SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended

Commission File No. 0-26224

December 31, 1998

INTEGRA LIFESCIENCES CORPORATION (Exact name of registrant as specified in its charter)

Delaware

51-0317849

(State or other jurisdiction of incorporation or organization)

(I.R.S. employer identification no.)

105 Morgan Lane

Plainsboro, New Jersey

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (609) 275-0500

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

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

Common Stock, par value \$.01 per share

(Title of class)

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

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

The aggregate market value of the registrant's Common Stock held by non-affiliates of the registrant as of March 25, 1999 was approximately \$18.8 million. (Reference is made to page 25 herein for a statement of the assumptions upon which this calculation is based).

The number of shares of the registrant's Common Stock outstanding as of March 25, 1999 was 15,782,678.

# DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive proxy statement relating to its scheduled May 17, 1999 Annual Meeting of Stockholders are incorporated by reference in Part III of this report.

### ITEM 1. BUSINESS

Integra LifeSciences Corporation (hereinafter referred to as "Integra" or the "Company") was incorporated in Delaware in June 1989. Integra develops, manufactures and markets medical devices, implants and biomaterials primarily used in the treatment of burns and skin defects, spinal and cranial disorders, orthopedics and other surgical applications. Integra seeks to be the world's leading company specializing in implantable medical and biopharmaceutical therapies to target and control cell behavior, and to build shareholder value by acquiring, discovering, and developing cost-effective, off-the-shelf products that satisfy unmet medical needs.

Headquartered in Plainsboro, New Jersey, Integra markets its products directly as well as through marketing partners and distributors both domestically and internationally in more than 29 countries. The Company's customers include burn, trauma, plastic and reconstructive surgeons, neurosurgeons, orthopedic surgeons, operating room nurses, private label purchasers, and hospital administrators. Integra products include Helistat(R), DuraGen(TM), VitaCuff(TM), BioPatch(TM), BioMend(R), and INTEGRA(R) Artificial Skin, Dermal Regeneration Template(TM) ("INTEGRA(R) Artificial Skin").

The Company's business strategy has been to selectively acquire and further develop several platforms of synergistic biomaterials and technologies. The Company uses the technologies and proprietary processes it owns and licenses to fabricate devices manufactured from collagen and other components. Once surgically implanted, these devices serve as temporary structures intended to support regeneration of functional tissues. These products are engineered precisely for specific tissues and are resorbed into the body during the regeneration process. INTEGRA(R) Artificial Skin and DuraGen(TM) are the first in a series of products that the Company is developing to regenerate a variety of body tissues, including skin, dura, peripheral nerve, bone, articular cartilage and cardiovascular graft.

The Company also develops, sells and has substantial manufacturing experience with FDA-regulated medical products that serve a broad range of applications, including drug delivery, surgical hemostasis (the control of bleeding), infection control, dental surgery and wound care. These products are sold primarily through marketing relationships with a number of established medical companies, including Arrow International, Inc., Bard Access Systems, Inc., the Sulzer Calcitek Division of Sulzermedica ("Sulzer Calcitek"), Johnson & Johnson Medical, Inc. ("J&J Medical"), and Johnson & Johnson Professional, Inc. ("J&J Professional"). The Company's commercial products use many of the same biomaterials, manufacturing processes, and materials engineering techniques.

The Company believes its management and scientific team, development and manufacturing experience, proprietary technological position and relationships with established medical and scientific institutions position it to achieve its objectives. The Company's research implementation has been to maintain a relatively small core of scientists and researchers within the Company and to conduct a large portion of its research and product development through arrangements with independent medical research centers. The Company believes this provides a cost-effective approach to managing its research and product development efforts, while maintaining the ability to respond quickly and effectively to technological changes.

The Company is actively engaged in the following three business areas, each of which is described in detail below: (1) Skin Defects and Burns; (2) Medical Products; and (3) Developing Businesses and Ventures.

The repair of skin defects and burns business encompasses INTEGRA(R) Artificial Skin, the Company's leading commercial product, Panafil(R) debriding and wound healing agent, and a pipeline of new products including the development of a second generation of INTEGRA(R) Artificial Skin utilizing a peptide/collagen matrix for enhanced healing, as well as a number of wound care products under development.

The Company believes the annual severe burn market is approximately \$75 million worldwide, and that the annual market for all burns and scar revision procedures is estimated to be \$350 million worldwide. Additional indications for plastic surgery and acute wound procedures increase the estimated market to over \$1 billion worldwide.

### INTEGRA(R) Artificial Skin

INTEGRA(R) Artificial Skin is designed to enable the human body to regenerate functional dermal tissue. Human skin consists of the epidermis (the thin, outer layer that serves as a protective seal for the body) and the dermis (the thicker layer underneath that provides structural strength and flexibility). The dermis also supports the viability of the epidermis through a vascular network.

The body normally responds to severe damage to the dermis by producing scar tissue in the wound area. This scar tissue is accompanied by contraction that pulls the edges of the wound closer which, while closing the wound, often permanently reduces flexibility. In severe cases, this contraction leads to a reduction in the range of motion for the patient, who subsequently requires extensive physical rehabilitation or reconstructive surgery. Physicians treating severe wounds, such as full-thickness burns, seek to minimize scarring and contraction. INTEGRA(R) Artificial Skin was designed to minimize scar formation and wound contracture in full thickness skin defects.

INTEGRA(R) Artificial Skin consists of two layers, a thin collagen-glycosaminoglycan ("GAG") sponge and a silicone membrane. The product is applied with the sponge layer in contact with the excised wound. The collagen-GAG sponge material serves as a template for the growth of new functional dermal tissue. The outer membrane layer acts as a temporary substitute for the epidermis to control water vapor transmission, prevent re-injury and minimize bacterial contamination.

INTEGRA(R) Artificial Skin was approved by the FDA under a premarket approval application ("PMA") for the post-excisional treatment of life-threatening full-thickness or deep partial-thickness thermal injury where sufficient autograft is not available at the time of excision or not desirable due to the physiological condition of the patient. The FDA's approval order includes requirements to provide a comprehensive practitioner training program and to conduct a post approval study at multiple clinical sites. The Company currently has contracted with 12 burn centers in the United States to participate in the post approval study, and has approximately 154 patients enrolled. The Company offers its training program to all surgeons specializing in burns throughout the world, and has trained over 750 surgeons worldwide. The Company also offers programs to the entire hospital team, including operating room personnel, burn unit support staff, and hospital reimbursement specialists.

Sales of INTEGRA(R) Artificial Skin have been largely for the treatment of patients with life-threatening full-thickness or deep partial-thickness burns where conventional autograft is not available or not desirable due to the physiological condition of the patient. While the Company believes that burns are an important market for INTEGRA(R) Artificial Skin, the Company is seeking to expand the approved indications for INTEGRA(R) Artificial Skin in reconstructive surgery, acute wounds, closure following

excision of skin cancers, and chronic wounds. In March 1998, the Company received CE Mark certification for INTEGRA(R) Artificial Skin in Europe, which included an indication for reconstructive surgery and full thickness injuries. The broader reconstructive surgery indications include scar revision procedures, tumor and skin cancer resection, release of post-burn contractures, congenital skin defects and revision of hypertrophic and keloid scars.

With the CE mark certification, the Company markets INTEGRA(R) Artificial Skin in 29 countries, including Canada and the United States. The Company sells INTEGRA(R) Artificial Skin through a direct technical sales organization in the United States, Canada, Ireland and the United Kingdom and through distributors in other international markets. Through its direct sales force and by working closely with its specialized international distributors, the Company maintains a continuous working relationship with clinicians in the field of burn care and reconstructive surgery. Integra believes these relationships are critical to the long-term success of any new generation product.

In 1997, the Company signed an exclusive importation and sales agreement for INTEGRA(R) Artificial Skin in Japan with Century Medical Inc. ("CMI"), a subsidiary of ITOCHU Corporation. CMI is headquartered in Tokyo, with sales offices in Sapporo, Sendai, Nagoya, Osaka and Fukuoka. Over the past two decades, CMI has steadily expanded its medical products distribution business in Japan. Under this agreement, CMI is conducting a clinical trial in Japan at its own expense to obtain Japanese regulatory approvals for the sale of INTEGRA(R) Artificial Skin in Japan.

#### Debridement Agents

In September 1998, the Company announced the acquisition of Rystan Company, Inc. in Little Falls, New Jersey ("Rystan"). Rystan's primary products are Panafil(R). Panafil(R) is an enzymatic debridement agent used to remove necrotic tissue in acute and chronic wounds, including diabetic ulcers, burns, and postoperative and infected wounds, and provides both debriding and healing functions. In January 1999, Integra and Rystan sold the Panafil(R) product line, including the brand name and related equipment, to Healthpoint, Ltd. for \$6.4 million in cash. Integra also is entitled to receive the first \$3 million of Panafil(R) sales specifically to the podiatry market and certain hospitals with burn centers. Simultaneous with the sale, Integra and Healthpoint entered into a series of co-marketing agreements under which Integra will continue to market Panafil(R) and add Healthpoint's debriding agent, Accuzyme(R), to its sales call points in the podiatry market. Integra will receive sales commissions for marketing Panafil(R) and Accuzyme(R) once specified levels of product sales have been obtained, in accordance with the agreement.

Product sales for the skin defects and burns segment were \$6.3 million, \$6.0 million and \$3.1 million during 1998, 1997 and 1996, respectively. Sales of INTEGRA(R) Artificial Skin accounted for 41%, 43% and 28% of the Company's total product sales for the years ended December 31, 1998, 1997 and 1996, respectively.

Skin Defects and Burns Business: Product Development

The Company has begun development of a number of new products for its Skin Defects and Burns Business. The most important of these is a second generation INTEGRA(R) Artificial Skin which incorporates the proprietary (arginine-glycine-aspartic) amino acid peptide sequence ("RGD") which is part of the Company's CRC technology base. The Company expects this product to reduce significantly the healing time for full thickness skin repair.

In addition to the effort to expand indications for INTEGRA(R) Artificial Skin, the Company is aggressively developing adjunctive products with value added strategies of particular significance to the wound care business. Additionally, as data is acquired on the clinical performance of INTEGRA(R) Artificial Skin, that feedback is being utilized to generate potential product improvements necessary to provide the best regenerative dermal matrix product to Integra's customers.

Medical Products Business: Current Products

The Company develops and sells, primarily through licensing and distribution arrangements, a number of biomaterials-based medical products and devices for infection control, neurosurgery, general and dental surgery and other medical service providers. These products accounted for approximately \$7.8 million, \$8.0 million, \$8.1 million of revenue for the Company during 1998, 1997 and 1996, respectively, representing approximately 55%, 57% and 72%, respectively, of the Company's product sales during such years.

The Company has pursued a strategy of developing new products, obtaining regulatory approval for these products, and then distributing these products through marketing and distribution partnerships. Typically, these partnerships are with leading medical device companies that assist in developing the commercial potential of the Company's medical products. A substantial portion of the Company's medical products is sold to customers under the terms of multiple-year marketing and distribution agreements that provide for purchase and supply commitments. In many cases, marketing customers have paid license fees to the Company for the marketing and distribution rights. The Company sells certain of its Hemostasis products in the United States through a national network of specialized distributors.

Customers accounting for over 10% of total product sales included two customers accounting for 27% of product sales in 1998, two customers accounting for 24% of product sales in 1997 and three customers accounting for 42% of product sales in 1996.

# Infection Control Products

The Company's patented VitaCuff(TM) product provides protection against infection arising from long-term catheters. VitaCuff(TM) consists of a silver nitrate impregnated collagen matrix ring, which is positioned on the catheter before placement. Once in place the collagen forms a seal at the point of entry, mechanically preventing microbial invasion along the catheter while at the same time releasing silver nitrate into the surrounding area. In this application, silver nitrate functions as a highly effective, broad-spectrum anti-microbial agent. VitaCuff(TM) and related products are manufactured by the Company and marketed through Arrow International, Inc., Bard Access Systems, Inc. and Ouinton Instruments.

The Company manufactures a patented wound dressing composed of a synthetic and biopolymer composite foam impregnated with an anti-microbial compound, which is marketed under the trade name BioPatch(TM) by Johnson & Johnson Medical Inc., a Johnson & Johnson subsidiary. The product is applied over the entry point of a percutaneous device, such as orthopedic traction pins and epidural catheters, and serves to protect the area from bacterial growth for an extended period. In 1997, the Company extended its licensing and distribution agreement with Johnson & Johnson for BioPatch(TM) and agreed to provide them with an exclusive license to its patents in this field. In 1998, the United States Patent and Trademark Office issued U.S. Patent Number 5,833,665, which covers BioPatch(TM) Antimicrobial Dressing. The Company has also developed a silver impregnated foam wound dressing which provides anti-microbial protection to prevent bacterial colonization leading to infection. The Company is evaluating potential marketing partners for this device.

#### Dental Surgery Products

The Company's dental surgery products are extensions of the Company's absorbable collagen technology. Each of the three products, CollaCote(R), CollaPlug(R) and CollaTape(R), has a unique dimension, shape and density and provides most of the hemostasis requirements encountered in dental surgery. Sulzer Calcitek markets the Company's dental surgery products.

The Company has also developed BioMend(R) Absorbable Collagen Membrane ("BioMend(R)") for use in guided tissue regeneration in periodontal surgery. BioMend(R) is inserted between the gum and the tooth after surgical treatment of periodontal disease. BioMend(R) prevents the gum tissue from interfering with the regeneration of the periodontal ligament that holds the tooth in place. BioMend(R) is intended to be absorbed after approximately four to seven weeks, avoiding the requirement for additional surgical procedures to remove a non-absorbable membrane. Sulzer Calcitek also markets BioMend(R). In addition to sales in the U.S., BioMend(R) has the CE Mark Certification for sales in the European Union, and Sulzer Calcitek is pursuing marketing approval in Japan.

In the fourth quarter of 1998, Integra extended its agreement with Sulzer Calcitek for an additional five years, and the two companies agreed upon a new product development alliance. Sulzer Calcitek will be funding Integra's development work on the next generation of BioMend(R), which is expected to have a longer absorption time and favorable healing characteristics attributable to separating the bone from soft tissue.

## Surgical and Hemostasis Products

The Company's hemostasis products are used in surgical procedures to help control bleeding. The Company's absorbable collagen hemostatic sponge products consist of Helistat(R) (Absorbable Collagen Hemostatic Sponge), Helitene(R) (Absorbable Collagen Hemostatic Agent - Fibrillar Form), Collastat(TM) and related products. The Company's products have been manufactured for more than 15 years and are estimated to have been used in several hundred thousand patients. These products are manufactured by Integra and marketed in the United States through a network of specialized distributors. Outside of the United States, various international distributors sell the products. In January 1998, the Company announced that it had signed an agreement with CMI for supply and distribution of the Company's Helistat(R) and Helitene(R) products in Japan. In early 1999, the Company announced that Helistat(R) and Helitene(R) had received the CE Mark Certification, which allows the Company to market both products throughout the European Union.

## Neurosurgical Products

The dura mater is the tough connective tissue that surrounds the brain and spinal cord and contains the cerebrospinal fluid (CSF). There is frequently a need for dural grafts to cover defects in the dura mater resulting from neurosurgical procedures or other trauma. DuraGen(TM) Dural Graft Matrix ("DuraGen(TM)") is a collagen matrix for the repair and restoration of the dural membrane. DuraGen(TM) provides a simple, safe and effective method of dural closure in neurosurgical procedures. DuraGen(TM) is indicated as an onlay graft and readily conforms to the surface of the brain and overlying tissues. It may be used to close dural defects following traumatic injury, excision, retraction or shrinkage.

In an extensive clinical study involving over 1,000 patients, DuraGen(TM) has been shown to be a safe and effective method of dural closure. This study reflects one of the most extensive clinical evaluations of a dural replacement graft to date. DuraGen(TM) allows restoration of the dural membrane by a process of cell migration into the scaffold like structure of the collagen matrix. These cells (fibroblasts) deposit new collagen and completely resorb the implanted matrix. The clinical evaluation demonstrated that DuraGen(TM) provides excellent protection against cerebrospinal fluid leakage, does not promote a foreign body reaction and is resorbed completely.

There are approximately 325,000 procedures performed worldwide annually where a dural graft is required. In 50% of these procedures, neurosurgeons use autologous (patient derived) grafts; the remainder use processed tissues or synthetic grafting materials. The Company believes that the annual dural graft market size is potentially \$40 million. Additionally, the dural graft material is being assessed clinically for the prevention of fibrosis (adhesions) in spinal surgery. The potential anti-fibrotic market in the U.S. comprises approximately 600,000 spinal and cranial procedures per year. The Company believes that the annual market size for this indication is potentially \$200 million worldwide.

In March 1998, Integra and CMI announced a strategic alliance for the export to Japan of the Company's identified neurosurgical products. This represents the third agreement under which CMI has rights to distribute Integra's proprietary medical devices in Japan. Under the terms of this agreement, CMI paid a licensing fee of \$1 million in the first quarter of 1998 and invested \$4 million for 500,000 shares of Integra preferred stock in the second quarter of 1998. CMI is also underwriting all costs of the Japanese clinical trials and regulatory approval processes. This seven-year distribution contract begins on the date of regulatory approval in Japan.

In early 1999, DuraGen(TM) received CE Mark Certification, which allows the Company to market this new neurosurgical implant throughout the member countries of the European Union. The Company filed a 510(k) premarket notification with the FDA for marketing approval in the U.S. in 1998. DuraGen(TM) broadens the Company's product offerings of selected medical devices and positions the Company in a segment of the market that has growth potential.

# Other Products

With the acquisition of Rystan, the Company added the Derifil(R) product line to the medical product segment. Derifil(R) is a high potency chlorophyll tablet for use by incontinent patients for odor control and personal hygiene in enterostomy management.

Medical Products Business: Product Development

#### Peripheral Nerve Conduit Program

Although peripheral nerves are one of the few tissues of the body that spontaneously regenerate, they fail, in the majority of cases, to make useful, functional connections. Consequently, peripheral nerve injuries often result in permanent loss of function. At present, there is no product on the market that regenerates peripheral nerves. Injuries to limbs and other parts of the body that sever peripheral nerves result in permanent loss of sensation and motor control. The only method of treatment for a severed peripheral nerve is microsurgical repair. Integra's peripheral nerve regeneration device is a collagen tube designed to facilitate regeneration of the severed nerve and to act as a bridge between the severed nerve ends. The collagen conduit supports nerve regeneration and is then absorbed into the body. Some 20,000 procedures are performed in the U.S. annually, and the Company estimates that the annual worldwide market is approximately \$80 million.

Scar formation at the nerve repair site is the leading cause of failure in conventional nerve grafting techniques. The Company's collagen tube prevents scar formation and provides guided peripheral nerve regeneration. The Company's pre-clinical studies have demonstrated the closure of 5-cm gaps in peripheral nerves in non-human primates with restored nerve function. The Company initiated Phase I clinical trials in 1996 in Copenhagen, Denmark. Phase II clinical trials are planned for the third quarter of 1999.

# Orthopedic Products

The Company has a number of projects under way to develop products that support the regeneration of bone, cartilage and connective tissue. Collaborative projects include those being undertaken with DePuy, a Johnson & Johnson company ("DePuy"), Genetics Institute, Inc. ("GI"), a subsidiary of American Home Products Corporation, Sofamor/Danek Group, Inc. ("SDG"), a subsidiary of Medtronic Corporation, Bionx Implants, Inc. ("Bionx"), the Linvatec division of CONMED Corporation ("Linvatec"), and the National Institute for Standards and Technology ("NIST"). The Company is a supplier of technology and products to the biomaterials-related orthopedic market. The Company's strategy is to leverage its expertise in matrices, materials and the control of cellular behavior to provide advanced products to its customers. These areas include regeneration of orthopedic tissues by delivering active materials using natural or synthetic polymer systems and regeneration and augmentation of bone after stabilization through the osteoconductive properties of the synthetic polymer system.

# Bone Regeneration Program

The Company supplies GI with absorbable collagen sponges for use in developing bone regeneration implants. Since 1994, the Company has supplied absorbable collagen sponges for GI's recombinant human bone morphogenetic protein-2 (rhBMP-2). Recombinant human BMP-2 is a manufactured version of human protein naturally present in very small quantities in the body. GI was first to clone the human gene for BMP-2 and is currently manufacturing rhBMP-2 for clinical evaluation in several areas of bone repair and augmentation.

Under this alliance, the Company will continue to supply collagen-based sponges for rhBMP-2 to GI for a minimum of five years, for bone repair and augmentation. The Company also collaborates with GI in development efforts for second-generation collagen sponges for use with rhBMP-2 in these applications.

GI is developing products based on its rhBMP-2 technology and Integra's collagen technology for applications in orthopedics, oral and maxillofacial surgery and spine surgery. Spine applications are being developed through a collaboration with SDG in North America.

## Articular Cartilage Program

More than 500,000 surgical procedures are performed annually for the treatment of traumatized articular cartilage. Damaged articular cartilage, which connects the skeletal joints, is associated with the onset of progressive pain, degeneration and, ultimately, long-term osteoarthritis. Conventional procedures for treating traumatic cartilage damage, such as debridement and drilling, do not stop joint surface degeneration and often require two or more surgeries. The Company is developing a new device to allow in vivo regeneration of the patient's own articular cartilage. This technology will allow the patient's body to regenerate a smooth, weight-bearing surface. Conventional approaches result in the formation of fibrocartilage, which is rough and non-weight bearing over prolonged periods. Normal articular cartilage is not highly vascularized, and although it is metabolically active tissue, damaged cartilage generally does not effectively heal. The conventional procedure for treating traumatic damage to cartilage involves smoothing damaged portions of the tissue and removing free-floating material from the joint using arthroscopic surgery. While the objective of this procedure is to reduce pain and restore mobility, the long-term result of this procedure often is permanent reduction of joint mobility and an increased risk of developing osteoarthritis. The Company's objective in developing its cartilage-specific technology is to produce a product that provides the proper matrix system to allow the natural regeneration of the patient's cartilage, with full restoration of function and diminished risk of osteoarthritis.

The product under development would use the Company's peptide technology to create an enhanced template that would encourage cells to grow into the template once implanted into the patient. The Company's peptide portfolio includes bioactive agents designed to mimic natural proteins to promote chondrocyte cell adhesion, cell survival and other important cellular functions. The product under development will use this peptide technology to create an enhanced template that would recruit chondrocyte cells to the template once implanted. The template itself would employ proprietary designs based on multiple layers of collagen material of varying but tightly controlled densities and pore sizes to provide a scaffold for chondrocyte proliferation and hyaline cartilage formation. Simultaneously it would prevent the in-growth of unwanted cells that could lead to scar tissue formation. The Company anticipates that the device will be absorbed into the body over a period of several weeks. Pre-clinical studies involving several variations of the above protocols are in progress. In February 1998, the Company announced the signing of a strategic alliance with Johnson & Johnson Professional, Inc., now DePuy, to develop and market a new product to regenerate joint cartilage. Integra has agreed to develop an absorbable, collagen-based implant, designed in combination with its proprietary RGD peptide technology, which will allow the body to repair and regenerate articular cartilage found in the knee and other joints. DePuy will market the product worldwide. Under the terms of the agreement, DePuy will make payments up to \$13 million as Integra meets various milestones, and will fund all necessary development costs beyond the pre-clinical phase. Following successful development, Integra will be responsible for manufacturing the product and for future product development. The Company received \$1 million under this agreement in 1998.

The Company believes the potential sales of the product, combined with the commitment from DePuy's worldwide marketing and sales force, is a strong validation of Integra's RGD peptides. The device is being designed to help overcome the body's inherent deficiencies in regenerating articular cartilage by promoting the adhesion and function of cells in a manner that will have much wider clinical use. The

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Company believes that the combination of its collagen matrix technology with the proprietary RGD peptide technology gives the Company a unique approach to accelerated cartilage repair. The product's acellular technique does not require cell cultures. The Company expects these features to prove substantially more cost-effective than current options.

#### Tyrosine Polycarbonates Program

The Company is continuing the development of additional biomaterial technologies. The goal is to enhance the rate and quality of healing and tissue regeneration with synthetic biodegradable scaffolds to support cell attachment and growth. To this end, the Company is developing a new class of resorbable polycarbonates created through the polymerization of tyrosine, a naturally occurring amino acid. A well-defined and commercially scaleable manufacturing process prepares these materials. Device fabrication by traditional techniques such as compression molding and extrusion is readily achieved. The Company believes that this new biomaterial will be useful in promoting full bone healing when implanted in damaged sites. The Company has licensed this patented technology from Rutgers University for all applications, and continues to work in collaboration with the technology's inventor, Joachim Kohn, Ph.D. This material is currently being developed for orthopedic and tissue engineering applications where strength and bone compatibility are critical issues for success of healing. The polymer when implanted in bone appears to conduct bone onto and through the polymer implant.

In March 1998 Integra was awarded its second NIST grant of over \$2 million. The focus of this grant is the development of a totally synthetic matrix for the regeneration of cartilage. In this instance, a copolymer of the tyrosine polycarbonate ethyl ester and tyrosine polycarbonate free acid is used. The co-polymer's unique combination of properties allows for faster resorption times and a site at which to affix an RGD peptide. The NIST program is being conducted at both the Company's Corporate Research Center (CRC) in San Diego, California and at Integra's headquarters in Plainsboro, New Jersey.

In September 1998, the Company announced two strategic alliances with Linvatec and Bionx for developing fixation devices using Integra's polymer technology. Under the agreements with Linvatec and Bionx, those companies have responsibility for clinical trials and any necessary regulatory filings, as well as certain minimum annual purchase payments. Products covered under the agreement with Linvatec include a resorbable line of interference screws, as well as tacks and anchors used in reconstruction of the anterior cruciate ligament and posterior cruciate ligament, fixation of ligaments and tendons in the knee and shoulder, and bone-tendon-bone procedures. Linvatec also intends to develop polymer implants for use in bladder neck suspension procedures.

Products covered under the agreement with Bionx Implants include a resorbable line of screws, plates, pins, wedges and nails used for the fixation and/or alignment of fractures or osteotomies in all areas of the musculoskeletal system except in the spine and cranium.

# Recent Acquisition of the NeuroCare Group

On March 29, 1999 the Company acquired certain assets and stock held by Heyer-Schulte NeuroCare, L.P. and its subsidiaries, Heyer-Schulte NeuroCare, Inc., Camino NeuroCare, Inc. and Neuro Navigational, LLC (collectively, the "NeuroCare Group"), through the Company's wholly-owned subsidiaries, NeuroCare Holding Corporation, Integra NeuroCare LLC and Redmond NeuroCare LLC (collectively, "Integra NeuroCare"). The purchase price for the NeuroCare Group consisted of \$14 million in cash and approximately \$11 million of assumed indebtedness under a term loan from Fleet Credit Corporation. The NeuroCare Group's assets include a manufacturing, packaging and

distribution facility in San Diego, California and a manufacturing facility in Anasco, Puerto Rico, as well as a corporate headquarters in Pleasant Prairie, Wisconsin which Integra intends to close by August 1, 1999.

Integra NeuroCare designs, manufactures and sells products used by neurosurgeons in operating rooms and intensive care units for the treatment of hydrocephalus and head injuries caused by trauma. Hydrocephalus is an incurable condition resulting from an imbalance between the amount of cerebrospinal fluid ("CSF") produced by the body and the rate at which CSF is absorbed by the brain. This condition causes the ventricles to enlarge and the pressure inside the head to increase. Hydrocephalus often is present at birth, but may also result from head trauma, spina bifida, intraventricular hemorrage, intracranial tumors and cysts. Integra NeuroCare addresses the market need created by trauma cases and hydrocephalus through its established market positions in intracranial pressure monitoring ("ICP"), neurosurgical shunting, neuroendoscopy and specialty neurosurgical instrumentation.

ICP monitors are used by neurosurgeons in diagnosing and treating cases of severe head trauma and other diseases. There are approximately 400,000 cases of head trauma each year in the United States and the Company believes that the annual worldwide market size for ICP monitors and related drainage technology is approximately could amount to \$45 million. Integra NeuroCare is currently the ICP monitoring market leader. Its product line includes the MPM-1 multi-parameter monitor, the V420 direct pressure monitor, the OLM fiber optic pressure monitoring catheter and accessories, a post craniotomy subdural pressure monitoring kit, a microventricular bolt pressure monitoring kit, temperature and pressure monitoring catheters, cranial access kits and external drainage systems. Integra NeuroCare currently has approximately 5,600 ICP monitors installed worldwide. Gross revenues generated by the NeuroCare Group from ICP monitoring and related drainage technology were approximately \$17.2 million and \$16.9 million during 1998 and 1997, respectively. Integra NeuroCare's ICP monitoring research, development and manufacturing operations are located in the San Diego, California facility.

Currently, the most effective method of treatment of hydrocephalus is the insertion of a shunt into the ventricular system of the brain to divert the flow of CSF out of the brain. A pressure valve then maintains the CSF at normal levels within the ventricles. According to the Hydrocephalus Association, hydrocephalus affects approximately one in 500 children born in the United States. Approximately 80% of total shunt sales address birth-related hydrocephalus with the remaining 20% addressing surgical procedures involving excess CSF due to head trauma. The Company believes that the annual worldwide market size for hydrocephalus shunts is approximately \$65 million. Integra NeuroCare offers a broad line of hydrocephalus shunts and related products, including the Novus, LPV and Pudenz shunts, ventricular, peritoneal and cardiac catheters, physician-specified hydrocephalic shunt kits, Ommaya CSF resevoirs, Spetzler lumbar and syringo-peritoneal shunts and external drainage systems, in addition to a line of carotid shunt products used in endarterectomy surgical procedures. Gross revenues generated by the NeuroCare Group from hydrocephalus shunts were approximately \$10.7 million and \$10.9 million during 1998 and 1997, respectively. Integra NeuroCare's hydrocephalus shunt operations are located in the Anasco, Puerto Rico facility.

Intregra NeuroCare designs, manufactures and produces minimally invasive neuroendoscopy products and is actively working with leading neurosurgery centers to develop new diagnostic and therapeutic neurosurgical products. The Company believes that there is substantial growth potential in the neuroendoscopy market resulting from an increasing number of neurosurgeons embracing minimally invasive surgical techniques. The Company anticipates that the annual worldwide market size for

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neuroendoscopy products is approximately \$14 million. Its products include the NeuroView 100 and 500 imaging systems, both completely integrated digital imaging systems for neuroendoscopy offering a wide range of single-use disposable devices for neuroendoscopy procedures. Gross revenues generated by the NeuroCare Group from neuroendoscopy products were approximately \$1.4 million and \$1.0 million during 1998 and 1997, respectively. Integra NeuroCare's neuroendoscopy operations are located in the San Diego, California facility.

Integra NeuroCare offers a broad line of neurosurgery and spinal instrumentation products and is a market leader in hand-held spinal and neurosurgery instruments, such as retractors, kerrisons, dissectors and curettes. The Company believes that the worldwide market size for neurosurgical instruments is \$50 million. Gross revenues generated by the NeuroCare Group from neurosurgical instruments were approximately \$1.6 million during 1998 and 1997, respectively. Integra NeuroCare's neurosurgical instrument operations are currently in the Pleasant Prairie, Wisconsin facility, which serves as the hub for the import and distribution of Integra NeuroCare's specially-designed surgical instruments. Integra NeuroCare's neurosurgical instrument operations are expected to be moved to Plainsboro, New Jersey by August 1, 1999 with the closing of the Pleasant Prairie facility.

From 1995 to 1998, the NeuroCare Group increased revenue by a compound annual growth rate of approximately 12% and in 1998 generated revenues of \$31 million and earnings before interest, depreciation, taxes and amortization of \$5.8 million. Historically, over 90% of the NeuroCare Group's revenues have come from ICP monitoring and hydrocephalus shunting businesses. Integra NeuroCare has close working relationships with neurosurgeons worldwide through its sales force of 18 direct sales representatives and three clinical specialists in the United States combined with a network of approximately 60 distributors worldwide. Integra NeuroCare operates in 52 countries worldwide.

Developing Businesses and Ventures

The Integra Corporate Research Center

Integra acquired Telios Pharmaceuticals in 1995 to commercialize its technologies relating to extracellular matrices and integrin-mediated activity and, in particular, their applications to tissue regeneration. Integra is developing these findings and methodologies to enhance and accelerate development and commercialization of its products. The Company's Telios Pharmaceuticals operation is now referred to as the Integra Corporate Research Center ("CRC").

Integra's RGD peptide technology is a direct result of the pioneering work begun in the early 1980s by co-inventors Michael D. Pierschbacher, Ph.D., Integra's Senior Vice President and General Manager of CRC, and Erkki Ruoslahti, MD, President and CEO of The Burnham Institute. The patented RGD technology has been shown to have potential utility in a number of important and rapidly growing medical therapies. These include tissue regeneration, thrombosis (blood clotting), cancer treatment, immune system regulation, inflammation, and control of angiogenesis.

Peptides are small synthetic chains of amino acids that are designed to perform specific functions on cells. Peptides can be engineered to mimic very large natural matrix proteins that are found within tissues of the body. Peptides bind integrin receptors found on the surface of virtually all cells of the body. There are more than 20 such integrin types within this family of cell receptors. Integrins control cell attachment, growth, migration and differentiation. Cells present within tissues rely on specific integrin types during tissue regeneration. Small synthetic peptides can be designed to interact selectively with certain integrins to achieve differing outcomes by enhancing certain interactions between cells and matrix. When used in combination with a collagen scaffold, these peptides signal the

appropriate cell-matrix functions through integrins and promote the formation of new tissue by guiding the attachment and growth of cells.

The Company's technologies are based on the interaction between a family of cell surface proteins called integrins and the RGD peptide sequence found in the majority of extracellular matrix proteins, including structural molecules and adhesion molecules that provide binding sites, structural support, and physiological information for the maintenance of normal cell function in the body. In 1997 additional significant patents that strengthen the Company's proprietary position in this technology were issued to The Burnham Institute. These patents are exclusively licensed to Integra through its CRC.

The Company has in development new pharmacological products based on the interaction between the extracellular matrix and the integrin family of receptors that are present on virtually all cells in the body. The Company believes that many major diseases and disorders throughout the body, including many that are debilitating, life-threatening, costly and difficult or impossible to treat satisfactorily with existing therapies, involve the disruption or abnormality of the interaction of cells with the extracellular matrix. The Company's technologies are intended to modify the interaction of cells with the matrix in such a way as to provide new treatment strategies for a range of disorders. The Company is pursuing a strategy to identify clinical and market leaders in pharmacological areas to co-develop and license the Company's proprietary technologies and applications. The Company believes that such development and marketing relationships could result in a greater likelihood of commercialization of these opportunities by utilizing the skills of partners to complete clinical trials and market introduction, while allowing the Company to focus on pre-clinical development. Many of the Company's technologies are in the early stages of development and will require the commitment of substantial additional resources by the Company and its potential strategic partners prior to commercialization. There can be no assurance that the Company will be able to form strategic alliances or successfully develop commercial products.

## Research Strategy

The Company has either acquired or secured the proprietary rights to several important scientific platforms. These technologies provide support for the Company's critical applications in tissue regeneration, developing pharmacological applications, and additional opportunities for generating near-term and mid-term revenues from medical applications. The Company has been able to identify and bring together critical platform technology components from which it works to develop solutions to the problem of targeting and controlling selected cell behavior in the patients' body for both tissue regeneration and pharmacological application.

Integra focuses on the commercial and clinical utility of its products by encouraging early and close collaboration with clinicians. As an example, INTEGRA(R) Artificial Skin is the result of a close collaboration between a surgeon and a materials scientist. The surgeon's ability to define the critical specifications of the product were essential prerequisites to the product development and demonstration of clinical utility in human clinical trials. Particularly critical were that the product be readily available "off the shelf" at the time of early wound excision for patients with life-threatening injury and that it be a permanent wound cover.

The Company's research implementation is to supplement a relatively small group of in-house scientists and researchers with a network of various hospitals and medical organizations, which are centers for research. To assist the Company in achieving its objectives, Integra has entered into collaborations, research and/or licensing arrangements with the following institutions: (a) Brigham & Women's Hospital, Inc., Boston, MA for INTEGRA(R) Artificial Skin; (b) Cambridge Antibody Technology

Limited, Cambridge, England, for product development of human TGF-[beta] antibodies; (c) Eastern Virginia Medical School, Norfolk, VA for pre-clinical studies on polymers; (d) Agency for Contraceptive Research and Development, Norfolk, VA for topical fertility and sexually transmitted disease control; (e) Hospital for Joint Diseases Orthopedic Institute, New York, NY for pre-clinical studies on cartilage regeneration; (f) National Institute of Standards and Technology for resorbable polymers for orthopedic indications and tissue engineering; (g) The Burnham Institute, La Jolla, CA (formerly La Jolla Cancer Research Foundation) for basic research on integrin signaling pathways; (h) Massachusetts General Hospital, Boston, MA for INTEGRA(R) Artificial Skin studies; (i) Massachusetts Institute of Technology, Cambridge, MA for INTEGRA(R) Artificial Skin studies; (j) Robert Wood Johnson Medical School, Piscataway, NJ for quality control methodology; (k) Rutgers University, Piscataway, NJ for tyrosine polycarbonate polymers for orthopedic applications and tissue engineering; (1) University Hospital Copenhagen, Denmark for clinical studies of collagen nerve graft tubes and resorbable polymers for tissue engineering; (m) DePuy for articular cartilage regeneration; (n) Century Medical Inc., Japan for INTEGRA(R) Artificial Skin and neurosurgical product clinical trials in Japan; (o) The Scripps Research Institute in the areas of regenerating pancreases and stroke; and (p) University of Washington EB for bioengineering.

The Company spent approximately \$8.4 million, \$6.4 million and \$6.3 million during 1998, 1997 and 1996, respectively, on research and development activities. Research and development activities funded by government grants and contract development revenues amounted to \$1.8 million, \$490,000 and \$1.1 million during 1998, 1997 and 1996, respectively.

# Patents and Proprietary Rights

The Company's ability to compete effectively will depend, in part, on the clinical and commercial success of its development efforts and its ability to maintain the proprietary nature of its technologies and manufacturing processes. The Company pursues a policy of seeking patent protection of its technology, products and product improvements both in the United States and in selected foreign countries. When determined appropriate, the Company has and plans to continue to enforce and defend its patent rights. The Company also relies upon trade secrets, continuing technological innovations and licensing opportunities to develop and maintain its competitive position.

As of December 31, 1998, the Company owned or had exclusive license rights to 146 issued or allowed United States patents and 163 issued foreign patents, with pending United States patent applications and related foreign patent applications describing approximately 167 additional inventions. These patents and patent applications contain composition of matter, process and method of use claims for various fields of use, primarily involving regenerative medicine and related technologies. The Company files patent applications both in the United States and in foreign countries in order to protect both its products and technologies. In addition, the Company has various licenses to technologies patented by others. The patent position of biotechnology and pharmaceutical firms is highly uncertain, involves many complex legal, factual and technical issues and has recently been the subject of much litigation. There is no clear policy involving the breadth of claims allowed in such cases or the degree of protection afforded under such patents. As a result, there can be no assurance that patent applications relating to the Company's products or technologies will result in patents being issued, that patents issued or licensed to the Company will provide protection against competitors or that the Company will enjoy patent protection for any significant period of time. It is possible that patents issued or licensed to the Company will be successfully challenged, or that patents issued to others may preclude the Company from commercializing its products under development.

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Certain of the patents licensed by the Company for specific uses are licensed to other parties for use in certain fields or are sublicensed to other parties. Litigation to establish the validity of patents, to defend against infringement claims or to assert infringement claims against others, if required, can be lengthy and expensive. There can be no assurance that the products currently marketed or under development by the Company will not be found to infringe patents issued or licensed to others.

The Company's competitive position is also dependent upon unpatented trade secrets. The Company continues to develop a substantial database of information concerning its research and development. The Company has taken security measures to protect its data and is in the process of exploring ways to enhance further the security of its data. However, trade secrets are difficult to protect. There can be no assurance that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to the Company's trade secrets, that such trade secrets will not be disclosed, or that the Company can effectively protect its rights to unpatented trade secrets.

In an effort to protect its trade secrets, the Company has a policy of requiring its employees, consultants and advisors to execute proprietary information and invention assignment agreements upon commencement of employment or consulting relationships with the Company. These agreements provide that all confidential information developed or made known to the individual during the course of their relationship with the Company must be kept confidential, except in specified circumstances. There can be no assurance, however, that these agreements will provide meaningful protection for the Company's trade secrets or other proprietary information in the event of the unauthorized use or disclosure of confidential information.

#### Government Regulation

The Company's research and development activities and the manufacturing and marketing of the Company's existing and future products are subject to regulation by numerous governmental agencies in the United States and in other countries. The FDA and comparable agencies in other countries impose mandatory procedures and standards for the conduct of clinical trials and the production and marketing of products for diagnostic and human therapeutic use. The FDA product approval process has different regulations for drugs, biologics, and medical devices. The FDA currently classifies the Company's proposed regenerative medicine products as medical devices.

## Review Process for Medical Devices

There are two types of FDA review/approval procedures for medical devices: a Premarket Notification Section  $510\,(k)$  (" $510\,(k)$ ") and a Premarket Approval ("PMA") application. A  $510\,(k)$  requires submission of sufficient data to demonstrate substantial equivalence to a device marketed prior to May 28, 1976, or to a device marketed after that date which has been classified into Class I or Class II which has received premarket notification  $510\,(k)$  clearance. Although the mandated period for FDA review is 90 days, actual review times can be substantially longer, and the sponsor cannot market the device until FDA clearance is obtained. For those devices that involve new technology and/or that present significantly more time for FDA review and may require submission of more extensive safety and effectiveness data, including clinical trial data.

Among the conditions for clearance to market of a 510(k) submission is the requirement that the prospective manufacturer's quality control and manufacturing procedures conform to the FDA's current Quality System Regulations. In complying with standards set forth in these regulations, manufacturers must expend time, money and effort for production and quality control to ensure full technical compliance

at all times. Manufacturing establishments, both international and domestic, are also subject to inspections by or under the authority of the FDA. Although, at present, the FDA generally does not inspect such establishments prior to clearance of a  $510\,(k)$  submission, it is establishing a program of conducting Quality System inspections for new devices in the future as a standard practice.

The Medical Device Amendments of 1976 amended the Federal Food, Drug and Cosmetics Act to establish three regulatory classes for medical devices, based on the level of control required to assure safety and effectiveness. Class III Devices are defined as life-supporting and life-sustaining devices, devices of substantial importance in preventing impairment of human health or devices that present potentially unreasonable risk of illness or injury. Class III devices are those for which there is insufficient information to show that Class I or Class II controls can provide a reasonable assurance of safety or effectiveness. The PMA application review process for Class III devices was established to evaluate the safety and effectiveness of these devices on a product by product basis. Manufacturers that wish to market Class III devices must submit and receive approval of a PMA application from the FDA.

The FDA has substantial content and format requirements for PMA applications, which include clinical and non-clinical safety and effectiveness data, labeling, manufacturing processes and quality assurance programs. As part of the PMA application process, the PMA application may be referred to an FDA Advisory Panel for review. Additionally, final approval of the product is dependent on an inspection of the manufacturing facility for compliance with FDA Quality System Regulations.

All studies in humans for the purpose of investigating the safety and effectiveness of an investigational significant risk medical device must be conducted under the Investigational Device Exemption ("IDE") regulations. An IDE application to the FDA includes all preclinical biocompatibility testing, investigational protocols, patient informed consents, reports of all prior investigations, manufacturing and quality control information. It takes a number of years from initiation of the project until submission of a PMA application to the FDA, and requires the expenditure of substantial resources. If a PMA application is submitted, however, there can be no assurance on the length of time for the review process at the FDA or that the FDA will approve the PMA application.

Under either the  $510\,(k)$  submission or PMA application process, manufacturing establishments, foreign and domestic, are subject to periodic inspections by the FDA for compliance with Quality System Regulations. The Company and each of its operating subsidiaries are subject to such inspections.

To gain approval for the use of a product for clinical indications other than those for which the product was initially evaluated or for significant changes to the product, further studies, including clinical trials and FDA approvals are required. In addition, for products with an approved PMA application, the FDA requires postapproval reporting and may require postapproval surveillance programs to monitor the product's safety and effectiveness. Results of post approval programs may limit or expand the further marketing of the product.

# International Regulatory Requirements

The Company is preparing for the changing international regulatory environment. "ISO 9000" is an international recognized set of guidelines that are aimed at ensuring the manufacture and development of quality products. The Company was audited under ISO standards in 1997 and received certification to ISO 9001, a full quality system. In 1998, the Company underwent a surveillance audit and renewed its certification to ISO 9001. The Company is required to be audited on an annual basis by a recognized notified body to maintain certification. Companies that meet ISO standards are internationally recognized as functioning under a quality system. Approval of a product by regulatory authorities in international

countries must be obtained prior to the commencement of marketing of the product in such countries. The requirements governing the conduct of clinical trials and product approvals vary widely from country to country, and the time required for approval may be longer or shorter than that required for FDA approval of the PMA application. In June 1998, the European Union Medical Device Directive became effective, and all medical devices must meet the Medical Device Directive standards and receive CE mark certification. CE mark certification involves a comprehensive quality system program, and submission of data on a product to the notified body in Europe.

## Other United States Regulatory Requirements

In addition to the regulatory framework for product approvals, the Company is and may be subject to regulation under federal and state laws, including requirements regarding occupational health and safety; laboratory practices; and the use, handling and disposal of toxic or hazardous substances. The Company may also be subject to other present and possible future local, state, federal and foreign regulations.

The Company's research, development and manufacturing processes involve the controlled use of certain hazardous materials. The Company is subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. Although the Company believes that its safety procedures for handling and disposing of such materials comply with the standards prescribed by such laws and regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, the Company could be held liable for any damages that result and any such liability could exceed the resources of the Company. Although the Company believes that it is in compliance in all material respects with applicable environmental laws and regulations, there can be no assurance that the Company will not incur significant costs to comply with environmental laws and regulations in the future, nor that the operations, business or assets of the Company will not be materially adversely affected by current or future environmental laws or regulations.

#### Manufacturing

The Company's primary manufacturing facility is located in Plainsboro, New Jersey. The Company manufactures the majority of its medical products at this approximately 35,000 square foot FDA-registered and inspected facility which also serves as the Company's executive offices. The Company's commercial-scale manufacturing facility for INTEGRA(R) Artificial Skin is at this location.

The basic material for many of the Company's medical and regenerative medicine products is principally purified collagen prepared from bovine tendon in a four-step process: (i) the raw material is processed with various enzymes and solvents to purify and render it non-immunogenic; (ii) the purified material is dispersed into suspensions appropriate for the manufacture of the different forms of collagen material and then dried using freeze drying techniques; (iii) the fibrous material yielded from the drying step is "cross-linked" through chemical bonding of overlying fibers, with different types and degrees of cross-linking being used for different products; and (iv) the bonded material is sized and packaged. The Company has installed equipment for the manufacture of bovine collagen-based products at its Plainsboro facility.

In 1998, the Company shut down its West Chester, Pennsylvania facility and consolidated the operations into the Plainsboro, New Jersey facility. As a result of the Rystan acquisition, the Company acquired the lease of a facility in Little Falls, New Jersey. With the sale of Rystan's Panafil product line in January 1999, the Company is currently planning to consolidate the remaining Rystan activities into the Plainsboro, New Jersey facility by the end of 1999.

#### Competition

In general, the medical technology industry is subject to rapid, unpredictable and significant technological change. Competition from established pharmaceutical and medical technology companies is intense. Competition also comes from early stage companies that have alternative technological solutions for the Company's primary clinical targets. New technologies are constantly being developed at universities and research institutions.

The Company's competitive position will depend on its ability to secure regulatory approval for its products, implement production and marketing plans, obtain patent protection and secure adequate capital resources. The Company is aware of several companies seeking to develop dermal replacement and other products that could, if successfully developed, potentially compete with the regenerative medicine technologies under development by the Company. A number of biotechnology, pharmaceutical and chemical companies are developing various types of wound healing treatments which are alternatives to tissue regeneration for some conditions, including chronic skin ulcers. These treatments employ a variety of approaches such as growth factors, tripeptides and wound dressings. The Company believes that some of these alternatives could be used in conjunction with the Company's products.

The Company competes primarily on the uniqueness of its technology and product features and on the quality and cost-effectiveness of its products. Many competitors or potential competitors have greater financial resources, research and development capabilities, and marketing and manufacturing experience than the Company. The Company is aware of several companies seeking to develop products that could, if successful and approved, compete with the regenerative medicine technologies under development by the Company. Several of these companies have products that may compete with INTEGRA(R) Artificial Skin, including LifeCell Corporation, Genzyme Tissue Repair (a division of Genzyme Corporation), Advanced Tissue Sciences, Inc., Organogenesis, Inc. and Ortec International, Inc. LifeCell Corporation and Genzyme Tissue Repair are currently not subject to FDA regulation because they involve the processing of human cells and tissues and, therefore, are not currently subject to the costs and expenses and the potential delays associated with the FDA approval process.

The Company believes that expansion of its markets will be enhanced by the entry of additional competitors. During the last year several new products have been approved by the FDA or have moved closer to final approval. These include products by Johnson & Johnson (Regranex) and Organogenesis, Inc. (Apligraf). Regranex is a growth factor-based wound healing compound which competes with the Company's technologies at CRC. Apligraf is a dermal replacement product targeted primarily at chronic wounds. The Company believes that success of these products in the market will offer an opportunity for Integra's technologies in the future. Ultimately, therefore, the Company's competitive position will depend both on the size of the market for its products and on the sales and marketing strength established by the Company and its corporate partners. The breadth of the Company's technologies allows it to compete in a wide range of possible solutions to the problem of repair of damaged tissue.

#### Employees

At December 31, 1998, the Company employed 178 full-time people (including temporary and part-time employees) of which 63 are engaged in production and production support (including warehouse, engineering, and facilities personnel), 17 in quality assurance/quality control, 37 in research and development, 8 in regulatory and clincial affairs, 20 in sales/marketing and 33 in administration and finance. None of the Company's employees is subject to a collective bargaining agreement.

## Forward Looking Statements

This report contains trend information and other forward-looking statements related to the future use and sales of the Company's products, potential markets for the Company's products, anticipated expenditure levels compared to historical amounts and the Company's plans for its research and development efforts. Such statements are made pursuant to the safe harbor provisions of the Securities Litigation Reform Act of 1995 and involve risks and uncertainties which may cause results to differ materially from those set forth in these statements. Potential risks and uncertainties include, without limitation, those mentioned in this report and, in particular, those mentioned under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations -- Factors That May Affect Future Results of Operations".

## ITEM 2. PROPERTIES

The Company has a lease for approximately 35,000 square feet for its principal administrative, marketing, manufacturing and product development activities in Plainsboro, New Jersey that expires in October 2012. The Company's CRC facility is approximately 18,600 square feet of leased administrative and laboratory space located in San Diego, California. This lease expires in October 2004. As a result of the Rystan acquisition, the Company also leases 12,000 square feet of manufacturing and administrative space in Little Falls, New Jersey. This lease expires in October 2004. In connection with the acquisition of the NeuroCare Group, Integra NeuroCare assumed a lease (expiring in January 2000) for a 31,000 square foot manufacturing, packaging and distribution facility in San Diego, California, a lease (expiring in July 2004) for a 23,000 square foot manufacturing facility in Anasco, Puerto Rico and a lease for a 14,000 square foot corporate headquarters facility in Pleasant Prairie, Wisconsin that the Company has scheduled to be closed by August 1, 1999. In addition, the Company leases several smaller facilities to support additional administrative and storage operations.

# ITEM 3. LEGAL PROCEEDINGS

In July 1996, the Company filed a patent infringement lawsuit in the United States District Court in San Diego against Merck KGaA, a German corporation, Scripps Research Institute, a California nonprofit corporation, and David A. Cheresh, Ph.D., a research scientist with Scripps seeking damages and injunctive relief. The complaint charges, among other things, that the defendant Merck KGaA willfully and deliberately induced, and continues to willfully and deliberately induce, defendants Scripps Research Institute and Dr. David A. Cheresh to infringe several of the Company's patents. These patents are part of a group of patents granted to The Burnham Institute and licensed by the Company that are based on the interaction between a family of cell surface proteins called integrins and the arginine-glycine-aspartic acid (known as "RGD") peptide sequence found in many extracellular matrix proteins. The defendants have filed a countersuit asking for an award of defendants' reasonable attorney fees. The Company anticipates this case will be tried during 1999.

The Company is also subject to other claims and lawsuits in the ordinary course of its business. In the opinion of management, such other claims are either adequately covered by insurance or otherwise indemnified, and are not expected, individually or in the aggregate, to result in a material adverse effect on the financial condition of the Company. The Company's financial statements do not reflect any significant amounts related to possible unfavorable outcomes of the matters above or others. However, it is possible that the Company's results of operations, financial position and cash flows in a particular period could be materially affected by these contingencies.

# ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

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

#### Additional Information

The following information is furnished in this Part I pursuant to Instruction 3 to Item 401(b) of Regulation S-K.

#### Executive Officers

The executive officers of the Company serve at the discretion of the Board of Directors. The only family relationship between any of the executive officers and directors of the Company is that Mr. Holtz is the nephew of Dr. Caruso. The following information indicates the position and age of the Company's executive officers as of the date of this report and their previous business experience.

Name	Age	Position
Richard E. Caruso, Ph.D.	55	Chairman
Stuart M. Essig, Ph.D.	37	President and Chief Executive Officer
George W. McKinney, III, Ph.D.	55	Executive Vice President and Chief Operating Officer
John B. Henneman, III	37	Senior Vice President, Chief Administrative Officer and General Counsel
Judith E. O'Grady	48	Senior Vice President, Regulatory, Quality Assurance and Clinical Affairs $$
Michael D. Pierschbacher, Ph.D.	47	Senior Vice President Research and Development, General Manager, Corporate Research Center
David B. Holtz	32	Vice President, Finance and Treasurer

Richard E. Caruso, Ph.D. founded the Company and has been the Chairman of the Board of Directors since inception. Until December 1997, Mr. Caruso also served as President and Chief Executive Officer. From 1969 to 1992, Dr. Caruso was a principal of LFC Financial Corporation, a major entrepreneurial financing company located in Radnor, Pennsylvania. When he left LFC Financial in 1992, he was a director and Executive Vice President. He has 25 years experience in finance and entrepreneurial ventures. Before joining LFC Financial, Dr. Caruso was associated with Price Waterhouse & Co. in Philadelphia, Pa. Dr. Caruso has served as a director or trustee of the following organizations: American Capital Open End Mutual Funds, LFC Financial Corporation, 202 Data Systems, Tenley Enterprises, Inc., and London School of Economics Business Performance Group. He is currently a director of Susquehanna University, The Baum School of Art, Uncommon Individual Foundation (Founder) and the Company. He received a BS degree from Susquehanna University, and MSBA degree from Bucknell University, and a Ph.D. degree from the London School of Economics, University of London (UK). Dr. Caruso is also a certified public accountant.

Stuart M. Essig, Ph.D. has served as President and Chief Executive Officer and a director of the Company since December 1997. Before joining the Company, Mr. Essig supervised the medical technology practice at Goldman, Sachs & Co. as a managing director. Mr. Essig had ten years of broad health care experience at Goldman Sachs serving as a senior merger and acquisitions advisor to a broad range of domestic and international medical technology, pharmaceutical and biotechnology clients. Mr. Essig received an A.B. degree from the Woodrow Wilson School of Public and International Affairs at Princeton University and an MBA and a Ph.D. degree in Financial Economics from the University of Chicago, Graduate School of Business. Mr. Essig also serves on the Board of Directors of Vital Signs, Inc., St. Jude Medical Corporation and Neuromedical Systems, Inc.

George W. McKinney, III, Ph.D. has served the Company as Vice Chairman, Executive Vice President and Chief Operating Officer since May 1997 and as a member of the Board of Directors since December 1992. Between 1990 and 1997, Dr. McKinney was Managing Director of Beacon Venture Management Corporation, a venture capital firm. Between 1992 and 1997, Dr. McKinney also served as President and Chief Executive Officer of Gel Sciences, Inc. and GelMed. Inc., a privately held specialty materials firm with development programs in both the industrial and medical products fields. From 1983 to 1989, Dr. McKinney was a Managing Director at American Research & Development, a venture capital firm. Between 1986 and 1989, he also served as President and Chief Executive Officer of American Superconductor, Inc. (NASDAQ: AMSC), a development stage firm in the specialty materials field. From 1965 to 1983, Dr. McKinney worked for Corning Glass Works (now Corning, Inc.), a specialty materials firm, in a variety of manufacturing, engineering, and financial positions. At Corning, he served as President of Corning Designs, a subsidiary which he founded, as Secretary to the Management Committee, as Director of Business Development and Planning, as Treasurer, International, as Assistant Treasurer, Domestic, and as Financial and Control Manager for the Engineering Division. Dr. McKinney holds a S.B. from MIT in Management and a Ph.D. from Stanford University in Strategic Planning.

John B. Henneman, III is the Company's Senior Vice President, Chief Administrative Officer and General Counsel. Prior to joining the Company in August 1998, Mr. Henneman served Neuromedical Systems, Inc., a public company developer and manufacturer of in vitro diagnostic equipment, in various capacities for more than four years. From 1994 until June 1997, Mr. Henneman was Vice President of Corporate Development, General Counsel and Secretary. From June 1997 through November 1997, he served in the additional capacity of interim Co-Chief Executive Officer and after December 1997 Mr. Henneman was Executive Vice President, US Operations, and Chief Legal Officer. In March 1999, Neuromedical Systems, Inc. filed a petition under Chapter 11of the federal bankruptcy laws. From 1986 to 1994, Mr. Henneman practiced law in the Corporate Department of Latham & Watkins (Chicago, Illinois). Mr. Henneman received his A.B. (Politics) from Princeton University in 1983, and his J.D. from the University of Michigan Law School in 1986.

Judith E. O'Grady, Senior Vice President of Regulatory Affairs, Quality Assurance and Clinical Research, has served the Company since 1985. Ms. O'Grady has worked in the areas of medical devices and collagen technology for over 20 years. Prior to joining the Company, Ms. O'Grady worked for Colla-Tec, Inc., a Marion Merrell Dow Company. During her career Ms. she has held positions with Surgikos, a Johnson & Johnson company, and was on the faculty of Boston University College of Nursing and Medical School. Ms. O'Grady obtained the FDA approval for INTEGRA(R)

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Artificial Skin, the first regenerative product approved by the FDA. She also has obtained approvals for several other product lines for the Company. In addition, Ms. O'Grady obtained the CE Mark Certification for approvals in the European Union as well as a multitude of other international approvals. She has been pivotal in the ISO 9001 Certification of the Company. She is a member of the NIST group on standards for clinical outcomes as well as on the Board of Directors for the New Jersey League of Nursing. Ms. O'Grady has presented professional programs and lectures, both nationally and internationally, on INTEGRA(R) Artificial Skin. She received her BS degree from Marquette University and MSN in Nursing from Boston University.

Michael D. Pierschbacher, Ph.D. joined the Company in October 1995 as Senior Vice President, Research and Development. In May 1998 he was named Senior Vice President and Director of the Corporate Research Center. From June 1987 to September 1995, Dr. Pierschbacher served as Senior Vice President and Scientific Director of Telios Pharmaceuticals, Inc., which was acquired by the Company in connection with the reorganization of Telios under Chapter 11 of the Bankruptcy Code. He was a co-founder of Telios in May 1987 and is the co-discoverer and developer of Telios' matrix peptide technology. Before joining Telios as a full-time employee in October 1988, he was a staff scientist at the Burnham Institute for five years and remained on staff there in an adjunct capacity until the end of 1997. He received his post-doctoral training at Scripps Clinical and Research Foundation and at the Burnham Institute. Dr. Pierschbacher received his Ph.D. in Biochemistry from the University of Missouri.

David B. Holtz joined the Company as Controller in 1993 and has served as Vice President, Finance and Treasurer since March 1997. His responsibilities include managing all accounting and information systems functions. He is also responsible for the preparation of the Company's Securities and Exchange Commission filings and federal and state tax returns. Before joining the Company, Mr. Holtz was an associate with Coopers & Lybrand, L.L.P. in Philadelphia and Cono Leasing Corporation, a private leasing company. He received a BS degree in Business Administration from Susquehanna University in 1989 and is a certified public accountant.

ITEM 5. MARKET PRICE FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The Company's Common Stock trades on The Nasdaq National Market under the symbol "IART". The following table represents the high and low sales prices for the Company's Common Stock for each quarter for the last two years. All outstanding common share and per share amounts have been retroactively adjusted to reflect a one-for-two reverse stock split of the Company's common stock on May 18, 1998.

1998 	HIGH	LOW
First Quarter	\$10.75	\$8.125
Second Quarter	\$9.75	\$6.125
Third Quarter	\$8.00	\$4.375
Fourth Quarter	\$5.25	\$3.25
1997		
First Quarter	\$27.00	\$12.75
Second Quarter	\$26.00	\$17.50
Third Quarter	\$23.50	\$8.25
Fourth Quarter	\$14.00	\$8.50

The closing price for the Common Stock on March 25, 1999 was \$4.00. For purposes of calculating the aggregate market value of the shares of Common Stock of the Company held by non-affiliates, as shown on the cover page of this report, it has been assumed that all the outstanding shares were held by non-affiliates except for the shares held by directors and executive officers of the Company and stockholders owning 10% or more of outstanding shares. However, this should not be deemed to constitute an admission that all such persons are, in fact, affiliates of the Company. Further information concerning ownership of the Company's Common Stock by executive officers, directors and principal stockholders will be included in the Company's definitive proxy statement to be filed with the Securities and Exchange Commission.

The Company does not currently pay any cash dividends on its Common Stock and does not anticipate paying as such dividends in the foreseeable future.

The number of stockholders of record as of March 25, 1999 was approximately 800, which includes stockholders whose shares were held in nominee name. The number of beneficial stockholders at that date was over 6,700.

#### TTEM 6. SELECTED FINANCIAL DATA

The following data has been selected by the Company and derived from consolidated financial statements that have been audited by PricewaterhouseCoopers LLP, independent accountants. The information set forth below is not necessarily indicative of the results of future operations and should be read in conjunction with the Company's consolidated financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations appearing elsewhere in this report.

	Years Ended December 31,				
	1998	1997	1996 	1995 	1994
		(In thousands			
Statement of Operations Data (1)					
Product sales	\$ 14,076	\$ 14,001 745	\$11,210	\$ 8,356	\$ 6,958
Other revenue	3,379	745	1,938	1,873	1,703
Total revenue	17,455	14,746	13,148	10,229	8,661
Cost of product sales	7,420	7,027	6,671	4,850	4,402
Research and development	8,424	6,406	6,294	5,191	3,085
Selling and marketing	5,955	5,460	4,310	2,455	1,335
General and administrative (2)	9,836	14,764	5,320	3,642	2,170
Acquired in-process research and development (3)				19,593	(275)
Total costs and expenses	31,635	33,657	22,595	35,731	10,717
Operating loss	(14,180)	(18,911)	(9,447)	(25,502)	(2,056)
Interest income	1,250	1,771	1,799	283	221
Interest expense				(188)	(64)
Other income (expense)	588	176	120	5	(1)
Net loss	\$(12,342)	\$(16,964)	\$(7,528)	\$(25,402)	\$(1,900)
Basis and diluted net loss per share	====== \$ (.76)	====== \$ (1.15)	====== \$ (.54)	\$ (2.41)	====== \$ (.20)
basis and diruced net 1055 per snare	Ş (.76)	Ş (I.IJ)	Ş (.54)	γ (2.41)	Ş (.20)
Weighted average number of common shares					
Outstanding	16,139	14,810	14,057	10,536	9,517
	======	======	======	======	======
	December 31,				
	1998	1997	1996	1995	1994
Balance Sheet Data (1)			In thousands		
Cash, cash equivalents and short-term investments	\$ 20,187	\$ 26,272	\$ 34,276	\$ 5 <b>,</b> 710	\$ 3,331
Working capital	23,898	29,407	37,936	7,476	3,610
Total assets	34,707	38,356	48,741	19,378	13,703
Long-term debt					1,754
Accumulated deficit	(88,334)	(75,945)	(58,981)	(51,453)	(26,051)
Total stockholders' equity	31,366	35,755	46,384	17,427	9,275

<sup>(1)</sup> As the result of the Company's acquisitions of Telios Pharmaceuticals, Inc. in August 1995 and Rystan Company, Inc. in September 1998, the consolidated financial results for certain of the periods presented above may not be directly comparable.

<sup>(2)</sup> The 1997 general and administrative expense included the following two non-cash charges: (i) \$1.0 million related to an asset impairment charge; and (ii) \$5.9 million related to an equity-based signing bonus for the Company's President and Chief Executive Officer.

<sup>(3)</sup> As a result of purchase accounting, the 1995 loss included \$19.6 million of acquired in-process research and development which was charged to expense at the date of the Company's acquisition of Telios Pharmaceuticals, Inc.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the Company's consolidated financial statements, the notes thereto and the other financial information included elsewhere in this report.

#### General

The Company has developed principally by combining existing businesses, acquiring synergistic technologies and forming strategic business and technological alliances. As a result of the Company's acquisition of Rystan Company, Inc. ("Rystan") in September 1998, the Company's consolidated financial results for 1998 and 1997 may not be directly comparable. The Company's financial information discussed below should be considered in light of (i) the Company's sale of the Panafil(R) product line on January 5, 1999 and (ii) the Company's acquisition of the NeuroCare group of companies on March 29, 1999 (see Notes 3 and 17 to the Company's consolidated financial statements under Item 8 of this report).

Results of Operations

1998 Compared to 1997

The Company's net loss decreased from \$17.0 million in 1997 to \$12.3 million in 1998. The 1997 loss included two non-cash charges totaling \$6.9 million, which are included in general and administrative expense.

Total revenues increased 18% from \$14.7 million in 1997 to \$17.5 million in 1998, due largely to increases in other revenues. Product sales increased 1% from \$14.0 million to \$14.1 million and included \$670,000 in sales from Rystan in the fourth quarter of 1998. Sales of INTEGRA(R) Artificial Skin ("INTEGRA") declined slightly from \$6.0 million in 1997 to \$5.8 million in 1998. INTEGRA sales in North America declined by \$560,000 as the Company reduced its selling and marketing efforts in North America. In 1998, the number of North American burn centers and hospitals that used INTEGRA declined from 114 to 94 as the Company's selling and marketing efforts were focused on the largest burn centers which handle the majority of severe burn cases. The Company's export sales increased 30% to \$2.3 million (18% of total sales) as INTEGRA export sales increased by \$400,000 due to increased international distribution efforts. INTEGRA received CE Mark certification in March 1998, which included a broader indication of use than currently granted in the United States. The Company's international sales include INTEGRA sales to over 25 countries throughout the world.

The primary application of INTEGRA in North America has been for patients with severe life-threatening burns. The Company is in the process of collecting clinical results on INTEGRA's application in reconstructive and wound healing procedures and is continuing to focus its strategy on expanding the approved indications for use of INTEGRA in the United States. The Company believes these results demonstrate that INTEGRA can offer improved clinical results compared to existing treatments for relief of painful scars, wound contractures and hypertrophic scarring. The Company believes that its ability to increase the use of the product will require an increase in marketing and selling effort for the product, as well as the receipt of regulatory approvals for broader indiciations of use.

Sales in the Company's medical products segment decreased from \$8.0 million in 1997 to \$7.8 million in 1997 due largely to discontinued product lines. The Company ceased production and sale of its private label ophthalmic product line in 1997 and suspended operations at its leased West Chester, Pennsylvania facility in January 1998, which resulted in an elimination of production for its avian collagen wound care product line and its contract manufacturing activities. The Company's ophthalmic, avian collagen and contract manufacturing revenues accounted for \$630,000 in 1997 compared to minimal amounts in 1998. This decline was offset by increases in the Company's infection control and surgical and hemostasis product lines.

Customers representing greater than 10% of sales included two customers with aggregate sales of 27% and 24% in 1998 and 1997, respectively. Because significant portions of the Company's medical products segment sales are made to marketing partners and distributors, quarter-to-quarter sales in medical products can vary significantly.

Other revenue, which includes grant revenue, license fees, contract development revenue and royalties, increased from \$745,000 in 1997 to \$3.4 million in 1998. Licensing revenue and development funding had the greatest increases with each increasing by \$1 million due to the Company's licensing and development agreements with Century Medical, Inc. and DePuy, a Johnson & Johnson Company ("DePuy"), respectively. Grant revenue also increased by \$200,000 as the Company initiated work under its second three-year \$2.0 million National Institute of Science and Technology ("NIST") grant. The Company expects to continue to focus its efforts to obtain additional funding through research grants, licensing arrangements and development alliances, although the timing and amount of such revenue, if any, can not be predicted. In addition, the second phase of the development agreement with DePuy requires that a specific milestone be achieved before additional funding is received.

Cost of product sales increased 6% from \$7.0 million (50% of product sales) in 1997 to \$7.4 million (53% of product sales) in 1998 and included \$300,000 related to the fair value purchase accounting adjustment for Rystan's inventory in 1998. Excluding the Rystan purchase adjustment, the Company's cost of product sales in 1998 was 51% of product sales. Lower operating costs due to the closing of the Company's West Chester, Pennsylvania production facility were largely offset by higher unit costs and royalty expense for INTEGRA. Due to the relatively high fixed costs of the manufacturing facility for INTEGRA, the Company is anticipating higher unit costs until there is higher production volume. The Company believes its current capacity to produce INTEGRA and its other medical products is sufficient to support significant growth, and the utilization of this capacity will affect its gross margin on product sales. The Company is anticipating a continued temporary decline in gross margins for the first quarter of 1999 primarily related to the fair value inventory purchase accounting adjustment associated with the Rystan acquisition.

Research and development expense increased from \$6.4 million in 1997 to \$8.4 million in 1998. Increases in research and development expenditures associated with funding levels for the Company's cartilage research programs with J&J/DePuy and NIST represented the largest increases. In addition, the Company increased expenditures related to its clinical efforts for its DuraGen(TM) and INTEGRA products as well as pre-clinical costs associated the Company's absorbable biocompatible polymer program. Continuing expenditures include costs associated with efforts focusing on combining the Company's biomaterials technologies with its integrin-mediated technologies acquired in the Telios acquisition. The Company expects the level of research and development expenditures in 1999 to be at or higher than 1998 levels depending on the Company's ability to obtain outside funding for its programs. The amount of resources allocated to fund particular research and development efforts will vary depending upon a number of factors, including the progress of development of the Company's technologies, changing competitive conditions and determinations with respect to the commercial potential of the Company's technologies.

Selling and marketing expense increased 9% from \$5.5 million in 1997 to \$6.0 million in 1998 and included \$270,000 in selling and marketing costs in the fourth quarter with the addition of Rystan. Excluding the Rystan increase, sales and marketing costs were up only 4% as the Company shifted efforts from domestic INTEGRA activities to international INTEGRA activities and pre-launch marketing activities for the Company's DuraGen(TM) product.

General and administrative expense declined from \$14.8 million in 1997 to \$9.8 million in 1998. The 1997 amount included two non-cash charges; a \$1.0 million asset impairment charge associated with certain leasehold improvements at its leased West Chester, Pennsylvania, and a \$5.9 million charge related to an equity-based signing bonus for the Company's President and Chief Executive Officer. The 1998 amount also included an additional asset impairment charge of \$145,000. Excluding these charges, general and administrative expense increased 23% from \$7.9 million in 1997 to \$9.7 million in 1998. Significant increases included the addition of several senior executives and costs related to the continued maintenance of the Company's intellectual property and patent infringement litigation. The Company settled three litigation matters during 1998, but significant litigation costs associated with the patent infringement lawsuit against Merck KGaA are expected to continue with the case scheduled for trail sometime during the second half of 1999.

Other income, net, which primarily included interest income and a litigation settlement gain of \$550,000 in 1998, was \$1.8 million in 1998 compared to \$1.9 million in 1997. The litigation gain offset a decline in interest income due to lower investment balances and lower short-term interest rates.

## 1997 Compared to 1996

The Company's net loss increased from \$7.5 million in 1996 to \$17.0 million in 1997. The 1997 loss included two non-cash charges totaling \$6.9 million, which are included in general and administrative expense.

Total revenues increased 12% from \$13.1 million in 1996 to \$14.7 million in 1997 as increases in product sales offset decreases in other revenues. Product sales increased 25% from \$11.2 million to \$14.0 million due to \$6.0 million in sales of INTEGRA in 1997 compared to \$3.1 in 1996. The Company's export sales increased 17% from \$1.7 million to \$2.0 million as INTEGRA export sales increased by \$860,000. Approximately 72% of INTEGRA sales in 1996 were in North America compared to 71% in 1996, following the product's marketing approval from the FDA in March 1996. In 1997, 114 burn centers and hospitals throughout North America purchased INTEGRA compared to 65 burn centers and hospitals in 1996. The Company's international sales included INTEGRA sales to 20 countries throughout the world.

Sales in the Company's medical products segment decreased from \$8.1 million in 1996 to \$8.0 million in 1997. Decreases in the Company's infection control and surgical and hemostasis product lines were partially offset by increases in its dental product line and other contract manufacturing. The dental product line increase was the result of increased orders from the Company's marketing partner for the BioMend product, which was introduced in August 1995. The decrease in the surgical and hemostasis product line, which includes products sold to marketing partners and products marketed directly, was due to lower unit volume from international distributors and customers.

During 1997, the Company's distribution agreement for its ophthalmic products was terminated, and the Company has discontinued the product line. In January 1998, the Company decided to suspend operations at its leased West Chester, Pennsylvania facility, and as a result discontinued its avian collagen wound care product line and its contract manufacturing activities. The Company's ophthalmic, avian collagen and contract manufacturing revenues accounted for less than 5% of product sales in 1997 and 1996. Customers representing greater than 10% of sales included two customers with aggregate sales of 24% in 1997 and three customers with aggregate sales of 42% in 1996. Because significant portions of the Company's medical products segment sales are sold to marketing partners and distributors, quarter-to-quarter sales can vary significantly.

Other revenue, which includes grant revenue, license fees, contract development revenue and royalties, declined from \$1.9 million in 1996 to \$745,000 in 1997. Grant revenue declined by \$590,000 as a large portion of 1996 revenue came from a three-year \$2.0 million NIST grant which was completed in 1996. Licensing revenue also declined as the Company received a \$500,000 license fee in 1996 in an agreement with Cambridge Antibody Technology Limited involving a human antibody development program.

Cost of product sales increased 5% from \$6.7 million (60% of product sales) in 1996 to \$7.0 million (50% of product sales) in 1997. The dollar increase in cost of product sales is due to higher product sales. Cost of product sales as a percentage of sales decreased due to lower inventory write-offs related to certain medical product production difficulties in 1996, improved capacity utilization for INTEGRA, and increased sales in higher margin products.

Research and development expense increased from \$6.3 million in 1996 to \$6.4 million in 1997. Increases in research and development expenditures associated with clinical costs for the Company's post-approval study of INTEGRA offset declines in pre-clinical costs associated the Company's absorbable biocompatible polymer program.

Selling and marketing expense increased 27% from \$4.3 million in 1996 to \$5.5 million in 1997 as the Company continued to focus its efforts on the domestic and international market introduction of INTEGRA. During 1997, the Company expanded its network of domestic and international regional managers for the sales of INTEGRA.

General and administrative expense was \$14.8 million in 1997 and included two non-cash charges in the fourth quarter. The Company incurred a \$1.0 million asset impairment charge associated with certain leasehold improvements at its leased West Chester, Pennsylvania, and a \$5.9 million charge related to an equity-based signing bonus for the Company's President and Chief Executive Officer. Excluding these charges, general and administrative expense increased 48% from \$5.3 million in 1996 to \$7.9 million in 1997. Significant increases include the addition of several senior executives and costs related to the continued maintenance of the Company's intellectual property and patent infringement litigation.

Other income, net, which primarily included interest income, was \$1.9 million in 1996 and 1997 as the decline in interest income from lower investment balances was offset by income from other items.

## Liquidity and Capital Resources

The Company has funded its operations to date primarily through private and public offerings of its common stock, revenues from sales of existing products, research grants from government agencies, development and licensing agreements with major industrial companies, borrowings under a revolving credit line and cash acquired in connection with the business acquisitions.

At December 31, 1998, the Company had cash, cash equivalents and short-term investments of \$20.2 million representing a \$6.1 million decrease from December 31, 1997. The principal uses of funds during 1998 were \$9.9 million for operations and \$1.2 million in purchases of property and equipment. The Company issued 500,000 shares of Series A Preferred Stock ("Series A Preferred") for \$4.0 million during the second quarter of 1998. The Series A Preferred shares carry an annual dividend of 2% and are each convertible into one-half of one share of the Company's common stock. In addition, the Company acquired \$1.1 million in cash in connection with the acquisition of Rystan in September 1998.

In January 1999, the Company sold its Panafil(R) product line, including the brand name and related equipment, to Healthpoint, Ltd. for \$6.4 million in cash. Integra also is entitled to receive the first \$3 million of Panafil(R) sales specifically to the podiatry market and certain hospitals with burn centers. The Company intends to move Rystan's remaining operations to its Plainsboro, New Jersey facility by July 1999.

On March 29, 1999, the Company acquired the business, including certain assets and liabilities, of the NeuroCare group of companies, a leading provider of neurosurgical products, for \$25 million, comprised of \$14 million of cash and \$11 million of assumed indebtedness under a term loan from Fleet Capital Corporation ("Fleet"). Fleet is also providing a \$4 million revolving credit facility (together with the term loan, the "Credit Agreement") to fund working capital for the business. Revenue of the acquired business was \$32.5 million in 1998 and earnings before interest, taxes, depreciation, amortization and a goodwill impairment charge was \$5.8 million. Of the cash portion of the purchase price, \$10 million was financed by affiliates of Soros Private Equity Partners LLC, through the sale 100,000 shares of Integra Series B Preferred Stock ("Series B Preferred") and related warrants to purchase 240,000 shares of common stock. The Series B Preferred shares are convertible into 2,617,801 shares of the Company's common stock, have a liquidation preference of \$10 million with a 10% cumulative dividend and are senior to all other equity securities of the Company. The balance of the cash portion of the purchase price was provided by Integra's indirect wholly-owed subsidiary, Integra NeuroCare LLC ("Integra NeuroCare"). The Credit Agreement was entered into by Integra NeuroCare and its subsidiaries, and all the assets as well as the ownership interests of Integra NeuroCare and its subsidiaries have been pledged as collateral under the Credit Agreement. NeuroCare Holding Corporation, a wholly-owned subsidiary of Integra and the sole

member of Integra NeuroCare, has guaranteed the borrowers' obligations under the Credit Agreement. The term loan portion of the Credit Agreement is at prime plus 1.5%, and interest on the revolving credit facility is at prime plus 1%. All interest is payable monthly. Principal payments under the term loan are payable on a quarterly basis through January 8, 2003. In addition, a commitment fee at an annual rate of 1/2 of 1% is payable monthly on the average unused portion of the revolving credit facility.

The Company anticipates it will continue to use its liquid assets to fund operations until sufficient revenues can be generated through product sales and collaborative arrangements. The Company believes that current cash balances and funds available from the fleet revolving credit facility and existing revenue sources will be sufficient to finance the Company's anticipated operations for at least the next twelve months. The Company may in the future seek to issue equity securities or enter into other financing arrangements with strategic partners to raise funds in excess of its anticipated liquidity and capital requirements. There can be no assurance that the Company will be able to generate sufficient revenues to obtain profitability or raise additional funding in equity or debt transactions.

Factors That May Affect Future Results of Operations

The Company believes that the following important factors, among others, have affected, and in the future could affect, the Company's results of operations and could cause the Company's future results to differ materially from its historical results and those expressed in any forward-looking statements made by the Company.

- The Company has developed by acquiring or securing a number of companies and technologies. There are certain risks associated with business and technology acquisitions, including incorrectly assessing the value of assets and future prospects, the extent of possible liabilities and the anticipated costs of incorporating acquired businesses into the Company. Although the Company is frequently in discussions with others relating to possible technology acquisitions and related matters, it does not currently have any agreement with respect to any acquisitions or any material technology transfers other than those described in this Annual Report. Because these types of transactions involve risks and could involve the issuance of the Company's equity, any business or technology acquisition could have a material affect on the Company's business. The Company's recent acquisition of the NeuroCare group of companies represents a significant acquisition, and the Company's ability to integrate and manage the business will probably have a significant impact on the future results of the Company.
- The ability of Integra NeuroCare to fund its debt service obligations under the Credit Agreement will depend upon its future operating performance, which is subject to the success of its business strategy, prevailing economic conditions, regulatory matters, levels of interest rates and financial, business and other factors, many of which are beyond its control. Although the Company is not a guarantor of such indebtedness, the current debt service obligations of Integra NeuroCare could have important consequences for both Integra NeuroCare and the Company, including: (i) the ability of the Company or Integra NeuroCare to obtain additional financing for future working capital needs, for possible future acquisitions or other purposes may be limited; (ii) a substantial portion of Integra NeuroCare's cash flow from operations will be dedicated to the payment of the principal and interest on its indebtedness, thereby reducing funds available for other purposes; and (iii) Integra NeuroCare and the Company will be more vulnerable to adverse economic conditions than some of its competitions and may be limited in its ability to withstand competitive pressures. If Integra NeuroCare's cash flow and capital resources are insufficient to fund its debt service obligations, it may be forced to reduce or delay planned expansion and capital expenditures, sell assets, or restructure its debt. There can be no assurance that Integra NeuroCare's operating results, cash flow and capital resources will be sufficient to repay its indebtedness. In the absence of such operating results and resources, Integra NeuroCare could face substantial liquidity problems and might be required to dispose of material assets or operations to meet its debt service and other obligations, and there can be no assurance as to the timing of such sales or the proceeds that Integra NeuroCare could realize therefrom. In addition, should any of the above conditions arise for Integra NeuroCare, the Company could be negatively impacted by such events.
- The Company believes that its INTEGRA product represents a relatively new method of treatment, and as such, it is difficult to estimate the potential market and potential revenue growth for the product. The Company also believes that INTEGRA provides a substantial enhancement over existing treatment alternatives for its current indication, which is the treatment of severe burns. The Company believes that INTEGRA provides longer-term financial savings and other health benefits by reducing the number of required procedures and the patient's length of hospital stay. However, the cost of the product does require the healthcare provider to incur a higher initial cost than is customary under most treatment options. In addition, the health care industry in general is under continued cost containment pressures from government health administration authorities, private health insurers and other organizations. Should the Company be unable to demonstrate these savings to the healthcare provider market and others, the Company may experience lower than anticipated revenue growth and a resulting adverse effect on its business, financial condition and results of operations.
- o Because a significant portion of the Company's historical medical product sales have been to a small number of marketing partners, the loss of one

of these customers could have a negative impact on revenues. The Company also depends on third party distributors for several products domestically and internationally. The Company's revenues and gross profit margins for these products are dependent on the continuing efforts of these marketing partners and third party distributors. The Company believes that its current relationships with customers regarding these products is satisfactory. The Company is also limited in its marketing and selling resources, which may or could make it ineffective in any direct marketing efforts.

There can be no assurance that the Company's planned research and development efforts will lead to commercially successful products. Many of the Company's technologies are in the early stages of development and will require the commitment of substantial additional resources by the Company and its potential strategic partners prior to commercialization. Their can be no assurance that any such potential products will be successfully developed on a timely basis, if at all, be safe and effective in clinical trials, meet applicable regulatory standards and receive necessary regulatory approvals, be produced in commercial quantities at acceptable costs, or be successfully marketed and achieve customer acceptance. There can also be no assurance that the Company's current plans for clinical trials to expand the indication of use for INTEGRA will result in an expanded indication or achieve a greater market acceptance. Costs due to regulatory delays or demands, unexpected adverse side effects or insufficient therapeutic

effectiveness would prevent or significantly slow development and commercialization efforts and could have a material adverse effect on the Company. In addition, the Company has filed a 510k premarket notification for its DuraGen(TM) product with the FDA for marketing approval in the U.S. The Company currently anticipates a U.S. launch of DuraGen(TM) by the third quarter of 1999 and any delays in this launch could have a negative effect on the Company's operating results.

- The Company depends substantially on its ability to obtain patents (by license or otherwise), maintain trade secrets and operate without infringing on the intellectual property rights of third parties. The patent position of biotechnology and pharmaceutical firms is highly uncertain, involves many complex legal, factual and technical issues and has recently been the subject of much litigation. There can be no assurance that patent applications relating to the Company's products and technologies will result in patents being issued, that patents issued or licensed by the Company will provide protection against competitors or that the Company will enjoy patent protection for any significant period of time. The Company is currently involved in a patent infringement lawsuit. This litigation, as well as any possible future litigation, can be lengthy and expensive, and there can be no assurance as to the timing, cost or eventual outcome of such litigation. The Company's business may be adversely affected if it is unsuccessful in protecting its patents and proprietary rights. In addition, the Company is involved in a lawsuit in which the defendant has made a counterclaim for damages that, if decided against the Company, could have a material adverse effect on the financial position of the Company. The Company believes this counterclaim is without merit and will continue its defense against this counterclaim. See "Item 3. Legal Proceedings" of this report.
- The markets for the Company's actual and proposed products and their intended use are characterized by rapidly changing technology. Competition in the general area of medical technology is intense and is expected to increase. There are many companies in the medical field that have substantially greater capital resources, research and development staffs and facilities than the Company. There is a risk that technological developments will render actual and proposed products or technologies of the Company non-competitive, uneconomical or obsolete. As a result, the Company's growth and future financial performance depend in part upon its ability to introduce new products and enhance existing products to meet the latest technological advances. Failure by the Company to anticipate or respond adequately to changes in technology and market factors could have a material adverse effect on the Company's business.

The above factors are not meant to represent an exhaustive list of the risks and uncertainties associated with the Company's business. These factors as well as other factors may affect the Company's future results and the Company's

stock price, particularly on a quarterly basis. Finally, because the Company participates in a highly dynamic industry, its stock price is often subject to significant volatility.

#### Year 2000 Disclosure

As is true for most companies, the potential for problems involving existing information systems as we approach and pass January 1, 2000 creates a risk for the Company. These potential problems are the result of the inability of certain date-sensitive computer programs and embedded controls to recognize a two-digit date field designated as "00" as the year 2000 instead of the year 1900, the consequences of which could lead to system failures or miscalculations causing disruptions to operations and normal business activities. This is a significant issue with far reaching implications, some of which cannot be anticipated or predicted with any degree of certainty as is commonly referred to as a Year 2000 (Y2K) compliance issue.

The Company has completed its initial assessment of the magnitude of the impact of Y2K on itself and is currently in the process of developing, implementing and monitoring a Y2K correction plan in all areas identified as potentially compromised by the advent of the Y2K. This correction plan includes (i) the assessment of information technology systems ("IT systems") and non-IT systems for Y2K compliance, (ii) the modification and/or replacement of non-compliant systems, (iii) the testing of modified and/or replaced systems, and (iv) the deployment of Y2K compliant systems. In most cases, the Company anticipates that the Y2K correction plan will include upgrading current hardware and software or purchasing additional hardware and software to enhance its current IT systems. Since January 1, 1997, Integra has spent approximately \$425,000 upgrading and/or replacing certain components of its information systems. Integra anticipates spending an additional \$75,000 on such IT system upgrades and purchases through December 31, 1999. The majority of the capital expenditures and operating costs associated with these upgrades and purchases would have occurred in the normal course of business regardless of the Y2K issue, although a portion of such expenditures and costs is attributable to the Company's Y2K correction plan. The Company expects that the upgrades and purchases will be implemented and tested by June 1999 and that, in any event, its IT systems will be Y2K compliant before December 31, 1999. The Company is currently on track with its planned upgrades.

The Company has been reviewing and has requested assurances on the status of Y2K readiness of its critical suppliers. Many of these suppliers however, have limited assurances on their status on the Y2K readiness. The Company plans to continue to monitor critical suppliers during 1999. The Company has reviewed information regarding its major customers to assess their readiness for Y2K. If a significant number of suppliers and customers experience disruptions as a result of the Y2K issue, this could have a material adverse effect on the financial position and results of operations of the Company. Although the Company is formulating contingency plans to deal with Y2K problems on critical suppliers and major customers, there can be no assurance that these plans will address all Y2K problems or that the implementation of these plans will be successful.

The Company's products do not contain any materials that would make such products susceptible to disruptions relating to the Y2K. Given the information available at this time, Integra currently anticipates that the amount that Integra will spend to complete its Y2K correction plan should not have a material adverse impact on Integra's business, results of operations, financial position and cash flow beyond the amounts discussed previously. Furthermore, Integra does not currently expect that the effects of any Y2K non-compliance on Integra's information systems will have any material adverse impact on Integra's business, results of operations, financial position or cash flows. However, there can be no assurance that Integra will not incur additional expenses or experience business disruption as a result of ITsystem problems associated with the century change, including system and equipment problems of third parties with whom Integra does business.

# Other Matters

At December 31, 1998, the Company had net operating loss carryforwards of approximately \$48 million and \$35 million for federal and state income tax purposes, respectively, to offset future taxable income, if any, which expire through 2018 and 2005, respectively. At December 31, 1998, several of the Company's subsidiaries had unused net operating loss and

tax credit carryforwards arising from periods prior to the Company's ownership. The net operating loss carryforwards (excluding Telios) of approximately \$10 million for federal income tax purposes expire between 2000 and 2005. The Company's Telios subsidiary has approximately \$84 million of net operating losses, which expire between 2002 and 2010. The amount of Telios' net operating loss that is available and the Company's ability to utilize such loss is dependent on the determined value of Telios at the date of acquisition. The Company's has valuation allowance of \$42 million against all deferred tax assets, including the net operating losses, due to the uncertainty of realization. The timing and manner in which these net operating losses may be utilized in any year by the Company are severely limited by the Internal Revenue Code of 1986, as amended, Section 382 and other provisions of the Internal Revenue Code and its applicable regulations.

#### ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial statements specified by this Item, together with the report thereon of PricewaterhouseCoopers LLP, are presented following Item 14 of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

## PART III

### INCORPORATED BY REFERENCE

The information called for by Item 10 "Directors and Executive Officers of the Registrant" (other than the information concerning executive officers set forth after Item 4 herein), Item 11 "Executive Compensation", Item 12 "Security Ownership of Certain Beneficial Owners and Management" and Item 13 "Certain Relationships and Related Transactions" is incorporated herein by reference to the Company's definitive proxy statement for its Annual Meeting of Stockholders scheduled to be held on May 17, 1999, which definitive proxy statement is expected to be filed with the Commission not later than 120 days after the end of the fiscal year to which this report relates.

## PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a) Documents filed as a part of this report.

1. Financial Statements. The following financial statements are filed as a part of this report. All schedules are omitted because they are not applicable or the required information is included in the consolidated financial statements or notes thereto.

Report of Independent Accountants	F-1
Consolidated Balance Sheets as of December 31, 1998 and 1997	F-2
Consolidated Statements of Operations for the years ended December 31, 1998, 1997 and 1996	F-3
Consolidated Statements of Cash Flows for the years ended December 31, 1998, 1997 and 1996	F-4
Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 1998, 1997 and 1996	F-5
Notes to Consolidated Financial Statements	F-6

# 2. Exhibits.

Number	Description	Location		
2.1	Agreement and Plan of Merger dated September 28, 1998 among the Company, RC Acquisition Corporation, Rystan Company, Inc., and GWC Health, Inc.	(9) (Exh. 2)		
3.1(a)	Amended and Restated Certificate of Incorporation of the Company	(2) (Exh. 3.1)		

Exhibit Number	Description	Locat	
3.1(b)	Certificate of Amendment to Amended and Restated Certificate of	(1)	
	Incorporation dated May 23, 1998		
3.2	Amended and Restated By-laws of the Company	(8)	(Exh. 3.3)
4.1	Certificate of Designation, Preferences and Rights of Series A	(6)	(Exh. 3)
	Convertible Preferred Stock as filed with the		
	Delaware Secretary of State on April 14, 1998.		
4.2	Certificate of Designation, Preferences and Rights of Series B	(1)	
	Convertible Preferred Stock as filed with the Delaware Secretary of		
4.3	State on March 12, 1999 Warrant to Purchase 150,000 shares of the Company's Common Stock at an	(9)	(Exh. 4.1)
4.5	exercise price of \$7.00 per share issued to GWC Health, Inc.	(3)	(EAII. 4.1)
4.4	Warrant to Purchase 150,000 shares of the Company's Common Stock at an	(9) (F	Exh. 4.2)
	exercise price of \$6.00 per share issued to GWC Health, Inc.	(-) (-	,
10.1	License Agreement between MIT and the Company dated as of December 29,	(2)	(Exh. 10.1)
	1993		
10.2	License & Research Agreement between ABS LifeSciences, Inc. and	(2)	(Exh. 10.2)
	Hospital for Joint Diseases Orthopaedic Institute dated as of December		
	26, 1990, as amended on May 9, 1992 and January 12, 1995		
10.3	License Agreement between Smith & Nephew Consolidated Inc. and	(2)	(Exh. 10.3)
10 4	Vitaphore Corporation dated as of December 31, 1993	(2)	(=-1- 10 4)
10.4	Research and License Agreement between the Brigham and Women's Hospital, Inc. and the Company dated as of January 1, 1995	(2)	(Exh. 10.4)
10.5	Exclusive License Agreement between the Company and Rutgers University	(2)	(Exh. 10.5)
10.5	dated as of December 31, 1994	(2)	(EAII: 10.5)
10.6	License Agreement for Adhesion Peptides Technology between La Jolla	(2)	(Exh. 10.6)
	Cancer Research Foundation and Telios dated as of June 24, 1987	, ,	,
10.7(a)	Letter of Intent among Cambridge Antibody Technology Limited ("CAT"),	(2)	(Exh. 10.7(a))
	Telios and the Company dated May 10, 1995		
10.7(b)	Strategic Alliance and Technology Agreement dated as of June 23, 1995	(2)	(Exh. 10.7(b))
	between CAT and Telios and consented to by the Company		
10.8	Technology Development and License Agreement between Union Carbide and	(2)	(Exh. 10.8)
10 0	the Company dated as of April 30, 1993	(2)	(Dark 10 10)
10.9	Supply Agreement between Genetics Institute, Inc. and the Company dated as of April 1, 1994	(2)	(Exh. 10.12)
	as or whire i, 1994		

Exhibit Number	Description	Location	
10.10	Letter Agreement between the Company and Ioannis V. Yannas, Ph.D. dated as of December 31, 1992 regarding the provision of Consulting and Technology Services	(2) (Exh.	10.17)
10.11	Registration Rights Agreement between the Company and Edmund L. Zalinski dated as of August 31, 1994	(2) (Exh.	10.19)
10.12	Registration Rights Agreement between the Company and Edmund L. Zalinski Company dated as of August 31, 1994	(2) (Exh.	10.20)
10.13	Registration Rights Agreement between the Company and Elliot-Lewis Corporation dated as of August 31, 1994	(2) (Exh.	10.21)
10.14	Registration Rights Agreement between the Company and Steven Dadio dated as of August 31, 1994	(2) (Exh.	10.22)
10.15	Registration Rights Agreement between the Company and William R. Sautter dated as of August 31, 1994	(2) (Exh.	10.23)
10.16	Registration Rights Agreement between the Company and Boston Scientific Corporation dated as of December 29, 1993	(2) (Exh.	10.26)
10.17(a)	Stockholder Rights Agreement between the Company and Union Carbide dated as of April 30, 1993 ("Carbide Agreement")	(2) (Exh.	10.27(a))
10.17(b)	Amendment dated November 30, 1993 to Carbide Agreement	(2) (Exh.	10.27(b))
10.18(a)	Real Estate Lease & Usage Agreement between BHP Diagnostics, Inc., Medicus Technologies, Inc., Integra, Ltd. and the Company dated as of May 1, 1994	(2) (Exh.	10.28)
10.18(b)	Shared Facilities Usage Agreement Between BHP Diagnostics, Inc., Medicus Technologies, Inc. and Integra, Ltd. and the Company dated as of May 1, 1994	(2) (Exh.	10.29)
10.18(c)	Agreement dated June 30, 1998 by and among BHP Diagnostics, Medicus Corporation, Integra Lifesciences I, LTD and Integra Lifesciences Corporation	(1)	
10.19	Lease between Plainsboro Associates and American Biomaterials Corporation dated as of April 16, 1985, as assigned to Colla-Tec, Inc. on October 24, 1989 and as amended through November 1, 1992	(2) (Exh.	10.30)
10.20	1992 Stock Option Plan*	(2) (Exh.	10.31)
10.21	1993 Incentive Stock Option and Non-Qualified Stock Option Plan*	(2) (Exh.	10.32)
10.22	Warrant Agreement between the Company and Boston Scientific Corporation dated as of December 29, 1993	(2) (Exh.	10.35)
10.23	Registration Rights Agreement between the Company and Provco Leasing Corporation dated as of April 30, 1995	(2) (Exh.	10.37)

Exhibit Number	Description	Location
10.24	Form of Indemnification Agreement between the Company and [ ] dated August 16, 1995, including a schedule identifying the individuals that are a party to such Indemnification Agreements	(4)
10.25	Amendment to 1996 Incentive Stock Option and Non-Qualified Stock Option Plan*	(8) (Exh. 10.4)
10.26	Stock Purchase Agreement dated as of February 26, 1998 by and between Integra LifeSciences Corporation and Century Medical, Inc.	(6) (Exh. 10.1)
10.27	Registration Rights Agreement dated as of April 30, 1998 by and between Integra Lifesciences Corporation and Century Medical, Inc.	(6) (Exh. 10.2)
10.28	1996 Incentive Stock Option and Non-Qualified Stock Option Plan*	(5)
10.29	Employment Agreement dated December 27, 1997 between the Company and Stuart M. Essig*	(8) (Exh. 10.1)
10.30	Stock Option Grant and Agreement dated December 27, 1997 between the Company and Stuart M. Essig*	(8) (Exh. 10.2)
10.31	Restricted Units Agreement dated December 27, 1997 between the Company and Stuart M. Essig*	(8) (Exh. 10.3)
10.32	Indemnity letter agreement dated December 27, 1997 from the Company to Stuart M. Essig*	(8) (Exh. 10.5)
10.33	Employment Agreement between John B. Henneman, III and the Company dated September 11, 1998*	(10) (Exh. 10)
10.34	Registration Rights Agreement dated September 28, 1998 between the Company and GWC Health, Inc.	(9) (Exh. 10.1)
10.35	Lease dated September 28, 1998 between Rystan Company, Inc. and GWC Health, Inc.	(9) (Exh. 10.2)
10.36	Employment Agreement between George W. McKinney, III and the Company dated December 31, 1998*	(1)
10.37	Employment Agreement between Judith O'Grady and the Company dated December 31, 1998*	(1)
10.38	Employment Agreement between David B. Holtz and the Company dated December 31, 1998*	(1)
10.39 10.40 21	Employee Stock Purchase Plan* 1998 Stock Option Plan* Subsidiaries of the Company	(7) (Exh. 10.1) (7) (Exh. 10.2) (1)

Exhibit Number	Description	Location
23	Consent of PricewaterhouseCoopers LLP	(1)
27	Financial Data Schedule	(1)

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- \* Indicates a management contract or compensatory plan or arrangement.
- (1) Filed herewith.
- (2) Incorporated by reference to the indicated exhibit to the Company's Registration Statement on Form 10/A (File No. 0-26224) which became effective on August 8, 1995.
- (3) Incorporated by reference to the indicated exhibit to the Company's Report on Form 10-Q for the quarter ended June 30, 1995.
- (4) Incorporated by reference to the indicated exhibit to the Company's Registration Statement on Form S-1 (File No. 33-98698) which became effective on January 24, 1996.
- (5) Incorporated by reference to the indicated exhibit to the Company's Registration Statement on Form S-8 (File No. 333-06577) which became effective on June 22, 1996.
- (6) Incorporated by reference to the indicated exhibit to the Company's Report on Form 10-Q for the quarter ended March 31, 1998.
- (7) Incorporated by reference to the indicated exhibit to the Company's Registration Statement on Form S-8 (File No. 333-58235) which became effective on June 30, 1998.
- (8) Incorporated by reference to the indicated exhibit to the Company's Report on Form 8-K filed on February 3, 1998.
- (9) Incorporated by reference to the indicated exhibit to the Company's Report on Form 8-K filed on October 13, 1998.
- (10) Incorporated by reference to the indicated exhibit to the Company's Report on Form 10-Q for the quarter ended September 30, 1998.
- (b) Reports on Form 8-K
  - On October 13, 1998, the Company filed a Report on Form 8-K reporting that it had acquired Rystan Company, Inc. on September 28, 1998.

#### SIGNATURES

Pursuant to the requirements of Section 13 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, as of the 31st day of March, 1999.

#### INTEGRA LIFESCIENCES CORPORATION

By: /s/ Stuart M. Essig

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Title

Stuart M. Essig, Ph.D. President

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 in the capacities indicated, on the 31st day of March, 1999.

Signature

Edmund L. Zalinski, Ph.D.

	<del></del>
/s/ Richard E. Caruso	Chairman of the Board
Richard E. Caruso, Ph.D.	
/s/ Stuart M. Essig	President, Chief Executive Officer and Director
Stuart M. Essig, Ph.D.	(Principal Executive Officer)
/s/ George W. McKinney, III	Executive Vice President, Chief Operating Officer and Director
George W. McKinney, III, Ph.D.	operating officer and birector
/s/ David B. Holtz	Vice President, Finance and Treasurer (Principal Financial and Accounting
David B. Holtz	Officer)
/s/ Keith Bradley	Director
Keith Bradley, Ph.D.	
/s/ Neal Moszkowski	Director
Neal Moszkowski	
/s/ Edmund L. Zalinski	Director

#### REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Integra LifeSciences Corporation and Subsidiaries:

In our opinion, the accompanying consolidated balance sheets and the related  $% \left( 1\right) =\left( 1\right) \left( 1$ consolidated statements of operations and stockholders' equity and cash flows present fairly, in all material respects, the financial position of  $\ensuremath{\mathsf{Integra}}$ LifeSciences Corporation and Subsidiaries (the "Company") at December 31, 1998 and 1997 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which that we plan and perform the audit to obtain reasonable  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 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 includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PRICEWATERHOUSECOOPERS LLP

Florham Park, New Jersey March 2, 1999, except as to Note 17, which is as of March 29, 1999

# INTEGRA LIFESCIENCES CORPORATION AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

### In thousands

	December 31,		
	1998	1997 	
ASSETS			
Current Assets: Cash and cash equivalents. Short-term investments. Accounts receivable, net of allowances of \$354 and \$390. Inventories. Prepaid expenses and other current assets.	\$ 5,277 14,910 3,106 2,713 921	\$ 2,083 24,189 2,780 2,350 400	
Total current assets  Property and equipment, net  Intangibles assets, net  Other assets	26,927 6,291 1,446 43	31,802 6,414  140	
Total assets	\$ 34,707 ======	\$ 38,356 ======	
LIABILITIES AND STOCKHOLDERS' EQUITY  Current Liabilities:			
Accounts payable, trade	\$ 573 2,456	\$ 541 1,854	
Total current liabilitiesOther liabilities	3,029 312	2,395 206	
Total liabilities	3,341	2,601	
Commitments and contingencies			
Stockholders' Equity:			
Preferred stock, \$.01 par value (15,000 authorized shares; 500 Series A Convertible shares issued and outstanding, \$4,000 liquidation preference and no shares issued or outstanding at December 31, 1998 and 1997, respectively)	5		
1998 and 1997, respectively). Additional paid-in capital. Treasury stock at cost (46 shares at December 31, 1998) Unearned compensation related to stock options. Notes receivable - related party. Accumulated other comprehensive loss. Accumulated deficit.	158 120,046 (286) (148) (35) (40) (88,334)	150 111,877  (266) (35) (26) (75,945)	
Total stockholders' equity	31,366	35 <b>,</b> 755	
Total liabilities and stockholders' equity	\$ 34,707 ======	\$ 38,356 ======	

# INTEGRA LIFESCIENCES CORPORATION AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF OPERATIONS

In thousands

	Years Ended December 31,			
-	1998 	1997 	1996 	
REVENUE				
Product sales.  Product license fees.  Contract product development.  Research grants.  Royalties.	\$ 14,076 1,290 1,114 687 288	\$ 14,001 14  485 246	\$ 11,210 500 76 1,072 290	
Total revenue	17,455	14,746	13,148 ======	
COSTS AND EXPENSES				
Cost of product sales.  Research and development.  Selling and marketing.  General and administrative.	7,420 8,424 5,955 9,836	7,027 6,406 5,460 14,764		
Total costs and expenses	31,635	33,657	22,595	
Operating loss	(14,180) 1,250 588	(18,911) 1,771 176	(9,447) 1,799 120	
Net loss	\$ (12,342) ======	\$ (16,964) ======	\$ (7,528) =====	
Basic and diluted net loss per share	\$ (0.76) ======	\$ (1.15) ======	\$ (0.54) ======	
Weighted average number of shares outstanding	16 <b>,</b> 139	14,810	14,057	

# INTEGRA LIFESCIENCES CORPORATION AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS

#### In thousands

	Years Ended December 31,			
	1998	1997 	1996 	
OPERATING ACTIVITIES:				
Net loss Adjustments to reconcile net loss to net cash used in operating activities:	\$ (12,342)	\$ (16,964)	\$ (7,528)	
Depreciation and amortization	1,438 (64) (481)	1,903 (162)	2,059 (136) (955)	
Restricted units issued	(461)  319	(126) 5,875 123	(955)  83	
Provision for impairment of leasehold improvements	145	1,021	 16	
Changes in operating assets and liabilities: Accounts receivable	(287) 527	122 285	(1,134) (1,263)	
Prepaid and other current assets	65 64	(62) (81)	130 159	
Accounts payable, accrued expenses and other liabilities	802	187	602	
Net cash used in operating activities	(9,814)	(7 <b>,</b> 879)	(7 <b>,</b> 967)	
INVESTING ACTIVITIES:				
Proceeds from the sales/maturities of investments  Purchases of investments  Purchases of property and equipment	33,020 (23,274) (1,166)	35,500 (37,071) (770)	21,138 (41,530) (1,172)	
Proceeds from sale of assets and other.  Cash acquired in business acquisitions	48 1,118	183	294	
Purchase of equity securities	(500)			
Net cash provided by (used in) investing activities	9,246	(2,158)	(21,270)	
FINANCING ACTIVITIES:	4 000		05.660	
Proceeds from sales of preferred and common stock  Proceeds from exercised stock options and employee stock purchase plan	4,000 95	358	35 <b>,</b> 662	
Purchase of treasury stock Preferred dividends paid	(286) (47)		 	
Other financing activities			40	
Net cash provided by financing activities	3,762	358	36,487	
Net increase (decrease) in cash and cash equivalents	3,194	(9,679)	7,250	
Cash and cash equivalents at beginning of period	2,083	11,762	4,512	
Cash and cash equivalents at end of period	\$ 5,277	\$ 2,083	\$ 11,762 ======	

#### INTEGRA LIFESCIENCES CORPORATION AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Public offering of common stock .....

Issuance of common stock under stock Amortization of unearned compensation Decrease in notes receivable ......

Balance, December 31, 1996 .....

Net loss ..... \$ (16,964) Unrealized loss on investments ..... (22)

Total comprehensive loss ..... \$ (16,986)

In thousands							Notes	Unearned
	Common	Stock	Serie Preferre		Treasury	Additional Paid-In	Receivable- Related	Compensation Related to
	Shares	Amount	Shares	Amount	Stock	Capital	Parties	Stock Options
Balance, December 31, 1995	11,747	\$ 118		\$	\$	\$ 68,847	\$ (85)	\$
Net loss Unrealized loss on investments								
Total comprehensive loss  Public offering of common stock  Issuance of common stock under stock	2,336	23				35,548		
option plans	. 193	2				783		
non-employee stock options Amortization of unearned compensation						411		(411) 83
Decrease in notes receivable							50	
Balance, December 31, 1996	14,276	143				105,589	(35)	(328)
				======				
Net loss Unrealized loss on investments Total comprehensive loss								
Issuance of common stock under stock option plans	676	7				352		
non-employee stock options Amortization of unearned compensation						61		(61) 123
Issuance of restricted units						5,875		
Balance, December 31, 1997	14,952 ======	150				111,877	(35)	(266)
Net loss								
Unrealized loss on investments  Total comprehensive loss  Issuance of common stock under stock option and employee stock								
purchase plans	31			 5		95		
Issuance of Series A preferred stock Dividends paid on Series A preferred			500	5		3 <b>,</b> 995		
stock								
acquisition	800	8				3,878		
non-employee stock options Amortization of unearned compensation						145		145 263
Warrant issued for services rendered					 (286)	56 		
Purchase of treasury stock								
Balance, December 31, 1998	15,783 ======	\$ 158 ======	500	\$ 5 =====	\$ (286) ======	\$ 120,046 ======	\$ (35) ======	\$ (148) ======
	Comprehensive Loss	Accumula Comprehen Loss	sive Stoc	kholders' icit	Total Equity			
Balance, December 31, 1995	\$	\$	\$ (5:	1,453)	\$17,427			
Net loss	\$ (7,528) (4)		( <sup>1</sup>	7 <b>,</b> 528) 	(7,528) (4)			
Total comprehensive loss	\$ (7,532)							

-- - 35**,**571

-- - 785 -- - 83 -- - 50 -- (4) (58,981) 46,384

====== (16,964)

(22)

(4)

-- (16,964) (22) --

	=======			
Issuance of common stock under stock option plans				359
Unearned compensation related to				
non-employee stock options				123
Amortization of unearned compensation Issuance of restricted units			<del></del>	5,875
issuance of festificted units				J, 673
Balance, December 31, 1997		(26)	(75,945)	35,755
Baranee, Beechaer 31, 133,		======	======	======
Net loss	\$ (12,342)		(12,342)	(12,342)
Unrealized loss on investments	(14)	(14)		(14)
Total comprehensive loss	\$ (12,356)			
	=======			
Issuance of common stock under stock				
option and employee stock				
purchase plans				95
Issuance of Series A preferred stock				4,000
Dividends paid on Series A preferred stock			(47)	(47)
Common stock and warrants issued in			(47)	(47)
connection with a business				
acquisition				3,886
Unearned compensation related to				-,
non-employee stock options				
Amortization of unearned compensation				263
Warrant issued for services rendered				56
Purchase of treasury stock				(286)
Balance, December 31, 1998		\$ (40)	\$(88,334)	\$31,366
		=======	=======	======

# 1. BUSINESS

Integra LifeSciences Corporation and subsidiaries (the "Company") develops, manufactures and markets medical devices, implants and biomaterials primarily used in the treatment of burns and skin defects, spinal and cranial disorders, orthopedics, private label medical products, and other surgical applications. The Company seeks to be the world's leading company specializing in implantable medical and biopharmaceutical therapies to target and control cell behavior.

There are certain risks and uncertainties inherent in the Company's business. The Company has incurred net operating losses since inception and expects to continue to incur such losses unless and until product sales and collaborative arrangements generate sufficient revenue to fund continuing operations. There can be no assurance that the Company's research and development efforts will result in commercially successful products or that the Company will be granted regulatory approvals for its products. The Company's business is characterized by rapidly changing technology and intense competition. There is a risk that technological developments will render actual and proposed products or technologies of the Company non-competitive, uneconomical or obsolete. There are certain risks associated with the Company's product sales being comprised of a few significant products. In addition, the Company is subject to various other risks and uncertainties common within its industry which could have a material adverse effect on its business.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Principles of Consolidation

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The consolidated financial statements include the accounts of the Company and its subsidiaries, all of which are wholly owned. All inter-company accounts and transactions are eliminated in consolidation. Certain prior year amounts have been reclassified to conform with the current year presentation.

#### Cash and Cash Equivalents

- -----

The Company considers all highly liquid investments purchased with original maturities of three months or less and have virtually no risk of loss in value to be cash equivalents. Cash and cash equivalents are primarily composed of money market mutual funds, repurchase agreements and U.S. Government securities. The carrying values of these instruments reflect their approximate fair values.

#### Investments

- -----

The Company's current investment policy is to invest available cash balances in high quality debt securities with maturities not to exceed 18 months. Realized gains and losses are determined on the specific identification cost basis. All investments are classified as available for sale, with unrealized gains and losses reported as a separate component of stockholder's equity.

#### Liquidity

#### - -----

The Company believes that current cash balances and funds available from existing revenue sources will be sufficient to finance the Company's anticipated operations for at least the next twelve months. The Company may in the future seek to issue equity securities or enter into other financing arrangements with strategic partners to raise funds in excess of its anticipated liquidity and capital requirements.

#### Inventories

#### \_ \_\_\_\_\_

Inventories, consisting of purchased materials, direct labor and manufacturing overhead, are stated at the lower of cost (determined on the first-in, first-out method) or market.

#### Property and Equipment

#### \_ \_\_\_\_\_

Purchases of property and equipment are stated at cost. The Company provides for depreciation using the straight-line method over the estimated useful lives of the assets, which are estimated to be between 3 and 15 years. Leasehold improvements are amortized using the straight-line method over the minimum lease term or the life of the asset whichever is shorter. The cost of major additions and improvements is capitalized. Maintenance and repair costs that do not improve or extend the lives of the respective assets are charged to operations as incurred. When depreciable assets are retired or sold, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in operations.

#### Intangible Assets

#### \_ \_\_\_\_\_

Intangible assets include the goodwill recorded in connection with the acquisition of Rystan Company, Inc. ("Rystan") on September 28, 1998. The goodwill is being amortized using a straight-line basis over fifteen years. Amortization expense for 1998 was \$24,000. The Company assesses whether its intangible assets are impaired based on an evaluation of undiscounted projected cash flows through the remaining amortization period. If an impairment exists, the amount of such impairment is calculated based on the estimated fair value of the asset.

#### Income Taxes

#### IIICOME Taxes

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of operations in the period that includes the enactment date.

#### Research and Development

#### - -----

Research and development costs are expensed in the period in which they are incurred.

#### Revenue Recognition

#### - -----

The Company's product revenue is recognized at the time that products are shipped or when title has passed to the customer. Research grant revenue and contract product development revenue are recognized when the related expenses are incurred. Under the terms of current research grants, the Company is reimbursed for allowable direct and indirect research expenses. Product licensing fees are recognized when earned, which is when all related commitments have been satisfied. Royalty revenue is recognized when the Company's marketing and distribution partners sell royalty products.

#### Concentration of Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents and short-term investments, which are held at major financial institutions and trade receivables. The Company's products are sold on an uncollateralized basis and on credit terms based upon a credit risk assessment of each customer. The Company's provisions for doubtful accounts receivable for the years ended December 31, 1998, 1997 and 1996 were \$91,000, \$318,000 and \$205,000, respectively. Amounts written off for the years ended December 31, 1998, 1997 and 1996 were \$127,000, \$156,000 and \$231,000, respectively.

#### Net Loss and Loss per Share

Basic earnings per share ("EPS") excludes dilution and is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then share in the earnings of the entity. The Company has not included 3,095,000 options and warrants to purchase common stock at \$2.9375 to \$11.50 per share and 500,000shares of preferred stock in the diluted per share computation as the result is antidilutive. The Restricted Units issued by the Company (see Note 8) are included in the weighted average calculation because no further consideration is due related to the issuance of the underlying common shares.

#### Stock Based Compensation

The Company adopted SFAS No. 123 "Accounting for Stock-Based Compensation". In conjunction with the adoption, the Company will continue to apply the intrinsic value based method of accounting prescribed by Accounting Principles Board Opinion No. 25 "Accounting for Stock Issued to Employees", with pro-forma disclosure of net income and earnings per share affect of the fair value method prescribed by SFAS No. 123.

#### Recent Accounting Pronouncements

In June 1998, the FASB issued SFAS No. 133 "Accounting for Derivative Instruments and Hedging Activities". SFAS No. 133 is effective for the Company on January 1, 2000. The Company will adopt SFAS 133 by the first quarter of 2000. SFAS 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. The Company has not yet determined the impact that the adoption of SFAS 133 will have on its earnings, comprehensive income or statement of financial position.

#### Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, including disclosures of contingent assets and liabilities, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

#### BUSINESS ACQUISITIONS AND DISPOSITIONS

#### Rvstan Acquisition

On September 28, 1998, the Company acquired Rystan Company, Inc. ("Rystan") for 800,000 shares of common stock of the Company and two warrants each having the right to purchase 150,000 shares of the Company's common stock. The purchase price was valued at \$4.0 million. The purchase price exceeded the Company's assessment of the fair value of net assets acquired by approximately \$1.5million, which will be amortized on a straight-line basis over 15 years. The acquisition has been accounted for using the purchase method of accounting. The assets and liabilities acquired were as follows (in thousands):

Cash and cash equivalents Accounts receivable Inventory	\$ 1,224 225 889
Property & equipment Residual goodwill Liabilities	357 1,495 (183)
	\$ 4,007
	======

The following summarized unaudited pro forma financial information assumes the acquisition had occurred on January 1 of each year (in thousands):

	For the	Year Ended
	1998	1997
Total revenue Net loss	\$19,414 (11,995)	\$17,697 (16,367)
Basic and diluted loss per share	(0.72)	(1.05)

The above amounts include Rystan's pre-acquisition financial results for the first nine months of 1998 and all of 1997. The pro forma amounts are based upon certain assumptions and estimates, and do not reflect any activities that might have occurred as a result of the acquisition. The pro forma results do not necessarily represent results which would have occurred if the acquisition had taken place on the basis assumed above, nor are they indicative of the results of future combined operations.

#### Panafil (Registered) Product Line Disposition

In January 1999, the Company sold the Rystan Panafil (Registered) product line, including the brand name and related production equipment, to Healthpoint, Ltd. for \$6.4 million in cash. The Company also agreed to a ten-year non-competition provision regarding any papain-urea debridement products and granted Healthpoint a seven-year right of first refusal regarding any new debridement agent product developed by the Company. The December 31, 1998 balance sheet includes \$1.1 million in goodwill and \$250,000 in fixed assets that were sold under the agreement. The Company anticipates an estimated pre-tax gain of \$4.0 million, subject to the valuation of certain intangibles. The Company is also entitled to receive the first \$3 million of Panafil (Registered) sales specifically to the podiatry market and certain hospitals with burn centers. The Company announced in the first quarter of 1999 its intention to move Rystan's operations to its Plainsboro, New Jersey facility by July 1999.

Simultaneous with the sale, the Company and Healthpoint entered into a series of co-marketing agreements under which Integra will continue to market Panafil(Registered) and add Healthpoint's debridement agent, Accuzyme(Registered), to its sales call points in the podiatry market and certain hospitals with burn centers. The Company will receive sales commissions for marketing Panafil(Registered) and Accyzyme(Registered) once specified levels of products sales have been obtained.

### 4. INVESTMENTS

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The Company's current investment balances are classified as available for sale and have maturities within one year. The Company held all securities until maturity (or call) during the twelve months ended December 31, 1998 and 1997. For the twelve months ended December 31, 1996, securities were sold for proceeds of \$3,938,000 and a net loss of \$26,000. Investment balances as of December 31, 1998 and 1997 were as follows:

In thousands	Amortized Cost	Unrealized Gains 	Unrealized Losses	Fair Value 
1998: U.S. Government agency securities	\$ 14,950	\$ 4 ======	\$ (44) ======	\$ 14,910 ======
1997: U.S. Government agency securities	\$ 24,215	\$ =======	\$ (26) ======	\$ 24,189 =======

# 5. INVENTORIES

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Inventories consist of the following (in thousands):

	December 31,				
	1998		1998		
Finished goods Work-in-process	\$	1,433 802 478	\$	773 1,251 326	
	\$	2,713 ======	\$	2,350	

### 6. PROPERTY AND EQUIPMENT

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Property and equipment, net, consists of the following (in thousands):

	December 31,		
	1998	1997 	
Machinery and equipment	\$ 4,952 340 6,843	\$ 4,107 221 6,550	
Less: Accumulated depreciation and amortization	12,135 (5,844)	10,878 (4,464)	
	\$ 6,291 ======	\$ 6,414 ======	

Depreciation and amortization expense associated with property and equipment for the years ended December 31, 1998, 1997 and 1996 was \$1,413,000, \$1,903,000 and \$1,959,000, respectively.

# 7. CURRENT LIABILITIES

Accrued expenses and other current liabilities consist of the following (in thousands):

	December 31,			
		1998 		1997
Legal fees		591 401 249	\$	471 252 12
VacationOther		260 955		214 905
	\$	2,456	\$	1,854

### 8. STOCKHOLDERS' EQUITY

#### Stock Split

stock spiit

The Company's shareholders approved a one-for-two reverse split of the Company's common stock at the annual shareholders meeting held on May 18, 1998. All outstanding common share and per share amounts have been retroactively adjusted to reflect the reverse split.

#### Preferred Stock Transaction

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During the second quarter of 1998, the Company sold 500,000 shares of Series A Preferred Stock ("Preferred Stock") for \$4 million to Century Medical, Inc. ("CMI"). The Preferred Stock pays an annual dividend of \$0.16 per share, payable quarterly, and has a liquidation preference of \$4 million. Each share of Preferred Stock is convertible at any time into one-half share of Company common stock and is redeemable at the option of the Company after December 31, 2007.

### Common Stock Transactions

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In September 1998, the Company issued 800,000 shares of Company common stock and two warrants each having the right to purchase 150,000 shares of the Company's common stock to GWC Health, Inc., a subsidiary of Elan Corporation, plc., as consideration for the acquisition of Rystan (See "Common Stock Warrants" below and Note 3).

On February 1, 1996, the Company completed the issuance of 2,335,625 shares of its common stock through a public offering, resulting in net proceeds of approximately \$35.6 million.

#### Restricted Units

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In December 1997, the Company issued one million restricted units ("Restricted Units") as a fully vested equity based signing bonus to the Company's new President and Chief Executive Officer ("Executive"). Each Restricted Unit represents the right to receive one share of the Company's common stock. The shares of common stock underlying the restricted units ("Unit Shares") shall be delivered to Executive on January 1, 2002 if Executive is employed by the Company on December 31, 2001. If, prior to December 31, 2001, (a) Executive's employment with the Company is terminated for cause or (b) he voluntarily leaves his employment with the Company (other than for good reason or due to disability), the Unit Shares shall be distributed to Executive on January 1, 2018. In connection with the Restricted Units, the Company incurred a non-cash compensation charge of \$5.9 million in the fourth quarter of 1997, which is included in general and administrative expenses.

#### Common Stock Warrants

In connection with the acquisition of Rystan, the Company issued two warrants each having the right to purchase 150,000 shares of the Company's common stock. Each of the warrants may be exercised for shares of common stock at any time after September 28, 1998, for a purchase price per share of \$6.00 and \$7.00, respectively, subject to customary antidilution adjustments. The \$6.00 warrant expires on January 31, 2000, provided that if the average closing price on the Nasdaq National Market of the Company's common stock for the thirty trading days ending on the fifth day immediately preceding the then-current expiration date is less than \$8.00 per share, then the expiration date shall be extended for one year, but in no event shall be extended beyond January 31, 2003. The \$7.00warrant expires on December 31, 2002.

In conjunction with a 1993 private placement of 347,947 shares of the Company's common stock to Boston Scientific Corporation ("BSC"), the Company sold for additional consideration and issued to BSC a warrant (the "BSC Warrant") to purchase 347,947 shares of the Company's common stock at an exercise price of \$14.37 per share. The BSC Warrant is exercisable through January 31, 2000.

#### Stockholders' Rights

As stockholders of the Company, Union Carbide Corporation, BSC, CMI and GWC Health are entitled to certain registration rights. Executive also has demand registration rights under the Restricted Units agreement.

#### Notes Receivable - Related Parties

Notes receivable - related party at December 31, 1998 is a recourse note due from a former officer of the Company and is collateralized by shares of the Company.

#### Stock Repurchase Program

In February 1998, the Company announced that its Board of Directors authorized a common stock repurchase program. The share repurchase program of up to 500,000 shares was effective immediately. The share repurchase plan allows the Company to make repurchases from time to time in the open market or through privately negotiated transactions. Through December 31, 1998 the Company acquired 51,745 shares in open market transactions. Repurchased common shares were added to the Company's treasury shares at cost.

### STOCK OPTIONS

As of December 31, 1998, the Company had four stock option plans, the 1992 Stock Option Plan (the "1992 Plan"), the 1993 Incentive Stock Option and Non-Qualified Stock Option Plan (the "1993 Plan"), the 1996 Incentive Stock Option and Non-Qualified Stock Option Plan (the "1996 Plan") and the 1998 Stock Option Plan (the "1998 Plan").

As of June 30, 1997, no additional options can be granted out of the 1992 Plan and 175,000 shares reserved under the 1992 Plan were cancelled.

The Company has reserved 750,000 shares of common stock for issuance under each of the 1993 and 1996 Plans and 1,000,000 shares under the 1998 Plan. The 1993 Plan, 1996 Plan and 1998 Plans (together, "the Plans") permit the Company to grant both incentive and non-qualified stock options to designated directors, officers, employees and associates of the Company. Options issued under the Plans become exercisable over specified periods, generally within five years from the date of grant.

In May 1997, the Company's Stock Option Committee and Board of Directors approved an option exchange program pursuant to which employees with options having an exercise price in excess of \$8.00 per share under the Company's Stock Option Plans could elect to exchange such options for new stock options with an exercise price of \$8.00. Under the exchange program, (i) the number of replacement options issued in exchange for the original options was determined by the utilization of a formula based on the percentage decrease in exercise price from the original grant (not to exceed 25% of the original options and excluding the first 500 options), (ii) the replacement options expiration dates were adjusted to one year later than the original options expiration dates, and (iii) the vesting terms of the replacement options were adjusted to proportionately reflect the decrease in options, when applicable. Under the exchange program, 542,242 options with exercise prices ranging from \$8.50 to \$25.00 were exchanged for 445,811 options granted with an exercise price of \$8.00, which was in excess of the closing market price at the date of exchange.

The Company has adopted the disclosure-only provisions of SFAS No. 123, and accordingly no compensation cost has been recognized for the stock option plans except the amortization of unearned compensation related to options granted to outside consultants and non-employee directors which amounted to \$264,000, \$123,000 and \$83,000 for the years ended December 31, 1998, 1997 and 1996, respectively. Had the compensation cost for the Company's stock option plans been determined based on the fair value at the grant date for awards in grant since 1995 consistent with the provisions of SFAS No. 123, the Company's net loss and basic and diluted net loss per share would have increased to the proforma amounts indicated below:

(In thousands)	1998	1997	1996
Net loss\$	(12,342)	\$ (16,964)	\$ (7,528)
Proforma net loss	(15,023)	(17,777)	(8,259)
Basic and diluted net loss per share\$	(0.76)	\$ (1.15)	\$ (0.54)
Proforma basic and diluted net loss per share	(0.93)	(1.20)	(0.59)

As options vest over a varying number of years and awards are generally made each year, the proforma impacts shown here may not be representative of future proforma expense amounts. The proforma additional compensation expense was calculated based on the fair value of each option grant using the Black-Scholes model with the following weighted-average assumptions:

	1998	1997	1996
Dividend yield	-0-	-0-	-0-
Expected volatility	80%	80%	60%
Risk free interest rate	5.2%	6.2%	6.1%
Expected option lives	4 years	6 years	3 years

For the three years ended December 31, 1998, option activity for all the Plans (including the 1992 Plan) was as follows:

	Weighted-	_	Shares
(Shares in thousands)			
December 31, 1995, Outstanding	\$	8.32	1,667
December 31, 1995, Exercisable	\$	4.12	842
Granted	\$	19.54	105 (193)
Canceled	\$	16.76	(174)
December 31, 1996, Outstanding	\$	8.68	1,405
December 31, 1996, Exercisable	\$	5.64	950
Granted Exercised	\$ \$	7.10 0.53	1,493 (676)
Canceled	\$	15.52	(681)
December 31, 1997, Outstanding	\$	7.68	1,541 =====
December 31, 1997, Exercisable	\$	9.36	393
Granted	\$ \$	4.35	1,045 (1)
Canceled	\$	8.21	(138)
December 31, 1998, Outstanding	\$	6.26	2,447
December 31, 1998, Exercisable	\$	8.45	730
December 31, 1998, Available for Grant			179

The exercise price of all options granted under the 1992 Plan and the Plans was equal to or greater than the fair market value of the common stock on dates of grant. The weighted average exercise price and fair market value of options granted in 1998, 1997 and 1996 were as follows:

	In Excess of	Market Price	Equal to Mar	ket Price
	Exercise Price	Fair Value	Exercise Price	Fair Value
1998 1997 1996	\$ 8.00 \$ 8.08 \$ 17.10	\$ 1.98 \$ 4.56 \$ 6.48	\$ 4.19 \$ 6.44 \$ 21.36	\$ 2.59 \$ 4.96 \$ 9.04

The following table summarizes information about the outstanding and exercisable stock options at December 31, 1998:

		Options Outstanding		Options Exercisable		
Options in thousands		Weighted Average	Weighted Average		Weighted Average	
Range of	As of	Remaining	Exercise	As of	Exercise	
Exercise Prices	12/31/98	Contractual Life	Price	12/31/98	Price	
\$3.375 - \$3.875	577	6.0 years	\$ 3.375		\$	
\$4.3125 - \$8.00	1,738	5.4 years	\$ 6.55	645	\$ 7.33	
\$8.13 - \$23.00	132	2.5 years	\$ 15.13	85	\$ 16.93	
	2,447			730		
	=====			=====		

### 10. LEASES

The Company leases all of its facilities through noncancelable operating lease agreements. In November 1992, a corporation whose shareholders are trusts whose beneficiaries include beneficiaries of a significant shareholder acquired from independent third parties a 50% interest in the general partnership from which the Company leases its approximately 35,000 square foot administrative, manufacturing, research and principal warehouse facility in Plainsboro, New Jersey. The lease provides for rent escalations of 10.1% and 8.5% in the years 2002 and 2007, respectively, and expires in October 2012. The total amount of the minimum lease payments related to the New Jersey facility is being charged to expense on the straight-line method over the term of the lease.

In 1994, the Company leased a 25,000 square foot medical facility in West Chester, Pennsylvania. The facilities were acquired in April  $199\overline{4}$  by a related party of a significant shareholder and were leased and otherwise made available for use by the Company as of May 1, 1994. The lease agreement provides that the Company was obligated to pay monthly non-escalating fixed amounts for the facility for a period of five years, with three five-year options to extend the lease. The intent of the lease agreement was to make available to the Company additional freeze drying facilities and other production assets as well as warehouse and administrative space. In January 1998, the Company decided to suspend its operations at its leased facility in West Chester, Pennsylvania and in June 1998, entered into a Lease Termination Agreement (the "Termination Agreement") related to the leased facility. Under SFAS No. 121 "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of", the Company is required to review their long-lived assets and certain identifiable intangibles (collectively, "Long-Lived Assets") for impairment whenever events or changes in circumstances indicate that the future cash flows do not recover the carrying value of the Long-Lived Assets. The Company incurred asset impairment charges of \$1,021,000 in 1997 and \$145,000 in 1998, respectively, related to certain leasehold improvements made at the West Chester facility. In addition, the Termination Agreement requires an aggregate payment of \$330,000 related to the facility's maintenance, certain operating costs and other commitments and is payable through April 1999. This Termination Agreement was expensed in general and administrative expense.

The Company also leases 18,600 square feet of administrative and laboratory space in San Diego, California under a five-year lease agreement that provides for monthly payments with annual escalations.

As a result of the Rystan acquisition, the Company also leases 12,000 square feet of manufacturing and administrative space in Little Falls, New Jersey. The lease is a three-year lease with fixed monthly payments and no renewal options.

The Company is required to pay for utilities, taxes, insurance and maintenance at its principal leased facilities. The Company also leases facilities additional space for administrative support activities and storage under short-term agreements in New Jersey and California.

Future minimum lease payments under operating leases at December 31, 1998 were as follows:

In thousands	Related Parties	Third Parties	Total
1999	\$ 210	\$ 514	\$ 724
2000	210	508	718
2001	210	513	723
2002	213	485	698
2003	231	478	709
Thereafter	2,140	365	2,505
Total minimum lease			
payments and receipts	\$3,214	\$2,863	\$ 6,077
		=========	

Total rental expense for the years ended December 31, 1998, 1997 and 1996 was \$780,000, \$640,000 and \$654,000, respectively, and included \$267,000, \$390,000 and \$390,000 in related party expense, respectively.

### 11. INCOME TAXES

In thousands	Decemb	per 31,
	1998	1997
Net operating loss and tax credit carryforwards Inventory reserves and capitalization Other Depreciation	\$ 36,679 1,312 3,086 767	\$ 31,974 1,402 3,406 682
Total deferred tax assets before valuation allowance	41,844	37,464
Valuation allowance	(41,844)	(37,464)
Net deferred tax assets		

The Company's valuation allowance of \$41.8 million was provided against the deferred tax assets due to the uncertainty of realization.

A reconciliation of the United States Federal statutory rate to the Company's effective tax rate for the years ended December 31, 1998, 1997 and 1996 is as follows:

	1998	1997	1996
Federal statutory rate Expenses not deductible for tax purposes: Increase in valuation allowance for deferred tax assets and net operating losses not recognized	(34.0%)	(34.0%)	(34.0%)
	32.2%	32.6%	32.7%
Other	1.8%	1.4%	1.3%
Effective tax rate			
	========	========	=========

At December 31, 1998, the Company has net operating loss carryforwards of approximately \$48 million and \$35 million for federal and state income tax purposes, respectively, to offset future taxable income, if any, which expire through 2018 and 2005, respectively.

At December 31, 1998, several of the Company's subsidiaries have unused net operating loss and tax credit carryforwards arising from periods prior to the Company's ownership. The net operating loss carryforwards (excluding Telios Pharmaceuticals, Inc. ("Telios")) of approximately \$10 million for federal income tax purposes expire between 2000 and 2005. The Company's Telios subsidiary has approximately \$84 million of net operating losses, which expire between 2002 and 2010. The amount of Telios' net operating losses that are available and the Company's ability to utilize such losses is dependent on the determined value of Telios at the date of acquisition. The timing and manner in which these net operating losses may be utilized in any year by the Company are severely limited by Section 382 and other provisions of the Internal Revenue Code of 1986, as amended, and its applicable regulations.

## 12. EMPLOYEE BENEFIT PLANS

The Company has a 401(k) Profit Sharing Plan and Trust ("401(k) Plan") for eligible employees and their beneficiaries. The 401(k) Plan provides for employee contributions through a salary reduction election. Employer discretionary matching and discretionary profit sharing contributions, which are determined annually by the Company, vest over a six-year period of service. For the years ended December 31, 1998, 1997 and 1996, the Company's discretionary matching was based on a percentage of salary reduction elections per eligible participant and totaled \$48, \$35 and \$33, respectively. No discretionary profit sharing contribution was made in any year.

The Company received shareholder approval for its Employee Stock Purchase Plan ("ESPP") in May 1998. The purpose of the Plan is to provide eligible employees of the Company and certain of its subsidiary corporations with the opportunity to acquire shares of common stock at periodic intervals by means of accumulated payroll deductions. Under the Plan, a total of 500,000 shares of Common Stock have been reserved for issuance. These shares will be made available either from the Company's authorized but unissued shares of Common Stock or from shares of Common Stock reacquired by the Company as treasury shares.

### 13. DEVELOPMENT, LICENSE AND ROYALTY AGREEMENTS

The Company has various development funding agreements and grant awards under which it receives payments to support research and development activities. Significant development funding and grant awards include;

A strategic alliance with Johnson & Johnson Professional, Inc. (now know as "DePuy") to develop and market a new product to regenerate articular cartilage. The Company will develop an absorbable, collagen-based implant designed in combination with a proprietary RGD peptide. DePuy will develop the arthroscopic instrumentation used in the surgery and will market the combined products worldwide. Under the terms of the agreement, DePuy will make payments up to \$13 million as the Company meets various milestones, and will fund all necessary development costs beyond the pre-clinical phase. Following successful development, the Company will be responsible for manufacturing the product and for future new product development. The Company received \$1 million in development funding under the agreement in 1998.

A three-year, \$2 million Department of Commerce award under the National Institute of Standards and Technology ("NIST") program for continued work on a class of biodegradable polymers licensed from Rutgers University. This second award began in April 1998 and the Company received approximately \$340 of funding under it in 1998.

An annual award under the Contraceptive Research and Development (CONRAD) program in collaboration with the Eastern Virginia Medical School to further develop polymer based materials for use in reproductive health applications. Under the collaboration, CONRAD provides the Company with grant funding to cover a portion of the expenditures under the program.

In connection with a distribution agreement with Genetics Institute, Inc. ("GI"), the Company receives development support payments from GI to support development of specialized delivery matrices for the release of GI's recombinant human bone morphogenic protein (rhBMP-2) to simulate bone growth.

In March 1998, the Company entered into a series of agreements with Century Medical, Inc ("CMI"), a wholly-owned subsidiary of ITOCHU Corporation, under which CMI will distribute the Company's identified neurosurgical products. Under the agreements, CMI paid an up-front non-refundable licensing fee of \$1.0 million in the first quarter of 1998 and agreed to underwrite the costs of the Japanese clinical trials and regulatory approval processes.

In January 1996, the Company and Cambridge Antibody Technology Limited ("CAT") entered into an agreement consisting of a license to CAT of certain rights to use anti-TGF-(beta) antibodies for the treatment of fibrotic diseases and the granting of a right of first refusal to CAT for certain rights relating to decorin, a molecule believed to mediate the production of TGF-(beta) in humans and animals. Under the agreement, the Company received a \$500,000 licensing fee and is entitled to market any dermal application products developed with royalties payable to CAT. The Company will also receive royalties upon the sale by CAT of licensed products other than those directed at dermal applications.

As consideration for certain technology, manufacturing, distribution and selling rights and licenses granted to the Company, the Company has agreed to pay royalties on the sales of products that are commercialized relative to the granted rights and licenses. Through December, 31, 1998, royalties expense has primarily been based on sales of Integra Artificial Skin(Registered) under agreements with Massachusetts Institute of Technology and Hoechst Marion Roussel. Royalty payments under these agreements by the Company were not significant for any of the periods presented. All other licensing and technology rights agreements with various third parties have yet to have commercial product sold under them.

# 14. LEGAL MATTERS

Various lawsuits claims and proceedings are pending or have been settled by the Company. The most significant of those are described below.

In November 1997, the Company and the Massachusetts Institute of Technology ("MIT") filed a patent infringement lawsuit against LifeCell Corporation ("LifeCell"). LifeCell filed counterclaims seeking declaratory judgments of non-infringement and patent invalidity and filed a complaint against the Company and MIT in Texas state court claiming tortious interference, business and product disparagement, unfair competition amoung other charges. LifeCell was seeking unspecified actual monetary damages in an amount not less than \$12 million together with treble damages, unspecified punitive damages, and other relief. In April 1998, the Company and LifeCell agreed to settle all litigation pending between the parties. Under the terms of the settlement, the Company has agreed not to assert certain patents against LifeCell's current technology or reasonable equivalents thereof and LifeCell has acknowledged the validity of these patents. As part of the settlement agreement, the Company agreed to purchase \$500,000 of LifeCell common stock, and LifeCell agreed to a royalty-bearing license for any possible future biomaterials-based matrix products developed by LifeCell that may be covered by the patents.

In January 1994, the Company entered into a five-year distribution agreement with the distributor of the Company's Chronicure product pursuant to which the distributor is obligated to purchase certain minimum quantities of wound care products. In October 1995, the Company's subsidiary filed a complaint in the United States District Court for the District of New Jersey claiming the distributor breached the distribution agreement by, among other things, not paying the subsidiary for certain products delivered. In November 1995, the distributor filed an affirmative defense and counterclaim alleging, among other things, fraudulent misrepresentation and breach of contract and seeking damages of approximately \$1.2 million plus unspecified punitive damages. In June 1998, the Company and the distributor entered into a settlement agreement in which the distributor agreed to pay an aggregate of \$550,000 in installments over the remainder of 1998. The Company recorded a net gain in other income in 1998 of \$545,000 as a result of the settlement.

In July 1996, the Company filed a patent infringement lawsuit against three parties: Merck KGaA, a German corporation, Scripps Research Institute, a California nonprofit corporation, and David A. Cheresh, Ph.D., a research scientist with Scripps. The complaint charges, among other things, that the defendant Merck KGaA willfully and deliberately induced, and continues to willfully and deliberately induce, defendants Scripps Research Institute and Dr. David A. Cheresh to infringe on one of the Company's patents. This patent is one of a group of five patents granted to The Burnham Institute and licensed by the Company that are based on the interaction between a family of cell surface proteins called integrins and the arginine-glycine-aspartic acid peptide sequence found in many extracellular matrix proteins. The defendants have filed a countersuit asking for an award of defendants' reasonable attorney fees.

The Company is also subject to other claims and lawsuits in the ordinary course of its business. In the opinion of management, such other claims are either adequately covered by insurance or otherwise indemnified, and are not expected, individually or in the aggregate, to result in a material adverse effect on the financial condition of the Company. The Company's financial statements do not reflect any significant amounts related to possible unfavorable outcomes of the matters above or others. However, it is possible that the Company's results of operations, financial position and cash flows in a particular period could be materially affected by these contingencies.

# 15. SEGMENT INFORMATION AND MAJOR CUSTOMER DATA

The Company adopted SAS No. 131 "Disclosures about Segments of an Enterprise and Related Information" in the fourth quarter of 1998. SFAS No. 131 requires a new basis of determining reportable business segments, i.e., the management approach. This approach designates the Company's internal organizational structure as used by management for making operating decisions and assessing performance, as the source of business segments. On this basis, the Company has two reportable segments: (1) Medical Products; and (2) Skin Defects and Burns. In the Company's Medical Products segment, many of the Company's products are sold to customers under the terms of multiple-year marketing and distribution agreements that provide for purchase and supply commitments on the part of the customer and the Company, respectively. In many cases marketing customers have paid license fees for the marketing and distribution rights or development funding for the products. The Company's Skin Defects and Burns business includes the Company's lead product, Integra Artificial Skin(Registered), and the Panafil (Registered) product line acquired in the Rystan acquisition.

Selected financial information on the Company's business segments is reported below (in thousands):

	Reportable				
			Segments		
			Sub-total		
1998					
Sales	ć 7 7EE	\$ 6,321	¢ 14 076	\$	\$ 14,076
Total revenue	\$ 7 <b>,</b> 755	5 6,321 6,321		422	
Operating costs	11,210	•		9,146	31,635
Net income (loss)	,	(4,958)		(6,886)	
, ,	, ,	. , ,	. , ,	, , ,	,
1997					
Sales	8,038	•	14,001		14,001
Total revenue	8,309	•	14,272		14,746
Operating costs	9,071	9,602	18,673	14,984	33 <b>,</b> 657
Net income (loss)	(762)	(3,639)	(4,401)	(12,563)	(16,964)
1996					
Sales	8,091	3,119	11,210		11,210
Total revenue		3,119	12,524	624	13,148
Operating costs		7,060		7,156	22,595
Net income (loss)	1,026	(3,941)	(2,915)		(7 <b>,</b> 528)

Research and development expense is allocated to segments based on a specific identification of program costs within each segment. The Company allocates specific general and administrative expenses such as regulatory and legal expense items to the segments, with the remaining corporate activities reflected as corporate activities. Included in Corporate and All Other are the Company's activities under its Developing Businesses and Ventures activities, which includes activities involving the pharmacological applications of its technologies and other development programs not related to its core activities. The Company does not review identifiable assets on a segment basis.

The following table represents customers that accounted for over 10% of product sales in one or more years:

Customer	1998	1997	1996
Customer A	15%	13%	15%
Customer B			15%
Customer C	12%	11%	12%
	279	2.4%	129

For the years ended December 31, 1998, 1997 and 1996, the Company's foreign export sales, primarily to Europe and the Asia Pacific regions, were 18%, 14% and 16% of total product sales, respectively.

The Company's product sales consists of several products that make up a large percentage of the total, including the Company's Integra Artificial Skin product which accounted for 41%, 43% and 28% of product sales for the years ended December 31, 1998, 1997 and 1996, respectively.

### 16. SUPPLEMENTAL CASH FLOW INFORMATION

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In connection with the September 1998 acquisition of Rystan, the Company issued 800,000 shares of its common stock and two warrants with an aggregate value of \$3.9 million.

Included in other current liabilities at December 31, 1997 is \$57,000 related to fixed asset additions and leasehold improvements that were paid after year-end.

### 17. SUBSEQUENT EVENT

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NeuroCare Group Acquisition

On March 29, 1999 the Company acquired the business, including certain assets and liabilities, of the NeuroCare group of companies ("NeuroCare"), a leading provider of neurosurgical products, for an acquisition price of \$25 million. The \$25 million acquisition price was comprised of \$14 million of cash and \$11 million of assumed indebtedness under a term loan from Fleet Capital Corporation. Fleet is also providing a \$4 million revolving credit facility to fund working capital requirements. The cash portion of the purchase price was financed in part by affiliates of Soros Private Equity Partners LLC, through the sale of \$10 million of Integra Series B Preferred Stock and related warrants. The convertible preferred shares are convertible into 2,617,801 shares of the Company's common stock, has a liquidation preference of \$10 million with a 10% compounded annual return and is senior to all other equity securities of the Company. The warrants issued are for the right to acquire 240,000 shares of the Company's common stock at an exercise price of \$3.82 per share. The Company provided the balance of the cash portion of the purchase price. NeuroCare designs, manufactures and sells implants, instruments and monitors used in neurosurgery and intensive care units, primarily for the treatment of hydrocephalus and neurological trauma. NeuroCare's product lines include the Camino, Heyer-Schulte, Redmond and Neuro Navigational brand names.

CERTIFICATE OF AMENDMENT
TO
AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
INTEGRA LIFESCIENCES CORPORATION

INTEGRA LIFESCIENCES CORPORATION, a corporation organized and existing under and by virtue of the Delaware General Corporation Law (the "Corporation"), DOES HEREBY CERTIFY THAT:

FIRST: The Board of Directors of the Corporation has adopted a resolution proposing and declaring advisable and in the best interests of the Corporation the following amendment to Article FOURTH of the Amended and Restated Certificate of Incorporation of the Corporation, to read in its entirety as follows (the "Charter Amendment"):

"FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 75,000,000 shares, par value \$.01 per share, of which 60,000,000 shares are designated as Common Stock and 15,000,000 shares are designated as Preferred Stock.

Effective as of 5:00 p.m., Eastern time, on the date of filing with the Secretary of State of a Certificate of Amendment (the "Effective Time"), each share of Common Stock of the Corporation issued and outstanding immediately prior thereto (the "Old Common Stock") shall automatically and without action on the part of the holder thereof be reclassified and changed into one-half of one share of Common Stock of the Corporation, \$.01 par value ( the "New Common Stock"), subject to treatment of fractional share interests as described below. Each holder of a certificate or certificates which immediately prior to the Effective Time represented outstanding shares of Old Common Stock (the "Old Certificates," whether one or more) shall be entitled to receive, upon surrender for cancellation of such Old Certificates to the transfer agent designated by the Corporation, a certificate or certificates (the "New Certificates," whether one or more) representing the number of shares of New Common Stock into which and for which the shares of Old Common Stock formerly represented by such Old Certificates so surrendered are reclassified under the terms hereof. From and after the Effective Time, the Old Certificates shall represent only the right to receive New Certificates (and, where applicable, cash in lieu of fractional shares, as provided below) pursuant to the provisions hereof. No certificates or scrip representing fractional interests in the shares of New Common Stock will be issued, and no such fractional share interest will entitle the holder thereof to vote or to any other rights of a stockholder of the Corporation. A holder of the Old Certificates shall receive, in lieu of any fraction of a share of New Common Stock to which the holder would otherwise be entitled, a cash amount in United States

dollars equal to the same fraction multiplied by two times the average closing price of the Common Stock on the Nasdaq National Market for the five trading days immediately preceding the Effective Time."

SECOND: The stockholders of the Corporation, at an annual meeting of stockholders called and held upon notice properly given in accordance with Section 222 of the Delaware General Corporation Law, have adopted and approved the Charter Amendment in accordance with the provisions of Section 212 of the Delaware General Corporation Law.

THIRD: The Charter Amendment has been duly adopted and approved in accordance with the provisions of Section 242 of the Delaware General Corporation Law.

IN WITNESS WHEREOF, said Integra LifeSciences Corporation has caused this Certificate of Amendment to Amended and Restated Certificate of Incorporation to be executed by a duly authorized officer of the Corporation this 22nd day of May, 1998.

INTEGRA LIFESCIENCES CORPORATION

By: /s/ Stuart M. Essig

Stuart M. Essig
President and Chief Executive Officer

# CERTIFICATE OF DESIGNATION, PREFERENCES AND RIGHTS OF SERIES B CONVERTIBLE PREFERRED STOCK OF INTEGRA LIFESCIENCES CORPORATION

Integra LifeSciences Corporation, a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), DOES HEREBY CERTIFY THAT:

A. Pursuant to authority conferred upon the Board of Directors by the Amended and Restated Certificate of Incorporation of the Corporation, as amended (as amended, the "Certificate of Incorporation"), and pursuant to the provisions of Section 151 of Title 8 of the Delaware Code of 1953, as amended, said Board of Directors, at a meeting held on February 25, 1999, adopted resolutions providing for the designation, preferences and relative, participating, optional and other special rights, and the qualifications, limitations and restrictions of the Corporation's Series B Convertible Preferred Stock, which resolutions are as follows:

WHEREAS, the Certificate of Incorporation of this Corporation provides for two classes of shares known as Common Stock, par value \$.01 per share, and Preferred Stock, par value \$.01 per share; and

WHEREAS, the Board of Directors of this Corporation is authorized by the Certificate of Incorporation to provide for the issuance of the shares of Preferred Stock in series, and by filing a certificate pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designation, preferences and rights of the shares of each such series and the qualifications, limitations and restrictions thereof.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors deems it advisable to, and hereby does, designate a Series B Convertible Preferred Stock and fixes and determines the preferences, rights, qualifications, limitations and restrictions relating to the Series B Convertible Preferred Stock as follows:

- 1. Designation/Ranking. The shares of such series of Preferred Stock shall be designated as "Series B Convertible Preferred Stock" (referred to herein as the "Series B Convertible Preferred Stock"). The Series B Convertible Preferred Stock shall rank senior to the Corporation's Common Stock and all other Preferred Stock of the Company, with respect to the payment of distributions on liquidation, dissolution or winding up of the Corporation and with respect to the payment of dividends.
- 2. Authorized Number. The number of shares constituting the Series B Convertible Preferred Stock shall be 120,000 shares.

3. Dividends. The holders of Series B Convertible Preferred Stock shall be entitled to receive, out of funds legally available for such purpose, annual cumulative dividends which shall accrue at the rate of 10% per annum, payable upon the liquidation, dissolution or winding up of the Corporation.

Dividends on each share of Series B Convertible Preferred Stock shall be cumulative and shall accrue from the date of issuance of such share of Series B Convertible Preferred Stock. The date on which the Corporation initially issues any share of Series B Convertible Preferred Stock shall be deemed to be its "date of issuance," regardless of the number of times of transfer of such shares is made on the stock records maintained by or for the Corporation and regardless of the number of certificates that may be issued to evidence such share.

#### 4. Liquidation.

(a) Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, in which all or substantially all of the consideration, if any, received by the Corporation or its stockholders is in cash, the holders of the shares of Series B Convertible Preferred Stock shall be paid, before any distribution or payment is made upon any stock ranking on liquidation junior to the Series B Convertible Preferred Stock, an amount equal to \$100 per share plus, in the case of each share, an amount equal to any dividends declared but unpaid thereon, through the date payment thereof is made available, and the holders of Series B Convertible Preferred Stock shall not be entitled to any further payment (such amount payable with respect to one share of Series B Convertible Preferred Stock being sometimes referred to as the "Liquidation Payment" and with respect to all shares of Series B Convertible Preferred Stock being sometimes referred to as the "Liquidation Payment").

(b) Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, in which all or substantially all of the consideration, if any, received by the Corporation or its stockholders is in securities, the Corporation shall have the option, at its election, of paying such Liquidation Payments to the holders of the shares of Series B Convertible Preferred Stock in cash or in a preferred security of the successor entity having terms substantially similar to the Series B Convertible Preferred Stock.

(c) If upon such liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the assets to be distributed among the holders of Series B Convertible Preferred Stock shall be insufficient to permit payment to the holders of Series B Convertible Preferred Stock of the Liquidation Payments, then the entire assets of the Corporation to be so distributed shall be distributed ratably among the holders of Series B Convertible Preferred Stock. Upon any such liquidation, dissolution or winding up of the Corporation, after the holders of Series B Convertible Preferred Stock shall have been paid in full the Liquidation Payments to which they shall be entitled, the Series B Convertible Preferred Stock shall be automatically cancelled and the remaining net assets of the

Corporation may be distributed to the holders of stock ranking on liquidation junior to the Series B Convertible Preferred Stock.

(d) Written notice of such liquidation, dissolution or winding up, stating a payment date, the amount of the Liquidation Payments and the place where said Liquidation Payments shall be payable, shall be delivered in person, mailed by certified or registered mail, return receipt requested, or sent by telecopier or telex, not less than 10 days prior to the payment date stated therein, to the holders of record of Series B Convertible Preferred Stock, such notice to be addressed to each such holder at its address as shown by the records of the Corporation.

(e) For purposes of this paragraph 4, a liquidation, dissolution or winding up of the Corporation shall be deemed to include (i) the Corporation's sale of all or substantially all of its assets or (ii) the merger or consolidation of the Corporation into or with any other corporation, in which all or substantially all of the consideration received by the Corporation or its stockholders in connection with such sale, merger or consolidation is: (x) in cash, or (y) in securities of the acquiring company or an affiliate thereof having a fair market value per share of Common Stock which is lower than the Conversion Price (as defined below) as last adjusted and in effect at the date of such liquidation, dissolution or winding up; provided that a liquidation, dissolution or winding up of the Corporation shall not include a sale, merger or consolidation in which all or substantially all of the consideration received by the Corporation or its stockholders in connection therewith is in securities of the acquiring company or an affiliate thereof having a fair market value per share of Common Stock which is equal to or greater than the Conversion Price as last adjusted and in effect on the date of such liquidation, dissolution or winding up. Nothing in this paragraph 4 shall limit the rights of the holders of the Series B Convertible Preferred Stock to convert their shares of Series B Convertible Preferred Stock in accordance with the terms hereof prior to a liquidation, dissolution or winding up of the Corporation.

(f) The Series B Convertible Preferred Stock shall, with respect to distribution of assets and rights upon the liquidation, dissolution or winding up of the Corporation, rank on a parity with any class or series of capital stock of the Corporation hereafter created which expressly provides that it ranks on a parity with the Series B Convertible Preferred Stock with respect to distribution of assets and rights upon the liquidation, dissolution or winding up of the Corporation. The Series B Convertible Preferred Stock shall, with respect to distribution of assets and rights upon the liquidation, dissolution or winding up of the Corporation, rank senior to (i) the Corporation's Series A Convertible Preferred Stock, \$.01 par value per share, and (ii) each class or series of capital stock of the Corporation hereafter created which does not expressly provide that it ranks on a parity with or senior to the Series B Convertible Preferred Stock with respect to distribution of assets and rights upon the liquidation, dissolution or winding up of the Corporation.

5. Restrictions. At any time when shares of Series B Convertible Preferred Stock are outstanding, except where the vote or written consent of the holders of a greater number of shares of the Corporation is required by law or by the Corporation's Articles of Incorporation, and in addition to any other vote required by law or the Corporation's Articles of Incorporation, without the approval of the holders of at least 66 \_% of the then outstanding

shares of Series B Convertible Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a series, the Corporation will not:

(a) Create, issue or authorize the creation or issuance of any additional class or series of shares of stock unless the same ranks junior to the Series B Convertible Preferred Stock as to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, or increase the authorized amount of the Series B Convertible Preferred Stock or increase the authorized amount of any additional class or series of shares of stock unless the same ranks junior to the Series B Convertible Preferred Stock as to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, or create, issue (other than to the holder of any shares of Series B Convertible Preferred Stock) or authorize the creation or issuance of any obligation or security convertible into shares of Series B Convertible Preferred Stock or into shares of any other class or series of stock unless the same ranks junior to the Series B Convertible Preferred Stock as to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, whether any such creation, issuance, authorization or increase shall be by means of amendment to the Corporation's Articles of Incorporation or by merger, consolidation or otherwise; or

(b) effect any transaction or other action that would adversely affect the rights, preferences, powers (including, without limitation, voting powers) and privileges of the Series B Preferred Stock; provided that a merger or sale of substantially all of the Corporation's assets in which all or substantially all of the consideration is stock of the acquiring company or an affiliate thereof shall not require the consent or vote of the holders of Series B Convertible Preferred Stock separately as a series.

 $\,$  6. Conversions. The holders of shares of Series B Convertible Preferred Stock shall have the following conversion rights:

(a) Right to Convert. Subject to the terms and conditions of this paragraph 6, the holder of any share or shares of Series B Convertible Preferred Stock shall have the right, at its option at any time, to convert any such shares (or fractions thereof) of Series B Convertible Preferred Stock (except that upon any liquidation, dissolution or winding up of the Corporation the right of conversion shall terminate at the close of business on the business day immediately preceding the date fixed for payment of the amount distributable on the Series B Convertible Preferred Stock) into such number of fully paid and nonassessable shares of Common Stock as is obtained by (i) multiplying the number of shares of Series B Convertible Preferred Stock so to be converted by \$100 and (ii) dividing the result by the conversion price of \$3.82 per share or, in case an adjustment of such price has taken place pursuant to the further provisions of this paragraph 6, then by the conversion price as last adjusted and in effect at the date any share or shares of Series B Convertible Preferred Stock are surrendered for conversion (such price, or such price as last adjusted, being referred to as the "Conversion Price"). Such rights of conversion shall be exercised by the holder thereof by giving written notice that the holder elects to convert a stated number of shares of Series B Convertible Preferred Stock into Common Stock and by surrender of a certificate or certificates for the shares so to be converted to the Corporation at its principal office (or such other office or agency of the Corporation as the Corporation may designate by notice in writing to the holders of the Series B Convertible Preferred Stock) at any time during its usual

business hours on the date set forth in such notice, together with a statement of the name or names (with address) in which the certificate or certificates for shares of Common Stock shall be issued.

(b) Issuance of Certificates; Time Conversion Effected. Promptly after the receipt of the written notice referred to in subparagraph 6(a) and surrender of the certificate or certificates for the share or shares of Series B Convertible Preferred Stock to be converted, the Corporation shall issue and deliver, or cause to be issued and delivered, to the holder, registered in such name or names as such holder may direct, a certificate or certificates for the number of whole shares of Common Stock issuable upon the conversion of such share or shares of Series B Convertible Preferred Stock. To the extent permitted by law, such conversion shall be deemed to have been effected and the Conversion Price shall be determined as of the close of business on the date on which such written notice shall have been received by the Corporation and the certificate or certificates for such share or shares shall have been surrendered as aforesaid, and at such time the rights of the holder of such share or shares of Series B Convertible Preferred Stock shall cease, and the person or persons in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder or holders of record of the shares of Common Stock represented thereby.

(c) Fractional Shares; Partial Conversion. No fractional shares of Common Stock shall be issued upon conversion of Series B Convertible Preferred Stock into Common Stock and no payment or adjustment shall be made upon any conversion on account of any cash dividends on the Common Stock issued upon such conversion. If the number of shares of Series B Convertible Preferred Stock represented by the certificate or certificates surrendered pursuant to subparagraph 6(a) exceeds the number of shares converted, the Corporation shall, upon such conversion, execute and deliver to the holder, at the expense of the Corporation, a new certificate or certificates for the number of shares (or fractions thereof) of Series B Convertible Preferred Stock represented by the certificate or certificates surrendered which are not to be converted. If any fractional share of Common Stock would, except for the provisions of the first sentence of this subparagraph 6(c), be delivered upon such conversion, the Corporation, in lieu of delivering such fractional share, shall pay to the holder surrendering the Series B Convertible Preferred Stock for conversion an amount in cash equal to the current market price of such fractional share as determined in good faith by the Board of Directors of the Corporation.

(d) Subdivision or Combination of Common Stock. In case the Corporation shall at any time subdivide (by any stock split, stock dividend or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Conversion Price in effect immediately prior to such subdivision shall be proportionately reduced, and, conversely, in case the outstanding shares of Common Stock shall be combined into a smaller number of shares, the Conversion Price in effect immediately prior to such combination shall be proportionately increased.

(e) Reorganization, Recapitalization or Reclassification. If any capital reorganization, recapitalization or reclassification of the capital stock of the Corporation (other than a merger or consolidation of the Corporation in which the Corporation

is the surviving corporation and which does not result in a reclassification or change of outstanding shares of Common Stock or a merger or consolidation which is deemed to be a liquidation, dissolution or winding up of the Corporation pursuant to paragraph 4) shall be effected in such a way that holders of CommonStock shall be entitled to receive stock, securities or assets with respect to or in exchange for Common Stock, then, as a condition of such reorganization, recapitalization or reclassification, lawful and adequate provisions shall be made whereby each holder of a share or shares of Series B Convertible Preferred Stock shall thereupon have the right to receive, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore receivable upon the conversion of such share or shares of Series B Convertible Preferred Stock, such shares of stock, securities or assets as may be issued or payable with respect to or in exchange for a number of outstanding shares of such Common Stock equal to the number of shares of such Common Stock immediately theretofore receivable upon such conversion had such reorganization or reclassification not taken place, and in any such case appropriate provisions shall be made with respect to the rights and interests of such holder to the end that the provisions hereof (including without limitation provisions for adjustments of the Conversion Price) shall thereafter be applicable, as nearly as may be, in relation to any shares of stock, securities or assets thereafter deliverable upon the exercise of such conversion rights.

(f) Notice of Adjustment. Upon any adjustment of the Conversion Price, then and in each such case the Corporation shall give written notice thereof, by delivery in person, certified or registered mail, return receipt requested, telecopier or telex, addressed to each holder of shares of Series B Convertible Preferred Stock at the address of such holder as shown on the books of the Corporation, which notice shall state the Conversion Price resulting from such adjustment, setting forth in reasonable detail the method upon which such calculation is based.

- (g) Other Notice. In case at any time:
- (1) the Corporation shall declare any dividend upon its Common Stock payable in cash or stock or make any other distribution to the holders of its Common Stock;
- (2) the Corporation shall offer for subscription pro rata to the holders of its Common Stock any additional shares of stock of any class or other rights;
- (3) there shall be any capital reorganization or reclassification of the capital stock of the Corporation, or a consolidation or merger of the Corporation with or into another entity or entities, or a sale, lease, abandonment, transfer or other disposition of all or substantially all its assets; or
- (4) there shall be a voluntary or involuntary dissolution, liquidation or winding up of the Corporation;

then, in any one or more of said cases, the Corporation shall give, by delivery in person, certified or registered mail, return receipt requested, telecopier or telex, addressed to each

holder of any shares of Series B Convertible Preferred Stock at the address of such holder as shown on the books of the Corporation, (i) at least 10 days' prior written notice of the date on which the books of the Corporation shall close or a record shall be taken for such dividend, distribution or subscription rights or for determining rights to vote in respect of any such reorganization, reclassification, consolidation, merger, disposition, dissolution, liquidation or winding up and (ii) in the case of any such reorganization, reclassification, consolidation, merger, disposition, dissolution, liquidation or winding up, at least 10 days' prior written notice of the date when the same shall take place. Such notice in accordance with the foregoing clause (i) shall also specify, in the case of any such dividend, distribution or subscription rights, the date on which the holders of Common Stock shall be entitled thereto and such notice in accordance with the foregoing clause (ii) shall also specify the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, disposition, dissolution, liquidation or winding up, as the case may be.

(h) Stock to be Reserved. The Corporation will at all times reserve and keep available out of its authorized shares of Common Stock, solely for the purpose of issuance upon the conversion of Series B Convertible Preferred Stock as herein provided, such number of shares of Common Stock as shall then be issuable upon the conversion of all outstanding shares of Series B Convertible Preferred Stock. The Corporation covenants that all shares of Common Stock which shall be so issued shall be duly authorized, validly issued, fully paid and nonassessable by the Corporation and free from all taxes, liens and charges with respect to the issue thereof, and, without limiting the generality of the foregoing, the Corporation covenants that it will from time to time take all such action as may be requisite to assure that the par value per share of the Common Stock is at all times equal to or less than the Conversion Price in effect at the time. The Corporation will take all such action as may be necessary to assure that all such shares of Common Stock may be so issued without violation of any applicable law or regulation, or of any requirement of any national securities exchange upon which the Common Stock may be listed. The Corporation will not take any action which results in any adjustment of the Conversion Price if the total number of shares of Common Stock issued and issuable after such action upon conversion of the Series B Convertible Preferred Stock would exceed the total number of shares of Common Stock then authorized by the Corporation's Articles of Incorporation.

(i) No Reissuance of Series B Convertible Preferred Stock. Shares of Series B Convertible Preferred Stock which are converted into shares of Common Stock as provided herein shall not be reissued as shares of Series B Convertible Preferred Stock.

(j) Issue Tax. The issuance of certificates for shares of Common Stock upon conversion of Series B Convertible Preferred Stock shall be made without charge to the holders thereof for any issuance tax in respect thereof, provided that the Corporation shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than that of the holder of the Series B Convertible Preferred Stock which is being converted.

 $$\rm (k)$$  Closing of Books. The Corporation will at no time close its transfer books against the transfer of any Series B Convertible Preferred Stock or of any

shares of Common Stock issued or issuable upon the conversion of any shares of Series B Convertible Preferred Stock in any manner which interferes with the timely conversion of such Series B Convertible Preferred Stock, except as may otherwise be required to comply with applicable securities laws.

(1) Definition of "Common Stock." As used in this paragraph 6, the term "Common Stock" shall be deemed to mean (i) the Common Stock, par value \$.01, and (ii) the stock of the Corporation of any class, or series within a class, whether now or hereafter authorized, which has the right to participate in the distribution of either earnings or assets of the Corporation without limit as to the amount or percentage.

(m) Minimum Adjustment. No reduction of the Conversion Price shall be made if the amount of any such reduction would be an amount less than \$.01, but any such amount shall be carried forward and reduction with respect thereof shall be made at the time of and together with any subsequent reduction which, together with such amount and any other amount or amounts so carried forward, shall aggregate \$.01 or more.

### 7. Future Issuance of Shares; Preemptive Rights.

(a) Offering Notice. Except for (i) capital stock of the Corporation which may be issued to employees, consultants or directors of the Corporation pursuant to a stock incentive plan or other employee benefit arrangement approved by the Board of Directors, (ii) a subdivision of the outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) capital stock issued as full or partial consideration for a merger, acquisition, joint venture, strategic alliance, license agreement or other similar non-financing transaction, (iv) capital stock issued in connection with a publicly registered offering, or (v) capital stock issued upon exercise, conversion or exchange of any Preferred Stock, options or warrants, if the Corporation wishes to issue any shares of capital stock or any other securities convertible into or exchangeable for capital stock of the Corporation (collectively, "New Securities") to any Person (the "Subject Purchaser"), then the Corporation shall send written notice (the "New Issuance Notice") to the holders of the Series B Preferred Stock, which New Issuance Notice shall state (x) the number of New Securities proposed to be issued and (y) the proposed purchase price per share of the New Securities that the Corporation is willing to accept (the "Proposed Price").

#### (b) Preemptive Rights; Exercise.

(i) For a period of fifteen (15) days after the giving of the New Issuance Notice as provided in Section 7(a), each holder of the Series B Preferred Stock (each, a "Preemptive Rightholder") shall have the right to purchase up to its Proportionate Percentage (as hereinafter defined) of the New Securities at a purchase price equal to the Proposed Price and upon the terms and conditions set forth in the New Issuance Notice. Each Preemptive Rightholder shall have the right to purchase up to that percentage of the New Securities determined by dividing (a) a number equal to the number of shares of Common Stock into which the shares of Series B Convertible Preferred Stock then owned by such Preemptive Rightholder are convertible by (b) the total of (i) the number of shares of Common Stock then outstanding and (ii) the number of shares of Common Stock into which all outstanding shares of Preferred Stock are convertible (the "Proportionate Percentage").

(ii) The right of each Preemptive Rightholder to purchase the New Securities under subsection (i) above shall be exercisable by delivering written notice of its exercise, prior to the expiration of the 15-day period referred to in subsection (i) above, to the Corporation, which notice shall state the amount of New Securities that the Preemptive Rightholder elects to purchase as provided in Section 7(b)(i). The failure of a Preemptive Rightholder to respond within the 15-day period shall be deemed to be a waiver of the Preemptive Rightholder's rights under Section 7(b)(i); provided that each Preemptive Rightholder may waive its, his or her rights under Section 7(b)(i) prior to the expiration of the 15-day period by giving written notice to the Corporation.

(iii) If, following the expiration of the 15-day period referred to above, not all of the New Securities have been subscribed for by the Subject Purchasers, each Preemptive Rightholder shall have the option to reduce that number of New Securities it has elected to purchase pursuant to Section 7(b) (i) by a proportionate amount.

(c) Closing. The closing of the purchase of New Securities subscribed for by the Preemptive Rightholders under Section 7(b) shall be held at the same time and place as the closing of the New Securities subscribed for by the Subject Purchasers (the "Closing"). At the Closing, the Corporation shall deliver certificates representing the New Securities, and the New Securities shall be issued free and clear of all Liens and the Corporation shall so represent and warrant, and further represent and warrant that the New Securities shall be, upon issuance of the New Securities to the Preemptive Rightholders and after payment for the New Securities, duly authorized, validly issued, fully paid and nonassessable by the Corporation. At the Closing, the Preemptive Rightholders purchasing the New Securities shall deliver payment in full in immediately available funds for the New Securities purchased by it, him or her. At the Closing, all of the parties to the transaction shall execute any additional documents that are otherwise necessary or appropriate.

(d) Sale to Subject Purchaser. The Corporation may sell to the Subject Purchaser all of the New Securities not purchased by the Preemptive Rightholders as provided in Section 7(b) on terms and conditions that are no more favorable to the Subject Purchaser than those set forth in the New Issuance Notice; provided, however, that the sale is bona fide and made pursuant to a contract entered into within four (4) months of the earlier to occur of (i) the waiver by the Preemptive Rightholders of their option to purchase the New Securities as provided in Section 7(b) and (ii) the expiration of the 15-day period referred to in Section 7(b). If such sale is not consummated within such four (4) month period for any reason, then the restrictions provided for in this Section 7 shall again become effective, and no issuance and sale of New Securities may be made thereafter by the Corporation without again offering the New Securities in accordance with this Section 7. The closing of any issue and purchase contemplated by this Section 7(d) shall be held at the time and place as the parties to the transaction may agree.

8. Voting Rights. Holders of Series B Convertible Preferred Stock shall be entitled to notice of any stockholders' meeting. Except as otherwise required by law, at any annual or special meeting of the Corporation's stockholders, or in connection with any written consent in lieu of any such meeting, each outstanding share of Series B Convertible Preferred Stock shall be entitled to the number of votes equal to the number of full shares of Common Stock into which such share of Series B Convertible Preferred Stock is then convertible (calculated by rounding any fractional share down to the nearest whole number) on the date for determination of stockholders entitled to vote at the meeting. Except as otherwise required by law, the Series B Convertible Preferred Stock and the Common Stock shall vote together as a single class on each matter submitted to the stockholders, and not by separate class or series.

#### 9. Optional Redemption.

(a) For the purposes of this Section 9 the "Target Market Price" shall mean an amount equal to: (i) in the twelve-month period commencing on March 15, 2001, 2.5 times the Conversion Price as last adjusted and then in effect; (ii) in the twelve-month period commencing on March 15, 2002, 3.25 times the Conversion Price as last adjusted and then in effect; and (iii) in the twelve-month period commencing on March 15, 2003, 4 times the Conversion Price as last adjusted and then in effect.

(b) If, at any time after March 15, 2001, for a period of not less than thirty (30) consecutive trading days, the average closing price of the Corporation's Common Stock on the principal securities exchange or market on which such shares are then traded has been equal to or greater than the Target Market Price, then the Corporation may, at the option of the Board of Directors of the Corporation, redeem from any source of funds legally available therefor, in whole or in part, in the manner provided herein, any or all whole number of shares of Series B Convertible Preferred Stock at any time outstanding for a cash amount per share to be redeemed equal to the Liquidation Payment as defined in Section 4 (the "Redemption Price").

(c) Notwithstanding the foregoing, at any time and from time to time after March 15, 2004, the Corporation may, at the option of the Board of Directors of the  $\,$ 

Corporation, redeem from any source of funds legally available therefor, in whole or in part, in the manner provided herein, any or all whole number of shares of Series B Convertible Preferred Stock at any time outstanding for an amount per share to be redeemed equal to the Redemption Price.

10. Redemption Procedure. At least forty-five (45) days prior to the date fixed for redemption of the Series B Convertible Preferred Stock pursuant to Section 8, written notice ("Redemption Notice") shall be mailed, postage prepaid, to each holder of record of the Series B Convertible Preferred Stock at its address last shown on the records of the Corporation. The Redemption Notice shall state:

(a) whether all or less than all of the outstanding shares of Series B Convertible Preferred Stock are to be redeemed and the total number of shares of Series B Convertible Preferred Stock being redeemed;

(b) the number of shares of Series B Convertible Preferred Stock held by the holder that the Corporation intends to redeem;

(c) the date of the redemption and the Redemption

Price; and

(d) that the holder is to surrender to the Corporation, in the manner and at the place designated, his or her certificate or certificates representing shares of Series B Convertible Preferred Stock to be redeemed.

Any failure to mail the notice provided for herein or any defect therein or in the mailing thereof shall not affect the validity of the proceedings for the redemption of any shares so to be redeemed.

On or before the date fixed for any redemption of shares, each holder of shares of Series B Convertible Preferred Stock to be redeemed on such date, unless the holder has exercised his right to convert the shares as provided in Section 6, shall surrender the certificate or certificates representing such shares of Series B Convertible Preferred Stock to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof, and each surrendered certificate shall be cancelled and retired. In the event less than all of the shares represented by such certificate are redeemed, a new certificate shall be issued representing the unredeemed shares.

If the Redemption Notice is duly given, and if on or prior to the Redemption Date the Redemption Price is either paid or made available for payment, then notwithstanding that the certificates evidencing any of the shares of Series B Convertible Preferred Stock so called for redemption have not been surrendered, all rights with respect to such shares shall forthwith after the Redemption Date cease and terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificates therefor.

B. The recitals and resolutions contained herein have not been modified, altered or amended and are presently in full force and effect.

IN WITNESS WHEREOF, the undersigned has executed this Certificate this 12th day of March 1999.

INTEGRA LIFESCIENCES CORPORATION

By: /s/ Stuart M. Essig

-----

Name: Stuart M. Essig Title: President

### AGREEMENT

THIS AGREEMENT (this "Agreement") is made as of this 30th day of June, 1998 by and among BHP Diagnostics, Inc. ("BHP"), Medicus Corporation (formerly known as Medicus Technologies, Inc.) ("Medicus" and, together with BHP, "BHP/Medicus"), Integra LifeSciences I Ltd. (formerly known as Integra Ltd.) ("ILTD") and Integra LifeSciences Corporation ("ILC" and, together with ILTD, "Integra").

# Background

BHP, Medicus, ILTD and ILC are parties to a Real Estate Lease and Usage Agreement (the "Lease") and a Shared Facilities Usage Agreement (the "Facilities Agreement"), each dated as of May 1, 1994, relating to that certain facility located in West Chester, Pennsylvania that is leased by Medicus to Integra (the "Facility").

The parties desire to terminate the Lease and the Facilities Agreement and to enter into certain agreements relating to the Facility, all upon the terms and subject to the conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and the mutual agreements contained herein and intending to be legally bound hereby, the parties hereto agree as follows:

# Termination of Agreements.

- 1.1 Effective as of June 30, 1998, the Lease and the Facilities Agreement shall be terminated, without further action, and shall be of no further force or effect.
- 1.2 ILC shall be responsible for all costs and expenses incurred in connection with the operation and maintenance of the Facility on and prior to June 30, 1998, and Medicus shall be responsible for all costs and expenses incurred in connection with the operation of the Facility on and after July 1,  $\frac{1}{1000}$
- 1.3 On July 1, 1998, ILC shall pay Medicus for the repair and restoration items set forth on Exhibit A (items (1), (2), (3) and (4)) hereto. Before and after June 30, 1998, ILC shall at its expense use its personnel or independent contractors to complete the item set forth on Exhibit A (item (5)) as expeditiously as reasonably possible.
- Covenants and Agreements of ILC and ILTD.
- 2.1 On the last business day of each month commencing July 31, 1998 and ending on April 30, 1999, Integra shall pay Medicus an amount equal to \$29.030.
- 2.2 ILC hereby grants to Medicus all of its right, title and interest in and to the name "Medicus Technologies, Inc.," and forever relinquishes all rights it may have with respect thereto. Integra shall promptly take all necessary and other appropriate action, to transfer all the stock of its inactive subsidiary, Medicus Technologies, Inc., to Medicus. ILC represents that as of the date hereof, such inactive subsidiary never had a bank account, transacted business through its accounts or made any commitments or contracts with Integra or any other party. Further, to its knowledge, there are not claims or threats of claims outstanding with respect to Medicus Technologies, Inc.

- 2.3 Upon the execution of this Agreement, ILC shall instruct electric, telephone, gas and other utilities, taxing authorities and the like, to read appropriate meters as of June 30, 1998 and send the bill for such utilities and taxes to ILC, and commencing July 1, 1998 to bill in the name of Medicus Technologies, Inc. for such utilities, taxes and the like and to send the bill to Medicus Technologies, Inc. for such charges at 515 West Franklin Street, West Chester, Pennsylvania.
- 2.4 To the extent required during a transition period not beyond April 30, 1999, in the event Medicus Technologies, Inc. is prior to July 1, 1998 unable to obtain its own utility accounts and/or insurance coverage on terms acceptable to Medicus, ILC shall at the written instruction of Medicus continue such insurance and/or utility account on behalf of Medicus Technologies, Inc. and be entitled to charge and withhold payment to Medicus Technologies, Inc. for the actual costs thereof incurred commencing July 1, 1998.
- 3. Covenants and Agreements of Medicus.
- 3.1 Promptly following April 30, 1999, Medicus shall deliver a report to Integra detailing the operating costs (operating costs do not include capital expenditures made by Medicus) and revenues of the freeze-drying operation conducted by Medicus at the Facility for the period from July 1, 1998 through April 30, 1999. Along with such report, Medicus shall deliver to Integra by wire transfer pursuant to instructions previously provided by Integra the amount by which the revenues of the freeze-drying operation exceeds the costs thereof, less \$140,300.
- 3.2 For seven years following the date hereof, if Medicus is conducting a freeze-drying operation at the Facility, Medicus shall provide freeze-drying services to Integra at prices equal to the lowest prices charged by Medicus to third parties for such services and shall make available service capacity for Integra at the Facility to at least 20% of the current freeze-drying capacity of the Facility based on a 5 day, 40 hour work week.
- $3.3 \ \text{Medicus}$  shall not (a) for a period of seven years following the date hereof, sell or lease the Facility, either directly or indirectly, to any of the entities set forth on Exhibit B hereto, or (b) for a period of two years following the date hereof, compete directly with Integra in any non-human, collagen-based, medical products business, provided that Medicus shall be permitted to manufacture such products at the request of bona fide third parties pursuant to arms' length manufacturing agreements. During the seven-year period in (a) above, Medicus shall promptly notify Integra in writing of its intentions to sublease the Facility to a third party. Upon receiving such notice, Integra shall have thirty (30) days to exercise its right to lease the Facility, as currently configured, from Medicus for \$15,000per month, plus an annual cost of living increase calculated from May 1, 1999. If from July 1, 1998 Medicus makes substantial modifications or improvements to the Facility, such modifications or improvements shall warrant additional fair rent. If Integra does not exercise such right within the thirty-day period, Medicus shall be permitted to sublease the Facility to a third party, subject to the restrictions contained in the first sentence of this Section 3.3; provided, however, that the provisions of this Section 3.3 relating to notice and rights of Integra shall again become applicable if Medicus does not sublease the Facility to a third party within sixty (60) days after the initial thirty-day period expires.
- $3.4~{\rm Medicus}$  agrees to employ John O'Donnell for a period of at least ten (10) months ending April 30, 1999.

- 4. Entire Agreement. This Agreement sets forth the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior arrangements or understandings with respect thereto.
- 5. Assignment. This Agreement and the rights or obligations of any party hereunder may not be assigned or delegated without the written consent of each other party hereto.

 $\,$  IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

BHP DIAGNOSTICS, INC.	INTEGRA LIFESCIENCES CORPORATION
By:	ву:
Name: Title:	Name: Title:
MEDICUS CORPORATION	INTEGRA LIFESCIENCES I LTD.
Ву:	Ву:
Name:	Name:
Title:	Title:

### EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "Agreement") is made this 31st day of December, 1998 by and between Integra LifeSciences Corporation, a Delaware corporation, and George McKinney, Ph.D. ("Executive").

# Background

Executive is currently the Executive Vice President of Company serving as Chief Operating Officer. Company desires to continue to employ Executive, and Executive desires to remain in the employ of Company, on the terms and conditions contained in this Agreement. Executive will be substantially involved with Company's operations and management and will learn trade secrets and other confidential information relating to Company and its customers; accordingly, the noncompetition covenant and other restrictive covenants contained in Section 14 of this Agreement constitute essential elements hereof.

NOW, THEREFORE, in consideration of the premises and the mutual agreements contained herein and intending to be legally bound hereby, the parties hereto agree as follows:

#### Terms

- 1. Definitions. The following words and phrases shall have the meanings set forth below for the purposes of this Agreement (unless the context clearly indicates otherwise):
- (a) "Base Salary" shall have the meaning set forth in Section 5.
- (b) "Board" shall mean the Board of Directors of Company, or any successor thereto.
- (c) "Cause," as determined by the Board in good faith, shall mean Executive has  $\mbox{--}$ 
  - (1) failed to perform his stated duties and not cured such failure (if curable) within 15 days of his receipt of written notice of the failure;
  - (2) breached any provision of this Agreement and not cured such breach (if curable) within 15 days of his receipt of written notice of the breach;
  - (3) demonstrated his personal dishonesty in connection with his employment by Company;
    - (4) engaged in willful misconduct;

- (5) engaged in a breach of fiduciary duty;
- (6) willfully violated any law, rule or regulation, or final cease-and-desist order (other than traffic violations or similar offenses); or
- (7) engaged in other serious misconduct of such a nature that his continued employment may reasonably be expected to affect Company adversely.
  - (d) A "Change in Control" of Company shall be deemed to

have occurred:

- (1) if the "beneficial ownership" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of securities representing more than fifty percent (50%) of the combined voting power of Company Voting Securities (as herein defined) is acquired by any individual, entity or group (a "Person"), Company, any trustee or other fiduciary holding securities under any employee benefit plan of Company or an affiliate thereof, or any corporation owned, directly or indirectly, by the stockholders of Company in substantially the same proportions as their ownership of stock of Company (for purposes of this Agreement, "Company Voting Securities" shall mean the then outstanding voting securities of Company entitled to vote generally in the election of directors); provided, however, that any acquisition from Company or any acquisition pursuant to a transaction which complies with clauses (i), (ii) and (iii) of paragraph (3) of this definition shall not be a Change in Control under this paragraph (1); or
- (2) if individuals who, as of the date hereof, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or
- (3) upon consummation by Company of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of Company or the acquisition of assets or stock of another entity (a "Business Combination"), in each case, unless immediately following such Business Combination: (i) more than 50% of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors of (x) the corporation resulting from such Business Combination (the "Surviving Corporation"), or (y) if applicable, a corporation which as a result of

such transaction owns Company or all or substantially all of Company's assets either directly or through one or more subsidiaries (the "Parent Corporation"), is represented, directly or indirectly, by Company Voting Securities outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which such Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportions as their ownership, immediately prior to such Business Combination, of the Company Voting Securities; (ii) no Person (excluding any employee benefit plan (or related trust) of Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 50%or more of the combined voting power of the then outstanding voting securities eligible to elect directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) except to the extent that such ownership of Company existed prior to the Business Combination; and (iii) at least a majority of the members of the board of directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) were members of the Incumbent Board at the time of the execution of the initial agreement, or the action of the Board, providing for such Business Combination; or  $\,$ 

- (4) upon approval by the stockholders of Company of a complete liquidation or dissolution of Company.
  - (e) "Code" shall mean the Internal Revenue Code of 1986, as

amended.

- (f) "Company" shall mean Integra LifeSciences Corporation and any corporation, partnership or other entity owned directly or indirectly, in whole or in part, by Integra LifeSciences Corporation.
- (g) "Disability" shall mean Executive's inability to perform his duties hereunder by reason of any medically determinable physical or mental impairment which is expected to result in death or which has lasted or is expected to last for a continuous period of not fewer than six months.
  - (h) "Good Reason" shall mean:
  - (1) a material breach of this Agreement by Company which is not cured by Company within 15 days of its receipt of written notice of the breach;
  - (2) without Executive's express written consent, the Board reduces Executive's Base Salary or the aggregate fringe benefits provided to Executive (except to the extent permitted by Section 5 or Section 6, respectively); provided, Executive resigns within 30 days after the change objected to; or

(3) Company fails to obtain the assumption of this Agreement by any successor to Company.

- (i) "Principal Executive Office" shall mean Company's principal office for executives, presently located at 105 Morgan Lane, Plainsboro, New Jersey 08536.
- (j) "Retirement" shall mean the termination of Executive's employment with Company in accordance with the retirement policies, including early retirement policies, generally applicable to Company's salaried employees.
- $$\rm (k)$$  "Termination Date" shall mean the date specified in the Termination Notice.
- (1) "Termination Notice" shall mean a dated notice which: (i) indicates the specific termination provision in this Agreement relied upon (if any); (ii) sets forth in reasonable detail the facts and circumstances claimed to provide a basis for the termination of Executive's employment under such provision; (iii) specifies a Termination Date; and (iv) is given in the manner specified in Section 15(h).
- 2. Employment. Company hereby employs Executive as Executive Vice President Company serving as Chief Operating Officer and Executive hereby agrees to continue such employment and agrees to render services to Company in such capacity (or in such other capacity in the future as the Chief Executive Officer may decide in his sole discretion) on the terms and conditions set forth in this Agreement. Executive's primary place of employment shall be at the Principal Executive Office or other corporate location as the Chief Executive Officer deems appropriate.

#### 3. Term.

- (a) Term and Renewal of Agreement. Unless earlier terminated by Executive or Company as provided in Section 10 hereof, the term of Executive's employment under this Agreement shall be three (3) years, commencing on the date of this Agreement and, subject to subsection 3(b), shall be deemed automatically, without further action, to extend for an additional year on each annual anniversary of the date of this Agreement.
- (b) Annual Review. Prior to the third annual anniversary of the date of this Agreement and each annual anniversary thereafter, the Board shall consider extending the term of this Agreement. The term shall continue to extend in the manner set forth in subsection 3(a) unless either the Board does not approve the extension and provides written notice to Executive of such event, or Executive gives written notice to Company of Executive's election not to extend the term. In either case, the written notice shall be given not fewer than 30 days prior to any such anniversary date. References herein to the term of this Agreement shall refer both to the initial term and successive terms.

# 4. Duties. Executive shall:

- (a) faithfully and diligently do and perform all such acts and duties, and furnish such services as are assigned to Executive as of the date this Agreement is signed, and (subject to Section 2) such additional or different acts, duties and services as the Chief Executive Officer may assign in the future: and
- (b) devote his full professional time, energy, skill and best efforts to the performance of his duties hereunder, in a manner that will faithfully and diligently further the business and interests of Company, and shall not be employed by or participate or engage in or in any manner be a part of the management or operations of any business enterprise other than Company without the prior written consent of the Board, which consent may be granted or withheld in its sole discretion.
- 5. Compensation. Company shall compensate Executive for his services at a minimum base salary of \$240,000.00 per year ("Base Salary"), payable in periodic installments in accordance with Company's regular payroll practices in effect from time to time. Executive's Base Salary may not be decreased without Executive's express written consent (unless the decrease is pursuant to a general compensation reduction applicable to all, or substantially all, executive officers of Company). Bonus payments may be made as determined appropriate by the Board in its sole discretion.
- 6. Benefit Plans. Executive shall be entitled to participate in and receive benefits under any employee benefit plan or stock-based plan of Company, and shall be eligible for any other plans and benefits covering executives of Company, to the extent commensurate with his then duties and responsibilities fixed by the Board. Company shall not make any change in such plans or benefits which would adversely affect Executive's rights thereunder, unless such change affects all, or substantially all, executive officers of Company.
- 7. Vacation. Executive shall be entitled to paid annual vacation in accordance with the policies established from time to time by the Board, which shall in no event be fewer than three weeks per annum. Regardless of what the Company's standard vacation policy may be, Executive shall not be entitled to extra cash payments for any vacation he does not utilize.
- 8. Business Expenses. Company shall reimburse Executive or otherwise pay for all reasonable expenses incurred by Executive in furtherance of or in connection with the business of Company, including, but not limited to, automobile and traveling expenses and all reasonable entertainment expenses, subject to such reasonable documentation and other limitations as may be established by the Board.
- 9. Disability. In the event Executive incurs a Disability, Executive's obligation to perform services under this Agreement will terminate, and the Board may terminate this Agreement upon written notice to Executive.
  - 10. Termination.
- (a) Termination without Salary Continuation. In the event (i) Executive terminates his employment hereunder other than for Good Reason, or (ii) Executive's

employment is terminated by Company due to his Retirement, Disability or death, or for Cause, Executive shall have no right to compensation or other benefits pursuant to this Agreement for any period after his last day of active employment.

- (b) Termination with Salary Continuation (No Change in Control). Except as provided in subsection 10(c) in the event of a Change in Control, in the event (i) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, or (ii) Executive terminates his employment for Good Reason, then Company shall:
  - (1) pay Executive a severance amount equal to the greater of (i) one times Executive's Base Salary as of his last day of active employment, or (ii) the unpaid portion of Executive's Base Salary for the remainder of the then current term of this Agreement; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date); and
  - (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time employment by another employer; or (iii) Executive's death, continued participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.
- (c) Termination with Salary Continuation (Change in Control). Notwithstanding anything to the contrary set forth in subsection 10(b), in the event within six months of a Change in Control: (i) Executive terminates his employment for Good Reason; or (ii) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, then Company shall:
  - (1) pay Executive a severance amount equal to 2.99 times Executive's Base Salary as of his last day of active employment; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date); and
  - (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time

employment by another employer; or (iii) Executive's death, continued participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.

- (d) Termination Notice. Except in the event of Executive's death, a termination under this Agreement shall be effected by means of a Termination Notice.
- 11. Withholding. Company shall have the right to withhold from all payments made pursuant to this Agreement any federal, state, or local taxes and such other amounts as may be required by law to be withheld from such payments.
- 12. Assignability. Company may assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any entity to which Company may transfer all or substantially all of its assets, if in any such case said entity shall expressly in writing assume all obligations of Company hereunder as fully as if it had been originally made a party hereto. Company may not otherwise assign this Agreement or its rights and obligations hereunder. This Agreement is personal to Executive and his rights and duties hereunder shall not be assigned except as expressly agreed to in writing by Company.
- 13. Death of Executive. Any amounts due Executive under this Agreement (not including any Base Salary not yet earned by Executive) unpaid as of the date of Executive's death shall be paid in a single sum as soon as practicable after Executive's death to Executive's surviving spouse, or if none, to the duly appointed personal representative of his estate.

#### 14. Restrictive Covenants.

(a) Covenant Not to Compete. During the term of this Agreement and for a period of two (2) years following the Termination Date, Executive shall not directly or indirectly: (i) engage, anywhere within the geographical areas in which Company is conducting business operations or providing services as of the date of Executive's termination of employment, in the tissue engineering business (the use of implantable absorbable materials, with or without a bioactive component, to attempt to elicit a specific cellular response in order to regenerate tissue or to impede the growth of tissue or migration of cells) (the "Tissue Engineering Business") or any other business the revenues of which constituted at least 30% of Company's revenues during the six (6) month period prior to the Termination Date (together with the Tissue Engineering Business, the "Business"); (ii) be or become a stockholder, partner, owner, officer, director or employee or agent of, or a consultant to or give financial or other assistance to, any person or entity engaged in the Business; (iii) seek in competition with the business of Company to procure orders from or do business with any customer of Company; (iv) solicit or contact with a view to the engagement or employment by any person or entity of any person who is an employee of Company; (v) seek to contract with or engage (in such a way as to adversely affect or interfere with the business of Company) any person or entity who has been contracted with or engaged to manufacture, assemble, supply or deliver products, goods, materials or services to Company; or (vi) engage in or participate in any effort or act to induce

any of the customers, associates, consultants, or employees of Company to take any action which might be disadvantageous to Company; provided, however, that nothing herein shall prohibit Executive and his affiliates from owning, as passive investors, in the aggregate not more than 5% of the outstanding publicly traded stock of any corporation so engaged.

(b) Confidentiality. Executive acknowledges a duty of confidentiality owed to Company and shall not, at any time during or after his employment by Company, retain in writing, use, divulge, furnish, or make accessible to anyone, without the express authorization of the Board, any trade secret, private or confidential information or knowledge of Company obtained or acquired by him while so employed. All computer software, business cards, telephone lists, customer lists, price lists, contract forms, catalogs, Company books, records, files and know-how acquired while an employee of Company are acknowledged to be the property of Company and shall not be duplicated, removed from Company's possession or premises or made use of other than in pursuit of Company's business or as may otherwise be required by law or any legal process, or as is necessary in connection with any adversarial proceeding against Company and, upon termination of employment for any reason, Executive shall deliver to Company, without further demand, all copies thereof which are then in his possession or under his control. No information shall be treated as "confidential information" if it is generally available public knowledge at the time of disclosure or use by Executive.

(c) Inventions and Improvements. Executive shall promptly communicate to Company all ideas, discoveries and inventions which are or  $\ensuremath{\mathsf{may}}$ be useful to Company or its business. Executive acknowledges that all such ideas, discoveries, inventions, and improvements which heretofore have been or are hereafter made, conceived, or reduced to practice by him at any time during his employment with Company heretofore or hereafter gained by him at any time during his employment with Company are the property of Company, and Executive hereby irrevocably assigns all such ideas, discoveries, inventions, and improvements to Company for its sole use and benefit, without additional compensation. The provisions of this Section 14(c) shall apply whether such ideas, discoveries, inventions, or improvements were or are conceived, made or gained by him alone or with others, whether during or after usual working hours, whether on or off the job, whether applicable to matters directly or indirectly related to Company's business interests (including potential business interests), and whether or not within the specific realm of his duties. Executive shall, upon request of Company, but at no expense to Executive, at any time during or after his employment with Company, sign all instruments and documents reasonably requested by Company and otherwise cooperate with Company to protect its right to such ideas, discoveries, inventions, or improvements including applying for, obtaining, and enforcing patents and copyrights thereon in such countries as Company shall determine.

(d) Breach of Covenant. Any breach or violation of the provisions in this Section 14 by Executive will result in forfeiture by Executive and all other persons of all rights to any further payments or benefits under this Agreement, and in such event Company shall have no further obligation to pay any amounts related thereto. Executive expressly acknowledges that damages alone will be an inadequate remedy for any breach or violation of any of the provisions of this Section 14 and that Company, in addition to all other remedies, shall be entitled as a matter of right to equitable relief, including injunctions and specific performance,

in any court of competent jurisdiction. If any of the provisions of this Section 14 are held to be in any respect unenforceable, then they shall be deemed to extend only over the maximum period of time, geographic area, or range of activities as to which they may be enforceable.

#### 15. Miscellaneous.

- (a) Amendment. No provision of this Agreement may be amended unless such amendment is signed by Executive and such officer as may be specifically designated by the Board to sign on Company's behalf.
- (b) Nature of Obligations. Nothing contained herein shall create or require Company to create a trust of any kind to fund any benefits which may be payable hereunder, and to the extent that Executive acquires a right to receive benefits from Company hereunder, such right shall be no greater than the right of any unsecured general creditor of Company.
- (c) Prior Employment. Executive represents and warrants that his acceptance of employment with Company has not breached, and the performance of his duties hereunder will not breach, any duty owed by him to any prior employer or other person.
- (d) Headings. The Section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. In the event of a conflict between a heading and the content of a Section, the content of the Section shall control.
- (e) Gender and Number. Whenever used in this Agreement, a masculine pronoun is deemed to include the feminine and a neuter pronoun is deemed to include both the masculine and feminine, unless the context clearly indicates otherwise. The singular form, whenever used herein, shall mean or include the plural form where applicable.
- (f) Severability. If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable under any applicable law, such event shall not affect or render invalid or unenforceable any other provision of this Agreement and shall not affect the application of any provision to other persons or circumstances.
- (g) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, permitted assigns, heirs, executors, and administrators.
- (h) Notice. For purposes of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given if hand-delivered, sent by documented overnight delivery service or by certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below:

To the Company:

Integra LifeSciences Corporation 105 Morgan Lane Plainsboro, New Jersey 08536 Attn: President

To the Executive:

George McKinney, Ph.D. 15 Beechtree Lane Plainsboro, NJ 08540

(i) Entire Agreement. This Agreement sets forth the entire understanding of the parties and supersedes all prior agreements, arrangements and communications, whether oral or written, pertaining to the subject matter hereof.

(j) Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the United States where applicable and otherwise by the laws of the State of New Jersey.

 $\,$  IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

INTEGRA LIFESCIENCES	CORPORATION
Ву:	
Title:	
EXECUTIVE	
George McKinney, III	, Ph.D.

### EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "Agreement") is made this 31st day of December, 1998 by and between Integra LifeSciences Corporation, a Delaware corporation, and Judith O'Grady ("Executive").

### Background

Executive is currently the Senior Vice President, Regulatory Affairs/Quality Assurance of Company. Company desires to continue to employ Executive, and Executive desires to remain in the employ of Company, on the terms and conditions contained in this Agreement. Executive will be substantially involved with Company's operations and management and will learn trade secrets and other confidential information relating to Company and its customers; accordingly, the noncompetition covenant and other restrictive covenants contained in Section 14 of this Agreement constitute essential elements hereof.

NOW, THEREFORE, in consideration of the premises and the mutual agreements contained herein and intending to be legally bound hereby, the parties hereto agree as follows:

# Terms

16. Definitions. The following words and phrases shall have the meanings set forth below for the purposes of this Agreement (unless the context clearly indicates otherwise):

- (a) "Base Salary" shall have the meaning set forth in
- (b) "Board" shall mean the Board of Directors of Company, or any successor thereto.

Section 5.

- (c) "Cause," as determined by the Board in good faith, shall mean Executive has  $-\!\!\!\!-$ 
  - (1) failed to perform his stated duties and not cured such failure (if curable) within 15 days of his receipt of written notice of the failure;
  - (2) breached any provision of this Agreement and not cured such breach (if curable) within 15 days of his receipt of written notice of the breach;
  - (3) demonstrated his personal dishonesty in connection with his employment by Company;
    - (4) engaged in willful misconduct;

- (5) engaged in a breach of fiduciary duty;
- (6) willfully violated any law, rule or regulation, or final cease-and-desist order (other than traffic violations or similar offenses); or
- $\mbox{(7)}$  engaged in other serious misconduct of such a nature that his continued employment may reasonably be expected to affect Company adversely.
  - (d) A "Change in Control" of Company shall be deemed to

have occurred:

- (1) if the "beneficial ownership" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of securities representing more than fifty percent (50%) of the combined voting power of Company Voting Securities (as herein defined) is acquired by any individual, entity or group (a "Person"), Company, any trustee or other fiduciary holding securities under any employee benefit plan of Company or an affiliate thereof, or any corporation owned, directly or indirectly, by the stockholders of Company in substantially the same proportions as their ownership of stock of Company (for purposes of this Agreement, "Company Voting Securities" shall mean the then outstanding voting securities of Company entitled to vote generally in the election of directors); provided, however, that any acquisition from Company or any acquisition pursuant to a transaction which complies with clauses (i), (ii) and (iii) of paragraph (3) of this definition shall not be a Change in Control under this paragraph (1); or
- (2) if individuals who, as of the date hereof, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or
- (3) upon consummation by Company of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of Company or the acquisition of assets or stock of another entity (a "Business Combination"), in each case, unless immediately following such Business Combination: (i) more than 50% of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors of (x) the corporation resulting from such Business Combination (the "Surviving Corporation"), or (y) if applicable, a corporation which as a result of

such transaction owns Company or all or substantially all of Company's assets either directly or through one or more subsidiaries (the "Parent Corporation"), is represented, directly or indirectly, by Company Voting Securities outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which such Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportions as their ownership, immediately prior to such Business Combination, of the Company Voting Securities; (ii) no Person (excluding any employee benefit plan (or related trust) of Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 50% or more of the combined voting power of the then outstanding voting securities eligible to elect directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) except to the extent that such ownership of Company existed prior to the Business Combination; and (iii) at least a majority of the members of the board of directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) were members of the Incumbent Board at the time of the execution of the initial agreement, or the action of the Board, providing for such Business Combination; or

- (4) upon approval by the stockholders of Company of a complete liquidation or dissolution of Company.
  - (e) "Code" shall mean the Internal Revenue Code of 1986,

as amended.

- (f) "Company" shall mean Integra LifeSciences Corporation and any corporation, partnership or other entity owned directly or indirectly, in whole or in part, by Integra LifeSciences Corporation.
- (g) "Disability" shall mean Executive's inability to perform his duties hereunder by reason of any medically determinable physical or mental impairment which is expected to result in death or which has lasted or is expected to last for a continuous period of not fewer than six months.
  - (h) "Good Reason" shall mean:
  - (1) a material breach of this Agreement by Company which is not cured by Company within 15 days of its receipt of written notice of the breach;
  - (2) without Executive's express written consent, the Board reduces Executive's Base Salary or the aggregate fringe benefits provided to Executive (except to the extent permitted by Section 5 or Section 6, respectively); provided, Executive resigns within 30 days after the change objected to; or

(3) Company fails to obtain the assumption of this Agreement by any successor to Company.

- (i) "Principal Executive Office" shall mean Company's principal office for executives, presently located at 105 Morgan Lane, Plainsboro, New Jersey 08536.
- (j) "Retirement" shall mean the termination of Executive's employment with Company in accordance with the retirement policies, including early retirement policies, generally applicable to Company's salaried employees.
- $\ensuremath{\mbox{(k)}}$  "Termination Date" shall mean the date specified in the Termination Notice.
- (1) "Termination Notice" shall mean a dated notice which: (i) indicates the specific termination provision in this Agreement relied upon (if any); (ii) sets forth in reasonable detail the facts and circumstances claimed to provide a basis for the termination of Executive's employment under such provision; (iii) specifies a Termination Date; and (iv) is given in the manner specified in Section 15(h).
- 17. Employment. Company hereby employs Executive as Senior Vice President, Regulatory Affairs/Quality Assurance and Executive hereby agrees to continue such employment and agrees to render services to Company in such capacity (or in such other capacity in the future as the Chief Executive Officer may decide in his sole discretion) on the terms and conditions set forth in this Agreement. Executive's primary place of employment shall be at the Principal Executive Office or other corporate location as the Chief Executive Officer deems appropriate.

### 18. Term.

- (a) Term and Renewal of Agreement. Unless earlier terminated by Executive or Company as provided in Section 10 hereof, the term of Executive's employment under this Agreement shall be two (2) years, commencing on the date of this Agreement and, subject to subsection 3(b), shall be deemed automatically, without further action, to extend for an additional year on each annual anniversary of the date of this Agreement.
- (b) Annual Review. Prior to the second annual anniversary of the date of this Agreement and each annual anniversary thereafter, the Board shall consider extending the term of this Agreement. The term shall continue to extend in the manner set forth in subsection 3(a) unless either the Board does not approve the extension and provides written notice to Executive of such event, or Executive gives written notice to Company of Executive's election not to extend the term. In either case, the written notice shall be given not fewer than 30 days prior to any such anniversary date. References herein to the term of this Agreement shall refer both to the initial term and successive terms.

#### 19. Duties. Executive shall:

- (a) faithfully and diligently do and perform all such acts and duties, and furnish such services as are assigned to Executive as of the date this Agreement is signed, and (subject to Section 2) such additional or different acts, duties and services as the Chief Executive Officer may assign in the future; and
- (b) devote his full professional time, energy, skill and best efforts to the performance of his duties hereunder, in a manner that will faithfully and diligently further the business and interests of Company, and shall not be employed by or participate or engage in or in any manner be a part of the management or operations of any business enterprise other than Company without the prior written consent of the Board, which consent may be granted or withheld in its sole discretion.
- 20. Compensation. Company shall compensate Executive for his services at a minimum base salary of \$145,000 per year ("Base Salary"), payable in periodic installments in accordance with Company's regular payroll practices in effect from time to time. Executive's Base Salary may be increased from time to time in such amounts as may be determined by the Board, but may not be decreased without Executive's express written consent (unless the decrease is pursuant to a general compensation reduction applicable to all, or substantially all, executive officers of Company). Bonus payments may be made as determined appropriate by the Board in its sole discretion.
- 21. Benefit Plans. Executive shall be entitled to participate in and receive benefits under any employee benefit plan or stock-based plan of Company, and shall be eligible for any other plans and benefits covering executives of Company, to the extent commensurate with his then duties and responsibilities fixed by the Board. Company shall not make any change in such plans or benefits which would adversely affect Executive's rights thereunder, unless such change affects all, or substantially all, executive officers of Company.
- 22. Vacation. Executive shall be entitled to paid annual vacation in accordance with the policies established from time to time by the Board, which shall in no event be fewer than three weeks per annum. Regardless of what the Company's standard vacation policy may be, Executive shall not be entitled to extra cash payments for any vacation he does not utilize.
- 23. Business Expenses. Company shall reimburse Executive or otherwise pay for all reasonable expenses incurred by Executive in furtherance of or in connection with the business of Company, including, but not limited to, automobile and traveling expenses and all reasonable entertainment expenses, subject to such reasonable documentation and other limitations as may be established by the Board.
- 24. Disability. In the event Executive incurs a Disability, Executive's obligation to perform services under this Agreement will terminate, and the Board may terminate this Agreement upon written notice to Executive.

- (a) Termination without Salary Continuation. In the event (i) Executive terminates his employment hereunder other than for Good Reason, or (ii) Executive's employment is terminated by Company due to his Retirement, Disability or death, or for Cause, Executive shall have no right to compensation or other benefits pursuant to this Agreement for any period after his last day of active employment.
- (b) Termination with Salary Continuation (No Change in Control). Except as provided in subsection 10(c) in the event of a Change in Control, in the event (i) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, or (ii) Executive terminates his employment for Good Reason, then Company shall:
  - (1) pay Executive a severance amount equal to the greater of (i) one times Executive's Base Salary as of his last day of active employment, or (ii) the unpaid portion of Executive's Base Salary for the remainder of the then current term of this Agreement; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date); and
  - (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time employment by another employer; or (iii) Executive's death, continued participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.
- (c) Termination with Salary Continuation (Change in Control). Notwithstanding anything to the contrary set forth in subsection 10(b), in the event within six months of a Change in Control: (i) Executive terminates his employment for Good Reason; or (ii) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, then Company shall:
  - (1) pay Executive a severance amount equal to 2.99 times Executive's Base Salary as of his last day of active employment; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date);

- (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time employment by another employer; or (iii) Executive's death, continued participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.
- (d) Termination Notice. Except in the event of Executive's death, a termination under this Agreement shall be effected by means of a Termination Notice.
- 26. Withholding. Company shall have the right to withhold from all payments made pursuant to this Agreement any federal, state, or local taxes and such other amounts as may be required by law to be withheld from such payments.
- 27. Assignability. Company may assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any entity to which Company may transfer all or substantially all of its assets, if in any such case said entity shall expressly in writing assume all obligations of Company hereunder as fully as if it had been originally made a party hereto. Company may not otherwise assign this Agreement or its rights and obligations hereunder. This Agreement is personal to Executive and his rights and duties hereunder shall not be assigned except as expressly agreed to in writing by Company.
- 28. Death of Executive. Any amounts due Executive under this Agreement (not including any Base Salary not yet earned by Executive) unpaid as of the date of Executive's death shall be paid in a single sum as soon as practicable after Executive's death to Executive's surviving spouse, or if none, to the duly appointed personal representative of his estate.

### 29. Restrictive Covenants.

(a) Covenant Not to Compete. During the term of this Agreement and for a period of two (2) years following the Termination Date, Executive shall not directly or indirectly: (i) engage, anywhere within the geographical areas in which Company is conducting business operations or providing services as of the date of Executive's termination of employment, the tissue engineering business (the use of implantable absorbable materials, with or without a bioactive component, to attempt to elicit a specific cellular response in order to regenerate tissue or to impede the growth of tissue or migration of cells) (the "Tissue Engineering Business") or any other business the revenues of which constituted at least 30% of Company's revenues during the six (6) month period prior to the Termination Date (together with the Tissue Engineering Business, the "Business"); (ii) be or become a stockholder, partner, owner, officer, director or employee or agent of, or a consultant to or give financial or other assistance to, any person or entity engaged in the Business; (iii) seek in competition with the business of Company to procure orders from or do business with any customer of Company; (iv) solicit or contact with a view to the engagement or employment by any person or entity of

any person who is an employee of Company; (v) seek to contract with or engage (in such a way as to adversely affect or interfere with the business of Company) any person or entity who has been contracted with or engaged to manufacture, assemble, supply or deliver products, goods, materials or services to Company; or (vi) engage in or participate in any effort or act to induce any of the customers, associates, consultants, or employees of Company to take any action which might be disadvantageous to Company; provided, however, that nothing herein shall prohibit Executive and his affiliates from owning, as passive investors, in the aggregate not more than 5% of the outstanding publicly traded stock of any corporation so engaged.

(b) Confidentiality. Executive acknowledges a duty of confidentiality owed to Company and shall not, at any time during or after his employment by Company, retain in writing, use, divulge, furnish, or make accessible to anyone, without the express authorization of the Board, any trade secret, private or confidential information or knowledge of Company obtained or acquired by him while so employed. All computer software, business cards, telephone lists, customer lists, price lists, contract forms, catalogs, Company books, records, files and know-how acquired while an employee of Company are acknowledged to be the property of Company and shall not be duplicated, removed from Company's possession or premises or made use of other than in pursuit of Company's business or as may otherwise be required by law or any legal process, or as is necessary in connection with any adversarial proceeding against Company and, upon termination of employment for any reason, Executive shall deliver to Company, without further demand, all copies thereof which are then in his possession or under his control. No information shall be treated as "confidential information" if it is generally available public knowledge at the time of disclosure or use by Executive.

(c) Inventions and Improvements. Executive shall promptly communicate to Company all ideas, discoveries and inventions which are or may be useful to Company or its business. Executive acknowledges that all such ideas, discoveries, inventions, and improvements which heretofore have been or are hereafter made, conceived, or reduced to practice by him at any time during his employment with Company heretofore or hereafter gained by him at any time during his employment with Company are the property of Company, and Executive hereby irrevocably assigns all such ideas, discoveries, inventions, and improvements to Company for its sole use and benefit, without additional compensation. The provisions of this Section 14(c) shall apply whether such ideas, discoveries, inventions, or improvements were or are conceived, made or gained by him alone or with others, whether during or after usual working hours, whether on or off the job, whether applicable to matters directly or indirectly related to Company's business interests (including potential business interests), and whether or not within the specific realm of his duties. Executive shall, upon request of Company, but at no expense to Executive, at any time during or after his employment with Company, sign all instruments and documents reasonably requested by Company and otherwise cooperate with Company to protect its right to such ideas, discoveries, inventions, or improvements including applying for, obtaining, and enforcing patents and copyrights thereon in such countries as Company shall determine.

(d) Breach of Covenant. Any breach or violation of the provisions in this Section 14 by Executive will result in forfeiture by Executive and all other persons of all rights to any further payments or benefits under this Agreement, and in such event Company

shall have no further obligation to pay any amounts related thereto. Executive expressly acknowledges that damages alone will be an inadequate remedy for any breach or violation of any of the provisions of this Section 14 and that Company, in addition to all other remedies, shall be entitled as a matter of right to equitable relief, including injunctions and specific performance, in any court of competent jurisdiction. If any of the provisions of this Section 14 are held to be in any respect unenforceable, then they shall be deemed to extend only over the maximum period of time, geographic area, or range of activities as to which they may be enforceable.

#### 30. Miscellaneous.

- (a) Amendment. No provision of this Agreement may be amended unless such amendment is signed by Executive and such officer as may be specifically designated by the Board to sign on Company's behalf.
- (b) Nature of Obligations. Nothing contained herein shall create or require Company to create a trust of any kind to fund any benefits which may be payable hereunder, and to the extent that Executive acquires a right to receive benefits from Company hereunder, such right shall be no greater than the right of any unsecured general creditor of Company.
- (c) Prior Employment. Executive represents and warrants that his acceptance of employment with Company has not breached, and the performance of his duties hereunder will not breach, any duty owed by him to any prior employer or other person.
- (d) Headings. The Section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. In the event of a conflict between a heading and the content of a Section, the content of the Section shall control
- (e) Gender and Number. Whenever used in this Agreement, a masculine pronoun is deemed to include the feminine and a neuter pronoun is deemed to include both the masculine and feminine, unless the context clearly indicates otherwise. The singular form, whenever used herein, shall mean or include the plural form where applicable.
- (f) Severability. If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable under any applicable law, such event shall not affect or render invalid or unenforceable any other provision of this Agreement and shall not affect the application of any provision to other persons or circumstances.
- (g) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, permitted assigns, heirs, executors, and administrators.
- (h) Notice. For purposes of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given if hand-delivered, sent by documented overnight delivery service or by certified

or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below:

To the Company:

Integra LifeSciences Corporation 105 Morgan Lane Plainsboro, New Jersey 08536 Attn: President

To the Executive:

Ms. Judith O'Grady 51 Sandlewood Drive Marlboro, NJ 07746

(i) Entire Agreement. This Agreement sets forth the entire understanding of the parties and supersedes all prior agreements, arrangements and communications, whether oral or written, pertaining to the subject matter hereof.

(j) Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the United States where applicable and otherwise by the laws of the State of New Jersey.

 $\,$  IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

By:
\_\_\_\_\_
Title:

EXECUTIVE

Judith O'Grady

INTEGRA LIFESCIENCES CORPORATION

# EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "Agreement") is made this 31st day of December, 1998 by and between Integra LifeSciences Corporation, a Delaware corporation, and David B. Holtz ("Executive").

#### Background

Executive is currently the Vice President, Financial, and Treasurer of Company. Company desires to continue to employ Executive, and Executive desires to remain in the employ of Company, on the terms and conditions contained in this Agreement. Executive will be substantially involved with Company's operations and management and will learn trade secrets and other confidential information relating to Company and its customers; accordingly, the noncompetition covenant and other restrictive covenants contained in Section 14 of this Agreement constitute essential elements hereof.

NOW, THEREFORE, in consideration of the premises and the mutual agreements contained herein and intending to be legally bound hereby, the parties hereto agree as follows:

#### Terms

- 31. Definitions. The following words and phrases shall have the meanings set forth below for the purposes of this Agreement (unless the context clearly indicates otherwise):
  - (a) "Base Salary" shall have the meaning set forth in

Section 5.

- (b) "Board" shall mean the Board of Directors of Company, or any successor thereto.
- (c) "Cause," as determined by the Board in good faith, shall mean Executive has  $\mbox{--}$ 
  - (1) failed to perform his stated duties and not cured such failure (if curable) within 15 days of his receipt of written notice of the failure;
  - (2) breached any provision of this Agreement and not cured such breach (if curable) within  $15\ \mathrm{days}$  of his receipt of written notice of the breach;
  - (3) demonstrated his personal dishonesty in connection with his employment by Company;
    - (4) engaged in willful misconduct;

- (5) engaged in a breach of fiduciary duty;
- (6) willfully violated any law, rule or regulation, or final cease-and-desist order (other than traffic violations or similar offenses); or
- $\mbox{(7)}$  engaged in other serious misconduct of such a nature that his continued employment may reasonably be expected to affect Company adversely.
- (d) A "Change in Control" of Company shall be deemed to have

occurred:

- (1) if the "beneficial ownership" (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of securities representing more than fifty percent (50%) of the combined voting power of Company Voting Securities (as herein defined) is acquired by any individual, entity or group (a "Person"), Company, any trustee or other fiduciary holding securities under any employee benefit plan of Company or an affiliate thereof, or any corporation owned, directly or indirectly, by the stockholders of Company in substantially the same proportions as their ownership of stock of Company (for purposes of this Agreement, "Company Voting Securities" shall mean the then outstanding voting securities of Company entitled to vote generally in the election of directors); provided, however, that any acquisition from Company or any acquisition pursuant to a transaction which complies with clauses (i), (ii) and (iii) of paragraph (3) of this definition shall not be a Change in Control under this paragraph (1); or
- (2) if individuals who, as of the date hereof, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or
- (3) upon consummation by Company of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of Company or the acquisition of assets or stock of another entity (a "Business Combination"), in each case, unless immediately following such Business Combination: (i) more than 50% of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors of (x) the corporation resulting from such Business Combination (the "Surviving Corporation"), or (y) if applicable, a corporation which as a result of

such transaction owns Company or all or substantially all of Company's assets either directly or through one or more subsidiaries (the "Parent Corporation"), is represented, directly or indirectly, by Company Voting Securities outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which such Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportions as their ownership, immediately prior to such Business Combination, of the Company Voting Securities; (ii) no Person (excluding any employee benefit plan (or related trust) of Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 50%or more of the combined voting power of the then outstanding voting securities eligible to elect directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) except to the extent that such ownership of Company existed prior to the Business Combination; and (iii) at least a majority of the members of the board of directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) were members of the Incumbent Board at the time of the execution of the initial agreement, or the action of the Board, providing for such Business Combination; or

- (4) upon approval by the stockholders of Company of a complete liquidation or dissolution of Company.
  - (e) "Code" shall mean the Internal Revenue Code of 1986,

as amended.

- (f) "Company" shall mean Integra LifeSciences Corporation and any corporation, partnership or other entity owned directly or indirectly, in whole or in part, by Integra LifeSciences Corporation.
- (g) "Disability" shall mean Executive's inability to perform his duties hereunder by reason of any medically determinable physical or mental impairment which is expected to result in death or which has lasted or is expected to last for a continuous period of not fewer than six months.
  - (h) "Good Reason" shall mean:
  - (1) a material breach of this Agreement by Company which is not cured by Company within 15 days of its receipt of written notice of the breach;
  - (2) without Executive's express written consent, the Board reduces Executive's Base Salary or the aggregate fringe benefits provided to Executive (except to the extent permitted by Section 5 or Section 6, respectively); provided, Executive resigns within 30 days after the change objected to; or

(3) Company fails to obtain the assumption of this Agreement by any successor to Company.

- (i) "Principal Executive Office" shall mean Company's principal office for executives, presently located at 105 Morgan Lane, Plainsboro, New Jersey 08536.
- (j) "Retirement" shall mean the termination of Executive's employment with Company in accordance with the retirement policies, including early retirement policies, generally applicable to Company's salaried employees.
- $\ensuremath{(k)}$  "Termination Date" shall mean the date specified in the Termination Notice.
- (1) "Termination Notice" shall mean a dated notice which: (i) indicates the specific termination provision in this Agreement relied upon (if any); (ii) sets forth in reasonable detail the facts and circumstances claimed to provide a basis for the termination of Executive's employment under such provision; (iii) specifies a Termination Date; and (iv) is given in the manner specified in Section 15(h).
- 32. Employment. Company hereby employs Executive as Vice President, Financial and Treasurer and Executive hereby agrees to continue such employment and agrees to render services to Company in such capacity (or in such other capacity in the future as the Chief Executive Officer may decide in his sole discretion) on the terms and conditions set forth in this Agreement. Executive's primary place of employment shall be at the Principal Executive Office or other Corporate location as the Chief Executive Officer deems appropriate.

#### 33. Term.

- (a) Term and Renewal of Agreement. Unless earlier terminated by Executive or Company as provided in Section 10 hereof, the term of Executive's employment under this Agreement shall be two (2) years, commencing on the date of this Agreement and, subject to subsection 3(b), shall be deemed automatically, without further action, to extend for an additional year on each annual anniversary of the date of this Agreement.
- (b) Annual Review. Prior to the second annual anniversary of the date of this Agreement and each annual anniversary thereafter, the Board shall consider extending the term of this Agreement. The term shall continue to extend in the manner set forth in subsection 3(a) unless either the Board does not approve the extension and provides written notice to Executive of such event, or Executive gives written notice to Company of Executive's election not to extend the term. In either case, the written notice shall be given not fewer than 30 days prior to any such anniversary date. References herein to the term of this Agreement shall refer both to the initial term and successive terms.

# 34. Duties. Executive shall:

(a) faithfully and diligently do and perform all such acts and duties, and furnish such services as are assigned to Executive as of the date this Agreement is signed,

and (subject to Section 2) such additional or different acts, duties and services as the Chief Executive Officer may assign in the future; and

- (b) devote his full professional time, energy, skill and best efforts to the performance of his duties hereunder, in a manner that will faithfully and diligently further the business and interests of Company, and shall not be employed by or participate or engage in or in any manner be a part of the management or operations of any business enterprise other than Company without the prior written consent of the Board, which consent may be granted or withheld in its sole discretion.
- 35. Compensation. Company shall compensate Executive for his services at a minimum base salary of \$115,000 per year ("Base Salary"), payable in periodic installments in accordance with Company's regular payroll practices in effect from time to time. Executive's Base Salary shall be subject to annual reviews, but may not be decreased without Executive's express written consent (unless the decrease is pursuant to a general compensation reduction applicable to all, or substantially all, executive officers of Company). Bonus payments may be made as determined appropriate by the Board in its sole discretion.
- 36. Benefit Plans. Executive shall be entitled to participate in and receive benefits under any employee benefit plan or stock-based plan of Company, and shall be eligible for any other plans and benefits covering executives of Company, to the extent commensurate with his then duties and responsibilities fixed by the Board. Company shall not make any change in such plans or benefits which would adversely affect Executive's rights thereunder, unless such change affects all, or substantially all, executive officers of Company.
- 37. Vacation. Executive shall be entitled to paid annual vacation in accordance with the policies established from time to time by the Board, which shall in no event be fewer than three weeks per annum. Regardless of what the Company's standard vacation policy may be, Executive shall not be entitled to extra cash payments for any vacation he does not utilize.
- 38. Business Expenses. Company shall reimburse Executive or otherwise pay for all reasonable expenses incurred by Executive in furtherance of or in connection with the business of Company, including, but not limited to, automobile and traveling expenses and all reasonable entertainment expenses, subject to such reasonable documentation and other limitations as may be established by the Board.
- 39. Disability. In the event Executive incurs a Disability, Executive's obligation to perform services under this Agreement will terminate, and the Board may terminate this Agreement upon written notice to Executive.

# 40. Termination.

(a) Termination without Salary Continuation. In the event (i) Executive terminates his employment hereunder other than for Good Reason, or (ii) Executive's employment is terminated by Company due to his Retirement, Disability or death, or for Cause,

Executive shall have no right to compensation or other benefits pursuant to this Agreement for any period after his last day of active employment.

- (b) Termination with Salary Continuation (No Change in Control). Except as provided in subsection 10(c) in the event of a Change in Control, in the event (i) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, or (ii) Executive terminates his employment for Good Reason, then Company shall:
  - (1) pay Executive a severance amount equal to the greater of (i) one times Executive's Base Salary as of his last day of active employment, or (ii) the unpaid portion of Executive's Base Salary for the remainder of the then current term of this Agreement; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date): and
  - (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time employment by another employer; or (iii) Executive's death, continued participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.
- (c) Termination with Salary Continuation (Change in Control). Notwithstanding anything to the contrary set forth in subsection 10(b), in the event within six months of a Change in Control: (i) Executive terminates his employment for Good Reason; or (ii) Executive's employment is terminated by Company for a reason other than Retirement, Disability, death or Cause, then Company shall:
  - (1) pay Executive a severance amount equal to 2.99 times Executive's Base Salary as of his last day of active employment; the severance amount shall be paid in a single sum on the first business day of the month following the Termination Date (unless Executive elects, in writing and on, or not later than 30 days after, the date this Agreement is executed, to receive the severance payment divided into 24 equal monthly installments, paid beginning on the first business day of the month following the Termination Date); and
  - (2) maintain and provide to Executive, at no cost to Executive, for a period ending at the earliest of (i) the expiration of 12 months from Executive's last day of active employment; (ii) the date of Executive's full-time employment by another employer; or (iii) Executive's death, continued

participation in all group insurance, life insurance, health and accident, disability, and other employee benefit plans in which Executive would have been entitled to participate had his employment with Company continued throughout such period, provided that such participation is not prohibited by the terms of the plan or by Company for legal reasons.

- (d) Termination Notice. Except in the event of Executive's death, a termination under this Agreement shall be effected by means of a Termination Notice.
- 41. Withholding. Company shall have the right to withhold from all payments made pursuant to this Agreement any federal, state, or local taxes and such other amounts as may be required by law to be withheld from such payments.
- 42. Assignability. Company may assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any entity to which Company may transfer all or substantially all of its assets, if in any such case said entity shall expressly in writing assume all obligations of Company hereunder as fully as if it had been originally made a party hereto. Company may not otherwise assign this Agreement or its rights and obligations hereunder. This Agreement is personal to Executive and his rights and duties hereunder shall not be assigned except as expressly agreed to in writing by Company.
- 43. Death of Executive. Any amounts due Executive under this Agreement (not including any Base Salary not yet earned by Executive) unpaid as of the date of Executive's death shall be paid in a single sum as soon as practicable after Executive's death to Executive's surviving spouse, or if none, to the duly appointed personal representative of his estate.

## 44. Restrictive Covenants.

(a) Covenant Not to Compete. During the term of this Agreement and for a period of two (2) years following the Termination Date, Executive shall not directly or indirectly: (i) engage, anywhere within the geographical areas in which Company is conducting business operations or providing services as of the date of Executive's termination of employment, in the tissue engineering business (the use of implantable absorbable materials, with or without a bioactive component, to attempt to elicit a specific cellular response in order to regenerate tissue or to impede the growth of tissue or migration of cells) (the "Tissue Engineering Business") or any other business the revenues of which constituted at least 30% of Company's revenues during the six (6) month period prior to the Termination Date (together with the Tissue Engineering Business, the "Business"); (ii) be or become a stockholder, partner, owner, officer, director or employee or agent of, or a consultant to or give financial or other assistance to, any person or entity engaged in the Business; (iii) seek in competition with the business of Company to procure orders from or do business with any customer of Company; (iv) solicit or contact with a view to the engagement or employment by any person or entity of any person who is an employee of Company; (v) seek to contract with or engage (in such a way as to adversely affect or interfere with the business of Company) any person or entity who has been contracted with or engaged to manufacture, assemble, supply or deliver products, goods, materials or services to Company; or (vi) engage in or participate in any effort or act to induce any of the customers, associates, consultants, or employees of Company to take any action which

might be disadvantageous to Company; provided, however, that nothing herein shall prohibit Executive and his affiliates from owning, as passive investors, in the aggregate not more than 5% of the outstanding publicly traded stock of any corporation so engaged.

(b) Confidentiality. Executive acknowledges a duty of confidentiality owed to Company and shall not, at any time during or after his employment by Company, retain in writing, use, divulge, furnish, or make accessible to anyone, without the express authorization of the Board, any trade secret, private or confidential information or knowledge of Company obtained or acquired by him while so employed. All computer software, business cards, telephone lists, customer lists, price lists, contract forms, catalogs, Company books, records, files and know-how acquired while an employee of Company are acknowledged to be the property of Company and shall not be duplicated, removed from Company's possession or premises or made use of other than in pursuit of Company's business or as may otherwise be required by law or any legal process, or as is necessary in connection with any adversarial proceeding against Company and, upon termination of employment for any reason, Executive shall deliver to Company, without further demand, all copies thereof which are then in his possession or under his control. No information shall be treated as "confidential information" if it is generally available public knowledge at the time of disclosure or use by Executive.

(c) Inventions and Improvements. Executive shall promptly communicate to Company all ideas, discoveries and inventions which are or may be useful to Company or its business. Executive acknowledges that all such ideas, discoveries, inventions, and improvements which heretofore have been or are hereafter made, conceived, or reduced to practice by him at any time during his employment with Company heretofore or hereafter gained by him at any time during his employment with Company are the property of Company, and Executive hereby irrevocably assigns all such ideas, discoveries, inventions, and improvements to Company for its sole use and benefit, without additional compensation. The provisions of this Section 14(c) shall apply whether such ideas, discoveries, inventions, or improvements were or are conceived, made or gained by him alone or with others, whether during or after usual working hours, whether on or off the job, whether applicable to matters directly or indirectly related to Company's business interests (including potential business interests), and whether or not within the specific realm of his duties. Executive shall, upon request of Company, but at no expense to Executive, at any time during or after his employment with Company, sign all instruments and documents reasonably requested by Company and otherwise cooperate with Company to protect its right to such ideas, discoveries, inventions, or improvements including applying for, obtaining, and enforcing patents and copyrights thereon in such countries as Company shall determine.

(d) Breach of Covenant. Any breach or violation of the provisions in this Section 14 by Executive will result in forfeiture by Executive and all other persons of all rights to any further payments or benefits under this Agreement, and in such event Company shall have no further obligation to pay any amounts related thereto. Executive expressly acknowledges that damages alone will be an inadequate remedy for any breach or violation of any of the provisions of this Section 14 and that Company, in addition to all other remedies, shall be entitled as a matter of right to equitable relief, including injunctions and specific performance, in any court of competent jurisdiction. If any of the provisions of this Section 14 are held to be

in any respect unenforceable, then they shall be deemed to extend only over the maximum period of time, geographic area, or range of activities as to which they may be enforceable.

#### 45. Miscellaneous.

- (a) Amendment. No provision of this Agreement may be amended unless such amendment is signed by Executive and such officer as may be specifically designated by the Board to sign on Company's behalf.
- (b) Nature of Obligations. Nothing contained herein shall create or require Company to create a trust of any kind to fund any benefits which may be payable hereunder, and to the extent that Executive acquires a right to receive benefits from Company hereunder, such right shall be no greater than the right of any unsecured general creditor of Company.
- (c) Prior Employment. Executive represents and warrants that his acceptance of employment with Company has not breached, and the performance of his duties hereunder will not breach, any duty owed by him to any prior employer or other person.
- (d) Headings. The Section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. In the event of a conflict between a heading and the content of a Section, the content of the Section shall control.
- (e) Gender and Number. Whenever used in this Agreement, a masculine pronoun is deemed to include the feminine and a neuter pronoun is deemed to include both the masculine and feminine, unless the context clearly indicates otherwise. The singular form, whenever used herein, shall mean or include the plural form where applicable.
- (f) Severability. If any provision of this Agreement or the application thereof to any person or circumstance shall be invalid or unenforceable under any applicable law, such event shall not affect or render invalid or unenforceable any other provision of this Agreement and shall not affect the application of any provision to other persons or circumstances.
- (g) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, permitted assigns, heirs, executors, and administrators.
- (h) Notice. For purposes of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given if hand-delivered, sent by documented overnight delivery service or by certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below:

To the Company:

Integra LifeSciences Corporation 105 Morgan Lane Plainsboro, New Jersey 08536 Attn: President

To the Executive:

Mr. David Holtz 214 Aspen Drive Plainsboro, NJ 08536

(i) Entire Agreement. This Agreement sets forth the entire understanding of the parties and supersedes all prior agreements, arrangements and communications, whether oral or written, pertaining to the subject matter hereof.

(j) Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the United States where applicable and otherwise by the laws of the State of New Jersey.

IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

INTEGRA	LIFESCIENCES	CORPORATION
Ву:		
Title:		
EXECUTIV	/E	
David B.	Holtz	

Exhibit 21

# Subsidiaries of Integra LifeSciences Corporation

Name	of Subsidiary	State of Incorporation
Name 1. 2. 3. 4. 5. 6. 7. 8. 9.	ABS LifeSciences, Inc. Advanced Reproductive Health Corporation Applied Regenerative Technologies, Inc. Colla-Tec, Inc. Camino NeuroCare, Inc Heyer-Schulte NeuroCare, Inc. Integra (Artifical Skin) Corporation Integra LifeSciences Surgical Products Corporation Integra LifeSciences I, Ltd.	Delaware Delaware Delaware Delaware Delaware Delaware Delaware Delaware
12. 13. 14. 15. 16.	Intellectual Properties and Asset Corporation LifeSciences Corporate Holdings Corporation LifeSciences Services Corporation Medicol Sciences, spol. s.r.o. Medicus Technologies, Inc. NeuroCare Holding Corporation Redmond NeuroCare LLC Telios Pharmaceuticals, Inc.	Delaware Delaware Delaware Czech Republic Delaware Delaware Delaware Delaware Delaware Delaware Delaware Delaware

# CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in the registration statements of Integra Lifesciences Corporation and Subsidiaries on Form S-8 (File Nos. 333-58235 and 333-06577) of our report dated March 2, 1999 (except for Note 17, as to which the date is March 29, 1999), on our audits of the consolidated financial statements of Integra Lifesciences Corporations, as of December 31, 1998 and 1997, and for each of the three years in the period ended December 31, 1998, which report is included in this Annual Report on Form 10-K.

PricewaterhouseCoopers LLP Florham Park, New Jersey March 31, 1999