an organ procurement agency or tissue bank at the time such organization consigns human tissue to the Company. The Company generates revenues from cryopreservation services by charging hospitals a fee, which covers the Company's services, the associated procurement fee and applicable shipping expenses. The Company records revenue upon shipping tissue. Costs associated with the procurement, processing and storage of tissue are accounted for as deferred preservation costs on the Company's consolidated balance sheet and are expensed when the tissue is shipped. The Company continually monitors cryopreserved tissue in its possession to determine its viability. Tissue determined not to be suitable for implantation is disposed of and the associated deferred preservation costs are expensed. As part of an effort to reduce its working capital needs, while simultaneously facilitating the use of cryopreserved tissue, the Company provides the liquid nitrogen freezers to a number of hospitals. The Company retains ownership of the liquid nitrogen freezers and, consequently, incurs associated depreciation charges. The hospitals are responsible for operating expenses related to the use of the liquid nitrogen freezers.

The Company has expanded, and intends to continue to expand, its portfolio of products and services. Much of this expansion has been accomplished through acquisitions of intellectual property and businesses. In 1992, the Company purchased for \$730,000 the exclusive distribution rights for a line of stentless aortic porcine heart valves and in 1996 purchased for \$275,000 a patent for an advanced design stentless pulmonary porcine heart valve, both of which the Company currently markets in Europe, South America, the Middle East and South Africa. Also in 1996, the Company purchased the patent for BioGlue, a surgical adhesive which the Company currently markets in Europe, South America, Asia, South Africa and the Middle East, and the Company acquired the assets of UCFI, a tissue processor, for \$750,000 in cash and a \$1.3 million note. In 1997, the Company acquired Ideas for Medicine, Inc. ("IFM") and its line of single-use medical devices for \$4.5 million in cash, a \$5.0 million convertible debenture and a commitment to pay additional cash consideration (not to exceed \$1.75 million) if certain target net revenues of IFM are exceeded.

On September 30, 1998 the Company completed the sale of substantially all of the IFM product line and certain related assets to Horizon Medical Products, Inc. ("Horizon"), for \$15 million in cash pursuant to an asset purchase agreement.

Concurrently, IFM and Horizon signed a manufacturing agreement which provides for the manufacture by IFM of specified minimum dollar amounts of IFM products to be purchased exclusively by Horizon over each of the four years following the sale. Thereafter, responsibility for such manufacturing is to be assumed by Horizon. The Company recorded deferred revenue at the transaction date totaling \$2.9 million, representing the selling price less the net book value of the assets sold, which included \$7.7 million of goodwill, net of accumulated amortization, and the costs related to the sale. The revenue was deferred because the sale and manufacturing agreements represent, in the aggregate, a single transaction for which the related income should be recognized over the term of the manufacturing agreement. Accordingly, the deferred revenue is being reflected in cost of goods sold over the four-year term of the manufacturing agreement in a manner which is expected to result in approximately equal margins over the four-year period on the products manufactured and sold by IFM to Horizon. During 1998 amortization of deferred revenue totaled \$387,000.

The composition of the Company's revenues is expected to change in future years, reflecting, among other things, the anticipated growth in shipments of human vascular tissue and human connective tissue for the knee, and the introduction into international markets of BioGlue Surgical Adhesive as well as other expected new products.

Results of Operations

Year Ended December 31, 1998 Compared to Year Ended December 31, 1997

Revenues increased 20% to \$60.7 million in 1998 from \$50.6 million in 1997. The increase in revenues was primarily due to the growing acceptance in the medical community of cryopreserved tissues, the Company's ability to procure greater amounts of tissue, price increases for certain cryopreservation services, revenues attributable to the Company's line of single-use medical devices following the IFM acquisition in March of 1997, and revenues attributable to the Company's introduction of BioGlue Surgical Adhesive in international markets in April 1998.

Revenues from human heart valve and conduit cryopreservation services increased 6% to \$30.8 million in 1998 from \$29.0 million in 1997, representing 51% and 57%, respectively, of total revenues during such periods. This increase in revenues was primarily due to a 6% increase in the number of heart allograft shipments due to an increased demand and the Company's ability to procure greater amounts of tissue.

Revenues from human vascular tissue cryopreservation services increased 36% to \$14.3 million in 1998 from \$10.5 million in 1997, representing 24% and 21%, respectively, of total revenues during such periods. This increase in revenues was primarily due to a 37% increase in the number of vascular allograft shipments due to an increased demand and the Company's ability to procure greater amounts of tissue.

Revenues from human connective tissue for the knee cryopreservation services increased 63% to \$7.7 million in 1998 from \$4.7 million in 1997, representing 13% and 9%, respectively, of total revenues during such periods. This increase

2.

in revenues was primarily due to a 50% increase in the number of allograft shipments due to increased demand and the Company's ability to procure greater amounts of tissue. Additional revenue increases resulted from a greater proportion of the 1998 shipments consisting of cryopreserved menisci, which have a significantly higher per unit revenue than the Company's cryopreserved tendons, and price increases for the cryopreservation of menisci and tendons.

Revenues from IFM increased 1% to \$5.7 million in 1998 from \$5.6 million in

1997, representing 9% and 11%, respectively, of total revenues during such periods. This increase in revenues is due to 1998 having two extra months of IFM revenue than 1997 due to the IFM acquisition closing on March 5, 1997, partially offset by the sale of the IFM product line to Horizon Medical Products, Inc., pursuant to which the Company became an OEM manufacturer of such products on October 1, 1998.

Revenues from bioprosthetic cardiovascular devices increased 33% to \$764,000 in 1998 from \$576,000 in 1997, representing 1% of total revenues during such periods. This increase in revenues was primarily due to a 36% increase in the number of bioprosthetic cardiovascular device shipments due to increased manufacturing capacity. Revenues in 1998 also benefited from the introduction of the CryoLife-Ross Pulmonary Valve into international markets in October 1998.

Revenues from BioGlue were \$883,000 for 1998. The Company introduced the product into international markets in April 1998.

Grant revenues increased to \$512,000 in 1998 from \$162,000 in 1997. This increase in grant revenues is primarily attributable to the SynerGraft research and development programs.

Other income increased to \$1,078,000 in 1998 from \$290,000 in 1997. Other income in 1998 relates primarily to proceeds from the sale of the Company's port product line.

Cost of cryopreservation services and products aggregated \$25.3 million in 1998 compared to \$17.8 million in 1997, representing 42% and 35%, respectively, of total cryopreservation and product revenues. The increase in 1998 of the cost of cryopreservation services and products as a percentage of revenues results from a lesser portion of 1998 revenues being derived from human heart valve and conduit cryopreservation services, which carry a significantly higher gross margins than other cryopreservation services, from increased manufacturing overhead costs associated with the Company's new manufacturing facilities, from the switch in October of 1998 to OEM manufacturing of single-use medical devices, which generates lower gross margins than cryopreservation services and lower gross margins than the IFM products generated prior to the sale of the IFM product line, compared with ten months of IFM sales in 1997, and from a one-time charge of \$500,000 associated with the start-up of the bioprosthetic

3

cardiovascular device manufacturing facility. The increase in the cost of cryopreservation services and products as a percentage of revenues was partially offset by a decrease in the IFM products sold in 1998 relative to those sold in 1997, which products generate lower gross margins than cryopreservation services, and the impact of the fourth quarter amortization of deferred revenue resulting from the sale of the IFM product line, which has the impact of reducing cost of goods sold.

General, administrative and marketing expenses increased 16% to \$23.9 million in 1998, compared to \$20.5 million in 1997, representing 40% and 41%, respectively, of total cryopreservation and product revenues in such periods. The increase in expenditures in 1998 resulted from expenses incurred to support the increase in revenues and costs associated with the introduction of BioGlue into international markets.

Research and development expenses increased 19% to \$4.7 million in 1998, compared to \$3.9 million in 1997, representing 8% of total cryopreservation and product revenues for each period. Research and development spending relates principally to the Company's focus on its bioadhesives and SynerGraft technologies.

Net interest income was \$820,000 in 1998 compared to net interest expense of \$970,000 in 1997. This variance is due to the repayment of certain indebtedness with the proceeds from the follow-on equity offering completed in April 1998, as well as the conversion of a portion of a convertible debenture into common stock of the Company, and the receipt of interest income on the invested proceeds from the follow-on equity offering (the "Offering").

The decline in the effective income tax rate to 25% in 1998 from 38% in 1997, is due to the implementation of certain income tax planning strategies including

the recognition of approximately \$600,000 of research and development tax credits during the fourth quarter of 1998, during which period studies were completed which quantified the amounts related thereto.

Year Ended December 31, 1997 Compared to Year Ended December 31, 1996

Revenues increased 37% to \$50.6 million in 1997 from \$36.9 million in 1996. The increase in revenues was primarily due to the growing acceptance in the medical community of cryopreserved tissues, the Company's ability to procure greater amounts of tissue, price increases for certain cryopreservation services and revenues attributable to the Company's line of single-use medical devices following the IFM acquisition in March 1997.

Revenues from human heart valve and conduit cryopreservation services increased 17% to \$29.0 million in 1997 from \$24.8 million in 1996, representing 57% and 67%, respectively, of total revenues during such years. This increase in revenues was primarily due to a 16% increase in the number of heart allograft shipments and the Company's ability to procure greater amounts of tissue.

Revenues from human vascular tissue cryopreservation services increased 28% to \$10.5 million in 1997 from \$8.2 million in 1996, representing 21% and 22%, respectively, of total revenues during such years. This increase in revenues was primarily due to a 22% increase in the number of vascular allograft shipments resulting from the introduction of cryopreserved tissues for new procedures, an increased demand for the Company's existing cryopreservation services and the Company's ability to procure greater amounts of tissue.

4

Revenues from human connective tissue for the knee cryopreservation services increased 38% to \$4.7 million in 1997 from \$3.4 million in 1996, representing 9% of total revenues during each year. This increase in revenues was primarily due to a 19% increase in the number of allograft shipments and a greater proportion of the 1997 shipments consisting of cryopreserved menisci, which have a significantly higher per unit revenue than the Company's cryopreserved tendons, and the Company's ability to procure greater amounts of tissue.

Revenues from the sale of bioprosthetic cardiovascular devices in 1997 were \$576,000 compared to \$385,000 in 1996, representing 1% of revenues during each year. Other revenues decreased to \$460,000 in 1997 from \$550,000 in 1996. Other revenues in 1997 consisted primarily of research grant award revenues related to the Company's SynerGraft technology.

Cost of cryopreservation services and products increased to \$17.8 million in 1997 from \$12.6 million in 1996. Cost of cryopreservation services and products as a percentage of revenues increased to 35% in 1997 from 34% in 1996. This increase was primarily due to the increased overhead costs associated with the new corporate headquarters and the addition of the IFM product line, partially offset by efficiencies gained with the increase in the number of allografts processed.

General, administrative and marketing expenses increased 31% to \$20.5 million in 1997 from \$15.7 million in 1996, representing 40% and 42%, respectively, of total revenues during such years. The increased expenses of approximately \$4.8 million were primarily attributable to increased costs associated with the Company's new corporate headquarters and increased fees paid to technical representatives and other marketing expenses relating to the growth in revenues and increases in general overhead expenses to support the growth in revenues.

Research and development expenses increased 19% to \$3.9 million in 1997, compared to \$2.8 million in 1996, representing 8% of total cryopreservation and product revenues for each year. The Company's research and development expenditures during 1997 were primarily for the development of bioadhesives for surgical applications and its SynerGraft technology.

#### Seasonality

The demand for the Company's human heart valve and conduit cryopreservation services is seasonal, with peak demand generally occurring in the second and third quarters. Management believes this demand trend for human heart valve and conduit cryopreservation services is primarily due to the high number of

surgeries scheduled during the summer months. Management believes the trends experienced by the Company to date for its human connective tissue for the knee cryopreservation services indicate this business may also be seasonal because it is an elective procedure which may be performed less frequently during the fourth quarter holiday months. However, the demand for the Company's vascular tissue cryopreservation services, bioprosthetic cardiovascular devices, single-use medical devices and BioGlue Surgical Adhesive does not appear to experience this seasonal trend.

5

#### Liquidity and Capital Resources

At December 31, 1998 net working capital was \$62.3 million, compared to \$19.5 million at December 31, 1997, with a current ratio of 8 to 1. The Company's primary capital requirements arise out of general working capital needs, capital expenditures for facilities and equipment, funding of research and development projects and a common stock repurchase plan approved by the board of directors in October of 1998. The Company historically has funded these requirements through bank credit facilities, cash generated by operations and equity offerings.

Net cash provided by operating activities was \$1.2 in 1998, as compared to net cash used in operating activities of \$2.2 million in 1997. This increase primarily resulted from an increase in net income, a decrease in the growth of deferred preservation costs due to more stringent inventory management policies, a decrease in the amount of accounts payable liquidated in the first quarter of 1998 as compared to the first quarter of 1997 due to shorter accounts payable payment terms, and a decrease in income taxes receivable, partially offset by an increase in receivables related to the increase in revenues and an increase in inventories to support the increase in sales of bioprosthetic valves and the introduction of BioGlue Surgical Adhesive.

Net cash used in investing activities was \$18.9 million in 1998, as compared to net cash used in investing activities of \$9.6 million in 1997. This increase was primarily attributable to the purchase of investments with the proceeds from the Company's follow-on equity offering and the absence of a business acquisition during 1998, partially offset by the net proceeds from the sale of the IFM product line.

Net cash provided by financing activities was \$30.5 million in 1998, as compared to \$10.6 million in 1997. This increase was primarily attributable to proceeds of \$45.4 million from the Offering, partially offset by the repayment of borrowings on the Company's bank loans, and accrued interest thereon, totaling \$13.3 million.

In October 1998 the Company entered into an agreement with an investment banking firm to provide financial advisory services related to a potential private placement of equity or equity-oriented securities to form a separate company for the commercial development of its serine proteinase light activation (FibRx(R)) technologies. This strategy will allow an affiliated entity to fund the FibRx technology and should expedite the commercial development of its blood clot dissolving and surgical sealant product applications without additional R&D expenditures by the Company. This strategy, if successful, will favorably impact the Company's liquidity going forward.

The Company anticipates its cash, short-term investments and cash generated from operations will be sufficient to meet its operating and development needs for at least the next 12 months. However, the Company's future liquidity and capital requirements beyond that period will depend upon numerous factors, including the timing of the Company's receipt of FDA approvals to begin clinical trials for its products currently in development, the resources required to further develop its marketing and sales capabilities if, and when, those products gain approval,

6

the resources required to expand manufacturing capacity and the extent to which the Company's products generate market acceptance and demand. There can be no assurance the Company will not require additional financing or will not seek to

raise additional funds through bank facilities, debt or equity offerings or other sources of capital to meet future requirements. These additional funds may not be available when needed or on terms acceptable to the Company, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Year 2000

The Company is aware of the issues that many companies will face as the year 2000 approaches. In order to become year 2000 compliant, the Company has set up a project team to address the issue and has taken the following steps:

Impact Assessment: The Company has identified potential year 2000 issues and the associated potential risks. The Company has assessed the impact of the year 2000 issue and believes that its business products and services will not be significantly impacted. Additionally, the Company has determined that, with the exception of the Company's clinical tracking database, all of the Company's financial and operational applications have been upgraded to or replaced with year 2000 compliant software.

Third Party Impact Assessments: The Company has begun to verify the readiness of its significant suppliers through the distribution of a questionnaire. This process was substantially completed by January 1, 1999. The Company does not anticipate that a lack of compliance of the vendors will significantly affect the Company's daily operations.

Project Plan: The Company began its compliance strategy in October 1997. With the exception of the clinical tracking database, all of the "off the shelf" software packages have been upgraded to compliant releases. Older internally developed software has been replaced with new systems that are year 2000 compliant. The remaining clinical tracking system will be internally rewritten, and implemented by the end of the first quarter 1999. The Company estimates all modifications and testing for year 2000 issues will be completed at a cost of less than \$50,000 including expenditures to date.

Contingency Plan: The principal risk the Company faces is a delay in the implementation of the new clinical tracking system. Although the clinical tracking system is not critical to the day-to-day operations of the Company, it is important for FDA compliance regarding follow-up procedures after transplant. A delay in the implementation of the new clinical tracking system would result in the Company having to rely on its paper support for required FDA data. Although the Company is uncertain what the costs associated with a delay would be or the related impact on operations, liquidity and financial condition, the Company does not expect the impact to be material. The Company expects to have a contingency plan completed by April 15, 1999.

7

The Company believes it is diligently addressing the year 2000 issue and expects that, through its actions, year 2000 problems are not reasonably likely to have a material adverse effect on its operations. However, there can be no assurance that such problems will not arise.

Recent Accounting Pronouncements

In 1997 the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("Statement 130") which established standards for the reporting and display of comprehensive income and its components in a full set of comparative general-purpose financial statements. The statement became effective for the Company in 1998. Comprehensive income is defined in Statement 130 as net income plus other comprehensive income, which, under existing accounting standards includes foreign currency items, minimum pension liability adjustments and unrealized gains and losses on certain investments in debt and equity securities. Comprehensive income disclosures are included in the Consolidated Statements of Shareholders' Equity and Comprehensive Income.

In June 1997, the FASB issued Statement No. 131 ("Statement 131"), "Disclosures about Segments of an Enterprise and Related Information", which requires public business enterprises to disclose certain information about reportable operating segments in complete sets of financial statements of the enterprise and in condensed financial statements of interim periods. It also requires public

enterprises to present certain "enterprise-wide" information, including revenues related to products and services and geographic areas in which they operate. Management does not review operating results on a "component" basis as described under the statement; accordingly, no separate disclosures have been made for segment information during the year ended December 31, 1998.

Quantitative and Qualitative Disclosures About Market Risk

The Company's interest income and expense are most sensitive to changes in the general level of U.S. interest rates. In this regard, changes in U.S. interest rates affect the interest earned on the Company's cash equivalents of \$12.9 million and short-term investments of \$16.1 million in municipal obligations as of December 31, 1998 as well as interest paid on its debt. To mitigate the impact of fluctuations in U.S. interest rates, the Company generally maintains 80% to 90% of its debt as fixed rate in nature. As a result, the Company is subject to a risk that interest rates will decrease and the Company may be unable to refinance its debt.

#### Forward-Looking Statement

This Annual Report includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act,") Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, including without limitation, (1) the effects on the Company of year 2000 issues including unanticipated expenses in connection therewith, (2) the Company's ability to find an equity investor in

8

the FibRx technology and the impact of such an investment on the Company's liquidity, (3) the adequacy of the Company's financing arrangements over the next twelve months, (4) the ability of the Synergraft heart valve to grow with the recipient and provide surgeons with a near-permanent heart valve replacement, (5) the impact of CryoLife's surgical adhesives on operating room procedures and (6) forecasted increases in international BioGlue Surgical Adhesive sales and other statements regarding future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts are forward-looking statements. These statements are based on certain assumptions and analyses made by the Company as well as other factors it believes are appropriate in the circumstances. However, whether actual results and developments will conform with the Company's expectations and predictions is subject to a number of risks and uncertainties which could cause actual results to differ materially from the Company's expectations, many of which are beyond the control of the Company. Consequently, all of the forward-looking statements made in this Annual Report are qualified by these risks and uncertainies, including without limitation, (1) government regulation of the Company's business, (2) the Company's competitive position, (3) the availability of tissue for implant, (4) the status of the Company's products under development, (5) the protection of the Company's proprietary technology and (6) the reimbursement of health care costs by third-party payors and there can be no assurance that the actual results or developments anticipated by the Company will be realized or that they will have the expected consequences to or effects on the Company or its business or operations. The Company assumes no obligation to update publicly any such forward-looking statements.

9

REPORT OF INDEPENDENT AUDITORS

ERNST & YOUNG LLP

Board of Directors and Shareholders

We have audited the accompanying consolidated balance sheets of CryoLife, Inc. as of December 31, 1998 and 1997, and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ending December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the 1998 and 1997 consolidated financial statements referred to above present fairly, in all material aspects, the consolidated financial position of CryoLife, Inc. at December 31, 1998 and 1997, and the consolidated results of its operations and its cash flows for each of the three years ended December 31, 1998, in conformity with generally accepted accounting principles.

/s/ Ernst & Young LLP

Atlanta, Georgia February 2, 1999

825065v1

# CryoLife, Inc. Consolidated Balance Sheets (in thousands, except per share data)

ASSETS December 31,	1998	1997
Current assets:		
Cash and cash equivalents	\$ 12,885	\$ 111
Marketable securities, at market	26,713	40
Receivables:		
Trade accounts, less allowance for doubtful accounts of \$256 in 1998 and \$103 in 1997	10,733	9,224
Income taxes	71	842
Other	383	271
Total receivables	11,187	10,337
Deferred preservation costs, less allowances		
of \$53 in 1998 and \$152 in 1997	14,239	12,257
Inventories	3,385	1,761
Prepaid expenses	1,945	1,260
Deferred income taxes	1,348	41
Total current assets	71,702	25 <b>,</b> 807
Property and equipment:		
Equipment	12,145	10,533
Furniture and fixtures	,	1,828
Leasehold improvements	14,254	8,247
Construction in progress	2,266	2,509

Less accumulated depreciation and amortization	31,676 10,216	23,117 7,630
Net property and equipment	21,460	15,487
Other assets:		
Goodwill, less accumulated amortization of \$215 in 1998 and \$468 in 1997 Patents, less accumulated amortization	1,685	9,809
of \$660 in 1998 and \$531 in 1997 Other, less accumulated amortization	2,216	2,196
of \$566 in 1998 and \$483 in 1997	1,327	1,103
Total assets	\$ 98,390	\$ 54,402

See accompanying notes to consolidated financial statements.

# CryoLife, Inc. Consolidated Balance Sheets (in thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' EQUITY		
December 31,	1998	1997
Current liabilities:		
Accounts payable	\$ 1,652	\$ 1,612
Accrued expenses	2,968	222
Accrued compensation	726	952
Accrued fees to technical service representatives	459	482
Accrued procurement fees	1,806	
Current maturities of capital lease obligation	224	
Current maturities of long-term debt	516	1,496
Deferred income	1,038	
Total current liabilities	9 <b>,</b> 389	6,329
Deferred income, less current amount	1,525	
Deferred income taxes	410	980
Capital lease obligations, less current maturities Revolving term loan	1,714	6,777
Convertible debenture	4,393	5,000
Other long-term debt	535	5,089
		<u>·</u>
Total liabilities	17,966 	24 <b>,</b> 175
Commitments and Contingencies		
Shareholders' equity:		
Preferred stock \$.01 par value per share;		
authorized 5,000 shares including 2,000		
shares of series A junior participating preferred		
stock; no shares issued.		
Common stock \$.01 par value per share;		
authorized 50,000 shares; issued 13,361		
shares in 1998 and 10,245 shares in 1997	134	102
Additional paid-in capital	64,350	17,694
Retained earnings	19 <b>,</b> 113 139	12,627
Unrealized gain on marketable securities Treasury stock; 845 shares in 1998 and 543	139	
shares in 1997, at cost	(3,312)	(180)
Note receivable from shareholder	(0,0±2)	
		(16)
Total shareholders' equity		(16) 30,227

Total liabilities and shareholders' equity \$ 98,390 \$ 54,402

See accompanying notes to consolidated financial statements.

2

# CryoLife, Inc. Consolidated Income Statements (in thousands, except per share data)

Year Ended December 31,	 1998	 1997	 1996
Revenues:			
Preservation services and products Research grants and licenses	\$ 60,179 512	\$ 50,409	\$ 36,678 188
	 60,691	 50,571	 36,866
Costs and Expenses:	 	 	 
Preservation services and products General, administrative and marketing Research and development Interest expense Interest income Other income, net	 4,708 670 (1,490)	17,764 20,548 3,946 978 (8) (290)	12,593 15,673 2,807 72 (189) (173)
	 52,020	 42,938	 30 <b>,</b> 783
Income before income taxes Income tax expense		7,633 2,908	6,083 2,156
Net income	\$ 6,486	\$ 4,725	\$ 3,927
Earnings per share: Basic	\$ 0.54	\$ 0.49	\$ 0.41
Diluted	\$ 0.53	\$ 0.48	\$ 0.40
Weighted average shares outstanding: Basic	 11,974	 9,642	 9,505
Diluted	 12,264	 9,942	 9,906

See accompanying notes to consolidated financial statements.

3

# CryoLife, Inc. Consolidated Statements of Cash Flows (in thousands)

Year Ended December 31,	1998	1997	1996
Net cash flows from operating activities:			
Net income	\$ 6,486 \$	4,725 \$	3,927

Adjustments to reconcile net income to net cash flows provided by (used in) operating activities:					
Deferred income recognized	(387)				
Depreciation of property and equipment	2,586		1,842		973
Amortization Provision for doubtful accounts	905 176		814 46		383 167
Deferred income taxes	(1,948)		972		242
Changes in operating assets and liabilities:	(1,310)		372		212
Trade and other receivables	(1,797)		(533)		(2,561)
Income taxes	771		(438)		(614)
Deferred preservation costs	(1,982)		(5,079)		(1,053)
Inventories	(3,010)		(864)		163
Prepaid expenses and other assets	(706)		(506)		(326)
Accounts payable	295		(2,756)		1,197
Accrued expenses	(158)		(468)		740
Net cash flows provided by (used in) operating activities			(2,245)		3,238
Net cash flows from investing activities:					
Capital expenditures	(6,693)		(5,059)		(8,481)
Cash paid for acquisitions, net of cash acquired			(4,418)		(722)
Net proceeds from sale of IFM product line	15,000				
Other assets	(752)		(148)		(939)
Purchases of marketable securities Sales of marketable securities	(34,277)				(3,013)
Gross unrealized gain on marketable equity securities	7,604 210		3		8,955
Net cash flows used in investing activities	(18,908)		(9,622)		(4,200)
Net cash flows from financing activities:					
Principal payments of debt	(13,990)		(6,607)		(750)
Proceeds from debt issuance	1,680		16,643		2,000
Principal payments on obligations under capital leases	(203)				
Proceeds from exercise of options and issuance of stock	46,298		567		561
Purchase of treasury stock Net payments on notes receivable from shareholders	(3,350) 16		 5		 5
Net payments on notes receivable from snareholders					
Net cash flows provided by financing activities:	30,451 		10,608		1,816 
Increase (decrease) in cash	12,774		(1,259)		854
Cash and cash equivalents, beginning of year	111		1,370		516
Cash and cash equivalents, end of year \$	12,885	 \$	111	\$	1,370
Supplemental disclosures of cash flow information - cash paid of	during the y	 ear	for:		
	742		920		34
Interest \$ Income taxes	3,568	Ş	2,380		2,529
Noncash investing and financing activities:					
Establishing capital lease obligation \$	2,141	\$ 			
Debt conversion into common stock \$	608	\$ 		\$ 	 
Purchase of property and equipment in accounts payable \$	185	\$	440	\$	888
Note issued for patent \$		\$		\$	826
Net cash paid for acquisition \$			1,768	 s	534
Cost in excess of assets acquired		Ÿ			1,873
Liabilities assumed			(891)		(435)
Notes issued for assets acquired			(5,000)		(1,250)
Fair value of assets acquired \$		\$	4,418	\$	722

	Common S	Shares					Notes	
	Outstar	nding	Additional		Unrealized		Receivables	
			Paid-In		Gains on	Treasury		Shareholders'
Shai	res	Amount	Capital	Earnings	Investments	Stock	Shareholders	Equity
Balance at December 31, 1995	9,431	\$100	\$16,568	\$3,975	\$28	\$(180)	\$ (26)	\$20,465
Net income				3,927				3,927
Unrealized gains on investments	s				(29)			(29)
Comprehensive income								3,898
Exercise of options	124	1	409					410
Employee stock purchase plan	2		21					21
Purchase of other assets	10		130					130
Payments on shareholder notes							5	5
Balance at December 31, 1996	9,567	101	17,128	7,902	(1)	(180)	(21)	24,929
Net income				4,725				4,725
Unrealized gains on investments	s				1			1
Comprehensive income								4,726
Exercise of options	105	1	298					299
Employee stock purchase plan	30							268
Additions to shareholder notes							(21)	(21)
Payments on shareholder notes							26	26
Balance at December 31, 1997	9,702	102	17,694	12,627		(180)	(16)	30,227
Net income				6,486				6,486
Unrealized gains on investments	s							139
Comprehensive income								6,625
Follow-on equity offering,								0,023
net of \$703 of offering costs	2 976	30	45,417					45,447
Exercise of options	100	1				121		460
Employee stock purchase plan	31					97		391
Convertible debenture	50	1						608
Purchase of treasury stock	(343)					(3,350)		(3,350)
Payment on shareholder note							16	16
Balance at December 31, 1998	12,516	\$134	\$64,350	\$19 <b>,</b> 113	\$139	\$ (3,312)	\$	\$80,424

See accompanying notes to the consolidated financial statements.

5

# CRYOLIFE, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

# 1. Summary of Significant Accounting Policies

#### Nature of Business

Founded in 1984, CryoLife, Inc. (the "Company") is the leader in the cryopreservation of viable human tissues for transplant, and is developing and commercializing additional implantable and single use non-implantable devices for use in vascular, cardiovascular and orthopaedic applications. The Company markets its viable human tissues in North and South America, Europe and Asia. The Company's bioprosthetic implantable products include stentless porcine heart valves marketed in Europe, South America, the Middle East and South Africa as well as a proprietary project to transplant human cells onto the structure of animal tissue. The Company also serves as an OEM manufacturer for single use medical devices for use in vascular surgical procedures. In addition, the Company develops proprietary implantable bioadhesives, including BioGlue surgical adhesive, which it has begun commercializing for vascular applications in Europe, South America, Asia, South Africa, and the Middle East. International revenues were \$4.0 million and \$2.7 million for 1998 and 1997, respectively.

#### Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany balances are eliminated.

Reclassifications

Certain prior year balances have been reclassified to conform to the 1998 presentation.

#### Use of Estimates

The consolidated financial statements have been prepared in conformity with generally accepted accounting principles and, as such, include amounts based on informed estimates and judgments of management with consideration given to materiality. Actual results could differ from those estimates.

#### Cash and cash equivalents

Cash equivalents consist primarily of highly liquid investments with insignificant interest rate risk and maturity dates of 90 days or less at the time of acquisition. The carrying value of cash equivalents approximates fair value.

#### Investments

The Company maintains cash equivalents and investments in several large well-capitalized financial institutions, and the Company's policy disallows investment in any securities rated less than "investments-grade" by national rating services.

Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designations as of each balance sheet date. Debt securities are classified as held-to-maturity when the Company has

6

the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are stated at amortized cost. Debt securities not classified as held-to-maturity or trading and marketable equity securities not classified as trading are classified as available-for-sale. Available-for-sale securities are stated at their fair values, with the unrealized gains and losses, net of tax, reported in a separate component of shareholders' equity. The amortized cost of debt securities classified as available-for-sale is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included in investment income. Realized gains and losses and declines in value judged to be other than temporary on available-for-sale securities are included in investment income. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available-for-sale are included in interest income. At December 31, 1998 and 1997, all marketable equity securities and debt securities were designated as available-for-sale.

# Deferred Preservation Costs and Revenue Recognition

Tissue is procured from deceased human donors by organ procurement organizations and tissue banks which consign the tissue to the Company for processing and preservation. Preservation costs related to tissue held by the Company are deferred until shipment to the implanting hospital. Deferred preservation costs consist primarily of laboratory expenses, tissue procurement fees, and freight-in charges and are stated at average cost, determined annually, on a first-in, first-out basis. When the tissue is shipped to the implanting hospital, revenue is recognized and the related deferred preservation costs are charged to operations. The Company does not require collateral or other security for its receivables.

# Inventories

Inventories are comprised of single-use medical devices, bioprosthetic implantable products, and implantable bioadhesives and are valued at the lower of cost (first-in, first-out) or market.

#### Property and Equipment

Property and equipment are stated at cost. Depreciation is provided over the estimated useful lives of the assets, generally 5 to 10 years, on a straight-line basis. Leasehold improvements are amortized on a straight-line basis over the lease term or the estimated useful lives of the assets, whichever is shorter.

#### Intangible Assets

Goodwill resulting from business acquisitions is amortized on a straight-line basis over 20 years. Patent costs are amortized over the expected useful lives of the patents (primarily 17 years) using the straight-line method. Other intangibles, which consist primarily of manufacturing rights and agreements, are being amortized over the expected useful lives of the related assets (primarily five years).

The Company periodically evaluates the recoverability of non-current tangible and intangible assets and measures the amount of impairment, if any, by assessing current and future levels of income and cash flows as well as other factors, such as business trends and prospects and market and economic conditions.

7

#### Income Taxes

Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Research Grant and License Revenues

Revenues from research grants are recognized in the period the associated costs are incurred. License revenues are recognized in the period the cash is received and all licenser obligations have been fulfilled.

Earnings Per Share and Stock Split

In 1997 the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 128, "Earnings per Share" ("Statement 128"). Statement 128 replaced the calculation of primary and fully diluted earnings per share with basic and diluted earnings per share. Unlike primary earnings per share, basic earnings per share excludes any dilutive effects of options, warrants and convertible securities. Diluted earnings per share is very similar to the previously reported fully diluted earnings per share. All earnings per share amounts for all periods have been presented, and where appropriate, restated to conform to the Statement 128 requirements.

On May 16, 1996, the Board of Directors declared a two-for-one stock split, effected in the form of a stock dividend, payable on June 28, 1996, to shareholders of record on June 7, 1996. All share and per share information in the accompanying consolidated financial statements has been adjusted to reflect such split.

#### Comprehensive Income

In 1997 the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("Statement 130") which established standards for the reporting and display of comprehensive income and its components in a full set of comparative general-purpose financial statements. The statement became effective for the Company in 1998. Comprehensive income is defined in Statement 130 as net income plus other comprehensive income, which, under existing accounting standards, includes foreign currency items, minimum pension liability adjustments and unrealized gains and losses on certain investments in debt and equity securities. Comprehensive income disclosures are included in the Consolidated Statements of Shareholders' Equity and Comprehensive Income.

8

On April 3, 1998 the Company completed a follow-on equity offering (the "Offering") of 2,588,000 new shares of its common stock resulting in net proceeds of \$39.4 million. On April 16, 1998 the Company issued an additional 387,500 shares of common stock pursuant to the underwriters' overallotment option resulting in \$6.0 million of additional net proceeds to the Company. A portion of the net proceeds were used to repay \$13.3 million of principal and interest outstanding under the Company's bank loans.

#### 3. Ideas For Medicine, Inc.

On March 5, 1997 the Company acquired the stock of Ideas for Medicine, Inc. ("IFM"), a medical device company specializing in the manufacture and distribution of single use medical devices, for consideration of approximately \$4.5 million in cash and approximately \$5.0 million in convertible debentures plus related expenses. The cash portion of the purchase price was financed by borrowings under the Company's Revolving Term Loan Agreement. Pursuant to the purchase agreement, additional consideration equal to 10 percent of IFM's net annual revenues in excess of \$7.5 million is to be paid each year for a 10 year period, limited to \$1.75 million in the aggregate. The acquisition was accounted for as a purchase; accordingly, the results of operations have been included in the accompanying 1998 and 1997 consolidated income statements from the date of acquisition. Based on the allocation of the purchase price, the Company's unaudited condensed pro forma results of operations for 1997, assuming consummation of the purchase as of January 1, 1997 and 1996, are as follows (in thousands, except per share data):

	1997	1996
Revenues	\$52 <b>,</b> 082	\$43,574
Net income	4,756	3,511
Earnings per share:		
Basic	\$0.49	\$0.37
Diluted	0.48	0.35

In connection with this acquisition, the Company also entered into a consulting agreement with the former majority shareholder of IFM requiring monthly payments to such shareholder of approximately \$17,000 until March 2002.

On September 30, 1998 the Company completed the sale of substantially all of the IFM product line and certain related assets to Horizon Medical Products, Inc. ("Horizon"), for \$15 million in cash pursuant to an asset purchase agreement. Concurrently, IFM and Horizon signed a manufacturing agreement which provides for the manufacture by IFM of specified minimum dollar amounts of IFM products to be purchased exclusively by Horizon over each of the four years following the sale. Thereafter, responsibility for such manufacturing is to be assumed by Horizon.

9

The Company recorded deferred revenue at the transaction date totaling \$2.9 million, representing the selling price less the net book value of the assets sold, which included \$7.7 million of goodwill, net of accumulated amortization, and the costs related to the sale. The revenue was deferred because the sale and manufacturing agreements represent, in the aggregate, a single transaction for which the related income should be recognized over the term of the manufacturing agreement. Accordingly, the deferred revenue is being reflected in cost of goods sold over the four-year term of the manufacturing agreement in a manner which is expected to result in approximately equal margins over the four-year period on the products manufactured and sold by IFM to Horizon. During 1998 amortization of deferred revenue totaled \$387,000.

## 4. Marketable Securities

The following is a summary of available-for-sale securities (in thousands):

December 31, 1998	Cost		Unrealized Holding Gains		Estimated Market Value	
Municipal obligations Equity securities	\$	24,963	\$	35 175	\$	24,998 10,615

\$ 35,403	3 \$	210 \$	35,613
C 2F 401	) Ċ	010 6	2 5 6 1 2

		===		=======	
Debt securities	\$	40	\$	\$	40
December 31, 1997	Cost		Holding Gains	Market	Value
			Unrealized	Estima	ated

The gross realized gains on sales of available-for-sale securities totaled \$4,000 and \$0 in 1998 and 1997, respectively. Differences between cost and market of \$210,000 (less deferred taxes of \$71,000) are included as a separate component of shareholders' equity as of December 31, 1998.

At December 31, 1998 approximately \$8.9 million of debt securities with original maturities of 90 days or less at their acquisition dates were included in cash and cash equivalents. At December 31, 1998 approximately \$16.1 million of investments mature between one and five years. The market values of these securities approximate cost.

1.0

#### 5. Inventories

Inventories at December 31 are comprised of the following (in thousands):

	1998	1997	
Raw materials	\$ 1,296	\$ 262	
Work-in-process	1,037	358	
Finished goods	1,052	1,141	
	\$ 3,385	\$ 1,761	
	=====	=====	

#### 6. Long-Term Debt

Long-term debt at December 31 consists of the following (in thousands):

	1998	1997
Revolving loan	\$	\$6,777
Term loan due in equal monthly installments of \$83,000 plus interest at prime through December 31, $2002$		5,000
7% convertible debenture, due in March 2002	4,393	5,000
8.25% note payable due in equal annual installments of \$250,000	750	1,000
Note payable due in 2000 with an effective interest rate of 8%, net of unamortized discount of \$29,000 in 1998		
and \$35,000 in 1997	301	585
	5,444	18,362
Less current maturities	516	1,496
Total long-term debt	\$4,928	\$16,866
	=====	======

On August 30, 1996 the Company executed a \$10 million revolving loan agreement (the "Agreement") with a bank which, as amended on June 12, 1998, permits the Company to borrow up to \$2.0 million at either the bank's prime rate of interest (7.75% at December 31, 1998) or at Adjusted LIBOR, as defined, plus an

applicable LIBOR margin. The Agreement expires on December 31, 1999; all borrowings outstanding on that date convert to a term loan to be paid in 60 equal monthly installments of principal plus interest at either the bank's prime rate of interest or at Adjusted LIBOR, as defined, plus an applicable LIBOR

11

margin. The Agreement contains certain restrictive covenants including, but not limited to, maintenance of certain financial ratios and a minimum tangible net worth requirement. The Agreement is secured by substantially all of the Company's assets, including IFM's stock but excluding intellectual property. Commitment fees are paid based on the unused portion of the facility. In December 1997 the Company amended the Agreement to also include a \$5.0 million term loan facility with the bank at the bank's prime rate of interest or Adjusted LIBOR, as defined, plus an applicable LIBOR margin. In conjunction with the Offering, the revolving and term loans were paid in full in April 1998.

In March 1997 the Company issued a \$5.0 million convertible debenture in connection with the IFM acquisition. The debenture bears interest at 7% and is due in March 2002. The debenture is convertible into common stock of the Company at any time prior to the due date at \$12.08 per common share. In conjunction with the Offering, \$608,000 of the convertible debenture was converted into 50,000 shares of the Company's common stock on March 30, 1998.

On September 12, 1996 the Company acquired the assets of United Cryopreservation Foundation, Inc. ("UCFI"), a processor and distributor of cryopreserved human heart valves and saphenous veins for transplant. The Company issued a \$1.25 million note in connection with the acquisition. The note bears interest at prime, as adjusted annually on the anniversary date of the acquisition.

In April 1996 the Company issued a \$910,000 non-interest bearing note in connection with the acquisition of its BioGlue(R) technology. The note is payable in three annual installments of \$290,000, plus a final payment of \$40,000 at maturity.

Scheduled maturities of long-term debt for the next five years are as follows (in thousands):

\$516	1999
285	2000
250	2001
4,393	2002
\$5,444	
=====	

#### 7. Fair Values of Financial Instruments

Statement of Financial Accounting Standards No. 107, "Disclosures about Fair Value of Financial Instruments" ("Statement 107"), requires the Company to disclose estimated fair values for its financial instruments. The carrying amounts of receivables and accounts payable approximate their fair values due to the short term maturity of these instruments.

In 1997 the Company entered into two interest rate swap agreements with the lender under the Agreement, maturing on dates through January 1999, which effectively fixes the interest rate on \$2.0 million of available borrowings through such dates. The estimated fair values of the Company's interest rate swap agreements and its outstanding debt approximate their carrying amounts at December 31, 1998.

12

# 8. Leases

The Company leases equipment, furniture, and office space under various leases with terms of up to 15 years. Commencing January 5, 1998 IFM leased office and manufacturing facilities under a capital lease for \$24,125 per month through January 2008 from the former majority shareholder of IFM. Certain leases contain

escalation clauses and renewal options for additional periods. Future minimum lease payments under noncancelable leases as of December 31, 1998 are as follows (in thousands):

	C	Capitalized Leases	Operating Leases
1999	\$	371	\$ 1,369
2000		310	1,368
2001		290	1,281
2002		290	984
2003		290	966
Thereafter		1,132	8,025
Total minimum lease payments		2 <b>,</b> 683	\$ 13,993
Less amount representing interest		745	 
Present value of net minimum			
lease payments		1,938	
Less current portion		224	
	\$	1,714	

Property acquired under capital leases at December 31, 1998 consists of the following (in thousands):

Buildings	\$ 1,987
Furniture and fixtures	150
	2,137
Accumulated depreciation	255
	\$ 1,882

Total rental expense for operating leases amounted to 1,321,000, 1,282,000 and 1998, 1997 and 1996, respectively.

13

### 9. Stock Option Plans

The Company has stock option plans which provide for grants of options to employees and directors to purchase shares of the Company's common stock at exercise prices generally equal to the fair values of such stock at the dates of grant, which generally become exercisable over a five-year vesting period and expire within ten years of the grant dates. Under the 1993 Employee Incentive Stock Option Plan, the 1998 Long-Term Incentive Plan, and the amended and restated Non-employee Director's Plan, the Company has authorized the grant of options of up to 700,000, 300,000, and 396,000 shares of common stock, respectively. As of December 31, 1998 and 1997, there were 569,000 and 306,000 shares of common stock reserved for future issuance under the Company's stock option plans. A summary of stock option transactions under the plans follows:

	Shares	Exercise Price	Weighted Average Exercise Price
Outstanding at December 31, 1995	590,000	\$2.25-7.74	\$ 4.21
Granted	247,000	8.5-18.43	15.70
Exercised	(124,000)	2.26-7.26	3.31
Canceled	(5,000)	2.25-3.75	3.68
Outstanding at December 31, 1996	708,000	2.25-18.43	7.36
Granted	201,000	10.25-15.88	11.97
Exercised	(105,000)	2.25-7.50	2.85

Canceled	(50,000)	2.25-16.75	10.06
Outstanding at December 31, 1997	754,000	3.00-18.43	8.95
Granted	331,000	12.00-17.13	15.48
Exercised	(103,000)	3.12-10.25	4.80
Canceled	(155,000)	3.12-18.43	16.03
	=========		
Outstanding at December 31, 1998	827,000	3.00-17.13	10.73

The following table summarizes information concerning currently outstanding and exercisable options:

Options Outstanding				Options Exercisable		
Ranç	ge of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ \$	3.00-7.75 8.50-13.50 14.19-17.13	293,000 295,000 239,000	1.5 4.5 5.4	\$ 4.68 11.66 17.01	206,000 115,000 184,000	\$ 4.50 11.19 17.05

14

The Company has elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" and related Interpretations ("APB 25") in accounting for its employee stock options because, as discussed below, the alternative fair value accounting provided for under Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" ("Statement 123") requires use of option valuation models that were not developed for use in valuing employee stock options. Under APB 25, because the exercise price of the Company's employee stock options equals the market price of the underlying stock on the date of the grant, no compensation expense is recognized.

Pro forma information regarding net income and earnings per share is required by Statement 123, which also requires that the information be determined as if the Company has accounted for its employee stock options granted subsequent to December 31, 1994 under the fair value method of that Statement. The fair values for these options were estimated at the dates of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

	1998	1997	1996	
Expected dividend yield	0 8	0%	0 응	
Expected stock price volatility	.520	.533	.561	
Risk-free interest rate	5.30%	5.75%	6.51%	
Expected life of options	3.8 Years	4.7 Years	4.8 Years	

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

For purposes of pro forma disclosures, the estimated fair values of the options are amortized to expense over the options' vesting periods. The Company's proforma information follows (in thousands, except per share data):

	1998	1997	1996
Net incomeas reported Net incomepro forma	\$6,486 \$5,705	\$4,725 \$4,164	\$3,927 \$3,542
Earnings per shareas reported:			

Basic	\$ .54	\$ .49	\$ .41
Dilutive	\$ .53	\$ .48	\$ .40
Earnings per sharepro forma:			
Basic	\$ .48	\$ .43	\$ .37
Dilutive	\$ .47	\$ .42	\$ .36

15

Other information concerning stock options follows:

	1998	1997	1996
Weighted average fair value of options granted during the year	\$6.54	\$6.69	\$8.34
Number of shares as to which options are exercisable at end of year	505,000	308,000	157,000

Because Statement 123 is applicable only to options granted subsequent to December 31, 1994, its pro forma effect will not be fully reflected until 1999.

#### 10. Shareholder Rights Plan

On November 27, 1995 the Board of Directors adopted a shareholder rights plan to protect long-term share value for the Company's shareholders. Under the plan, the Board declared a distribution of one Right for each outstanding share of the Company's Common Stock to shareholders of record on December 11, 1995. Additionally, the Company has further authorized and directed the issuance of one Right with respect to each Common Share that shall become outstanding between December 11, 1995 and the earliest of the Right's exercise date or expiration date. Each Right entitles the registered holder to purchase from the Company one-tenth of a share of a newly created Series A Junior Participating Preferred Stock, at an exercise price of \$100. The rights, which expire on November 27, 2005, may be exercised only if certain conditions are met, such as the acquisition of 15 percent or more of the Company's Common Stock by a person or affiliated group ("Acquiring Person").

In the event the Rights become exercisable, each Right will enable the owner, other than the Acquiring Person, to purchase, at the Right's then current exercise price, that number of shares of Common Stock with a market value equal to twice the exercise price. In addition, unless the Acquiring Person owns more than 50% of the outstanding shares of Common Stock, the Board of Directors may elect to exchange all outstanding Rights (other than those owned by such Acquiring Person) at an exchange ratio of one share of Common Stock, or one-tenth of a Preferred Share per Right.

# 11. Stock Repurchase

On October 14, 1998, the Company's Board of Directors authorized the Company to purchase up to 1 million shares of its common stock. The purchase of shares will be made from time to time in open market or privately-negotiated transactions on such terms as management deems appropriate. As of December 31, 1998, the Company had purchased 343,000 shares of its common stock for an aggregate purchase price of \$3,350,000.

16

#### 12. Employee Benefit Plans

The Company has a 401(k) savings plan (the "Plan") providing retirement benefits to all employees who have completed at least six months of service. The Company makes matching contributions of 50% of each participant's contribution up to 5% of each participant's salary. Total Company contributions approximated \$241,000, \$139,000 and \$123,000 for 1998, 1997, and 1996, respectively. Additionally, the Company may make discretionary contributions to the Plan that are allocated to each participant's account. No such discretionary contributions were made in 1998, 1997 or 1996.

On May 16, 1996 the Company's shareholders approved the CryoLife, Inc. Employee Stock Purchase Plan (the "ESPP"). The ESPP allows eligible employees the right to purchase common stock on a quarterly basis at the lower of 85% of the market price at the beginning or end of each three-month offering period. As of December 31, 1998 and 1997 there were 543,000 and 566,000 shares of common stock reserved under the ESPP and there had been 57,000 and 34,000 shares issued under the plan, respectively.

#### 13. Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share (in thousands, except per share data):

	1998	1997	1996
Numerator for basic and diluted earnings per share - income available to common			
shareholders	\$6,486	\$4,725	\$3,927
			=======
Denominator for basic earnings per share			
- weighted-average basis	11,974	9,642	9,505
Effect of dilutive stock options	290	300	401
Denominator for diluted earnings per share - adjusted weighted-average			
shares	12,264	9,942	9,906
Basic earnings per share	\$ 0.54	\$ 0.49	\$ 0.41
	========	=======	========
Diluted earnings per share	\$ 0.53	\$ 0.48	\$ 0.40
	========	========	========

17

## 14. Income Taxes

Income tax expense consists of the following (in thousands):

	1998	1997	1996
Current: Federal	\$3,854	\$1,533	\$1,573
State	279	403	341
	4,133	1 026	1,914
Deferred	(1,948)	1,936 972	242
	\$2,185	\$2,908	\$2,156
	=====	=====	=====

Such amounts differ from the amounts computed by applying the U.S. Federal income tax rate of 34% to pretax income as a result of the following (in thousands):

	1998	1997	1996
Tax expense at statutory rate	\$2,947	\$2,593	\$2,068
<pre>Increase (reduction) in income taxes resulting from:</pre>			
Change in valuation allowance for			
deferred tax assets		(30)	(129)
Entertainment expenses	90	42	30
State income taxes, net of federal benefit	173	266	241
Non-taxable interest income	(63)		(50)
Research and development credits	(585)		

18

The tax effects of temporary differences which give rise to deferred tax liabilities and assets at December 31 are as follows (in thousands):

	1998	1997
Long-term deferred tax liabilities/(assets):		
Depreciation	\$1,537	\$1,018
Deferred income	(580)	
Intangible assets	(547)	(38)
	410	980
Current deferred tax assets/(liabilities):		
Accrued expenses	872	
Deferred income	394	
Allowance for bad debts	97	
Deferred preservation costs and inventory reserves	20	58
Unrealized gain on marketable securities	(71)	
Other	36	(17)
	1,348	41
Net deferred tax assets /(liabilities)	\$938	\$ (939)
	====	=====

#### 15. FDA Regulation

Human heart valves historically have not been subject to regulation by the United States Food and Drug Administration (the "FDA"). However, in June 1991 the FDA published a notice stating that human heart valves for transplantation are medical devices subject to Premarket Approval ("PMA") or an Investigational Device Exemption ("IDE"). In October 1994 the FDA announced in the Federal Register that neither an approved application for PMA nor an IDE is required for processors and distributors who had marketed heart valve allografts before June 1991. This action by the FDA has removed allograft heart valves from clinical trial status thus allowing the Company to distribute such valves to cardiovascular surgeons throughout the United States.

### 16. Executive Insurance Plan

Pursuant to a supplemental life insurance program for certain executive officers of the Company, the Company and the executives share in the premium payments and ownership of insurance policies on the lives of such executives. The Company's aggregate premium contributions under this program were \$43,000, \$38,000 and \$37,000 for 1998, 1997 and 1996, respectively.

19

#### 17. Equipment on Loan to Implanting Hospitals

The Company consigns liquid nitrogen freezers with certain implanting hospitals for tissue storage. The freezers are the property of the Company. At December 31, 1998 freezers with a total cost of approximately \$1,540,000 and related accumulated depreciation of approximately \$901,000 were located at the implanting hospitals' premises. Depreciation is provided over the estimated useful lives of the freezers on a straight-line basis.

#### 18. Transactions with Related Parties

The Company expensed \$68,000, \$65,000 and \$39,000 during 1998, 1997 and 1996, respectively, relating to services performed by a law firm whose sole proprietor is a member of the Company's Board of Directors and a shareholder of the Company. The Company expensed \$75,000 in 1998 relating to consulting services performed by a member of the Company's Board of Directors and a shareholder of the Company. The Company expensed \$210,000 and \$175,000 in 1998 and 1997 relating to consulting services performed by a shareholder of the Company.

EXHIBIT 21.1

# SUBSIDIARIES OF CRYOLIFE, INC.

Subsidiary

Jurisdiction

Ideas for Medicine, Inc. CryoLife Technology, Inc. CryoLife Foreign Sales, Inc.

Florida Nevada Barbados

#### CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in this Annual Report (Form 10-K) of CryoLife, Inc. of our report dated February 2, 1999, included in the 1998 Annual Report to Shareholders of CryoLife, Inc.

Our audits also included the financial statement schedule of CryoLife, Inc. listed in Item 14(a). This schedule is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audits. In our opinion, as of the date of our report referred to in the preceding paragraph, the financial statement schedule referred to above, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also consent to the incorporation by reference in Registration Statement No. 333-16581 on Form S-3 and Registration Statement Nos. 33-83996, 33-84048, 333-03513, 333-59853, 333-59849, 333-06141 and 333-34025 on Form S-8, of our report dated February 2, 1999, with respect to the consolidated financial statements incorporated herein by reference, and our report included in the preceding paragraph with respect to the financial statement schedule included in this Annual Report (Form 10-K) of CryoLife, Inc.

Atlanta, Georgia March 26, 1999

#### <ARTICLE>5

## <LEGEND>

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE FINANCIAL STATEMENTS OF CRYOLIFE, INC. FOR THE YEAR ENDED DECEMBER 31 1998 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

<pre><period-type> <fiscal-year-end> <period-start> <period-end> <cash> <securities> <receivables> <allowances> <inventory> <current-assets> <pp&e> <depreciation> <total-assets> <current-liabilities> <bonds> <preferred-mandatory> <preferred-mandatory> <preferred> <common> <other-se> <total-liability-and-equity> <sales> <total-revenues> <cgs> <total-costs> <other-expenses> <loss-provision> <interest-expense> <income-pretax> <income-pretax> <income-continuing> <discontinued> <extraordinary>  </extraordinary></discontinued></income-continuing></income-pretax></income-pretax></interest-expense></loss-provision></other-expenses></total-costs></cgs></total-revenues></sales></total-liability-and-equity></other-se></common></preferred></preferred-mandatory></preferred-mandatory></bonds></current-liabilities></total-assets></depreciation></pp&e></current-assets></inventory></allowances></receivables></securities></cash></period-end></period-start></fiscal-year-end></period-type></pre>	YEAR DEC-31-1998 JAN-01-1998 DEC-31-1998 12,885,000 26,713,000 10,733,000 256,000 3,385,000 71,702,000 31,676,000 10,216,000 98,390,000 9,389,000 7,382,000 0 134,000 80,290,000 98,390,000 7,353,000 60,691,000 5,118,000 25,303,000 26,717,000 176,000 8,671,000 2,185,000 6,486,000 0 6,486,000